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STRATEGIC PLAN 2015-2020 Department of Energy



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# Part A INTRODUCTION

#### 1 FOREWORD BY THE MINISTER

Our determined path to freedom and democracy, with South Africa casting aside centuries of discrimination and oppression to form a new society is on track. Our country is, however, still confronted with the triple challenges of inequality, unemployment and poverty as highlighted in the National Development Plan (NDP) and the Presidency Twenty-Year Review. As we enter the second phase of our transition from apartheid to a national democratic society, we have to embark on radical socio-economic transformation to push back the triple challenges.

The central objective and mission of Government's developmental agenda, outlined in the Medium-Term Strategic Framework (MTSF) 2009-14, is to set the country on a higher and sustainable trajectory of economic growth. The Department of Energy (DoE) was mandated with ensuring security of supply of energy resources and pursuing an energy mix that includes clean and renewable resources to meet the needs of the country's fast-growing economy without compromising our commitment to sustainable development. During this MTSF period we will continue to strive toward supporting our national objectives of improving the economy and jobs, economic infrastructure, rural development, human settlements, local government, and protection and enhancement of our environment.

Economic growth and development, including the creation of decent work and investment in quality education and skills development, are at the centre of Government's programme. Infrastructure development is one of the programmes identified to boost our economy and reduce unemployment.

The energy sector has been shown to be an economic game changer globally and, for South Africa, energy is the catalyst to revolutionise our economy and drive economic transformation. However, the current global energy situation is faced with many uncertainties. These include the complex environmental and climate change issues, in which energy is a major player. There are also the persistent global economic challenges still faced by some of our major trade partners as well as continuing turmoil in the Middle East and Ukraine. All of these impact on our energy security and therefore our economy.

These uncertainties, and how the DoE will respond to them, however remind us that, as a nation, South Africa needs to engage in a national dialogue about our energy future. How do we meet the imperative of ensuring a sustained and secure supply of energy, especially cleaner energy? In taking on this debate, we will continue to build and strengthen relations within the Southern



African Development Community (SADC) and the African continent.

The DoE operates in this dynamic global environment, as it takes on the substantial domestic challenges. We have a determination to deliver on the goals and objectives that we have included in our Strategic Plans, as our contribution toward the priorities and outcomes of Government. We must recognise that existing infrastructure constraints, some of which are the result of inadequate infrastructure development planning, make this task a difficult one. Declining budgets, rating downgrades, and the shortage of skills in the energy sector all contribute to rising electricity costs and volatile oil prices, which contribute to the critical energy situation. These factors, many of which are out of our hands, place severe strains on the energy supply chain and we must work together to collectively address these challenges.

On 17 June 2014, on the occasion of the first State of the Nation Address (SoNA) of our fifth democratic

administration, President Jacob Zuma affirmed the imperative to address our country's energy challenges. In that address, Government made it clear that addressing our energy constraints is an apex priority and that energy supply in various forms is a primary catalyst in our efforts to transform our economy, and our society, in an accelerated and radical manner.

I must repeat what the President said. He recognised the problem, in saving:

"We need to respond decisively to the country's energy constraints in order to create a conducive environment for growth."

The direction is clear, over the medium term, we must tackle the energy constraints and we must do so in a way which properly balances the many alternatives that we have. This is not just a challenge for Government; it is a challenge for the private sector; it is a problem for the public, and we must solve it collectively. This Medium-Term Strategic Plan (MTSP) is aligned with the 2014-19 MTSF and sets out in detail how it will respond decisively to the injunctions of the NDP, as outlined by the President in his SoNA. It also sets clear targets and systems on processes to monitor and evaluate the implementation.

This plan has therefore taken into consideration the new priority of the 2014-19 MTSF as it forms the first five-year building block toward achieving the 2030 vision in the NDP. In this regard, the DoE will continue to contribute to the following outcomes:

- Outcome 4: Decent employment through inclusive economic growth;
- Outcome 6: An efficient, competitive and responsive economic infrastructure network;
- Outcome 7: Vibrant, equitable, sustainable rural communities contributing toward food security for all;
- Outcome 8: Sustainable human settlements and improved quality of household life:
- Outcome 9: Responsive, accountable, effective and efficient developmental local government system; and
- Outcome 10: Protect and enhance our environmental assets and natural resources.

We acknowledge the NDP as a national roadmap and have incorporated its goals into our five-year plan. South Africa aims to have an energy sector that promotes economic growth and development, social equity through expanded access to energy services and environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change. In our Strategic Plan, we outline how, collectively, we will realise a sustainable South African energy system, supported

by effective policies, institutions, governance systems, regulations and competitive markets.

We will continue with work to strengthen the policy and planning capacity within the DoE as well as increase dedicated capacity for effective organisation-wide monitoring and evaluation. We will further enhance the work of the Energy Programmes and Projects branch, including the repositioning and strengthening of our provincial offices to better support provincial and local governments. In this regard, we have already established an Electricity Distribution Response Team in collaboration with other departments and entities to address identified hot spots and the specific local and district municipalities that have been highlighted for intervention in the SoNA.

The DoE further aims that both traditional and green energy will be expanded to ensure a platform for growth and social inclusion. This will include the use of nuclear power for base-load energy generation, which will be used in a safe and environmentally sustainable manner. Additional energy will be generated through the completion of large power stations and solar and wind power will feed into the electricity grid to increase our generation capacity and promote environmental sustainability. The DoE will intensify work to ensure that further hydroelectric energy will be secured domestically and regionally for our national grid. Over this medium-term period, over 1 million homes will be equipped with solar water heaters (SWHs), ensuring cheaper hot water and lower energy use for more than 7 million South Africans and an additional 1.5 million households will be connected to energy sources, either through the grid or through nonarid means.

We are committed to the countrywide rollout of our Economic and Social Infrastructure Programme, especially in the energy sector. We see this as a major instrument to catalyse and spur positive economic growth and job creation as well as to make a positive difference in the lives of citizens, whether they live in a town or in a rural village and get electricity from alternative, off-grid sources. The pace of oil and gas exploration – including shale gas exploration – by the state and other players in the industry will be intensified.

The introduction of new power stations across a range of technologies is outlined in the Integrated Resource Plan (IRP), which proposes the development of new generation capacity in a way that optimises costs, promotes job creation and mitigates adverse climate change. The implementation of the plan is well underway. This is evidenced by the Independent Power Producer (IPP) Bidding Programme, which has approved the provision of in excess of 6 900 MW of capacity from

renewable IPPs and attracting international investment to the value of about R 120 billion. We are confident that this will boost employment growth and we know we can further improve on this. We have no intention of abandoning the coal option, but we are determined to find cleaner technologies that will reduce the adverse environmental impact associated with greenhouse gas (GHG) emissions.

Funding allocations available for the Electrification Programme have been constant and we are confident in delivering at least 280 000 new grid and non-grid connections in this budget cycle. For the first time, the non-grid programme will also be implemented in the urban areas of the country. This is especially important where it is not safe to supply these households with high-voltage grid electricity.

To improve the non-grid delivery, more service providers will be appointed to assist with this programme. We are also in the process, with the assistance of the European Union (EU), to develop a more sustainable delivery model with respect to non-grid programmes.

The next five years is about moving South Africa forward toward an energy secure future.

Despite recent discoveries in Mozambique, Tanzania and even locally on our West Coast, the lack of gas infrastructure, including pipelines and storage facilities, has made it difficult for gas to feature as a major energy carrier in our current mix. However, the Gas Utilisation Master Plan (GUMP) seeks to anticipate the infrastructure necessary to open up the gas market for the residential, commercial and industrial sectors. The gas infrastructure development effort is accordingly premised on regional integration with Mozambique in the east, the importation of liquefied natural gas (LNG) and the networking of various load centres for transporting and storing shale gas from the Karoo.

These developments herald a new era in the exploitation of this resource for our country and the private sector is well advised to prepare for their contribution in this regard. The IRP targets 2 500 MW of new gas-fired

power generation capacity, plus the feedstock needs for the Mossel Bay Petroleum Oil and Gas Corporation of South Africa (SOC) Limited (PetroSA) gas-to-liquid plant.

The prospect for gas to replace imported crude oil in the transport sector is very high on the Government agenda because it bodes well for our macro-economic outlook, particularly in our balance of payments. In the future, gas is likely to be the most common energy carrier for public transport, freight and domestic heating, and cooking. The development of shale gas cannot be dismissed or ignored. On the contrary, we should be learning from others on how to best exploit this resource in the least intrusive and environmentally prudent way and work with the Department of Environmental Affairs to implement this programme to the highest environmental standards and regulations.

In terms of the approved IRP, nuclear energy will play a key role to support the base-load generation capacity in the energy future of our country, given the need for the country to decarbonise. The IRP allocates 9 600 MW to be generated from nuclear energy by 2030. Work on the Nuclear Programme has been initiated and the Energy Security Sub-Committee of Cabinet has been appointed, led by His Excellency, President Jacob Zuma.

The Nuclear Expansion Programme presents the possibility of catapulting South Africa into the top echelons of the knowledge economy. Our country's track record in running a nuclear programme speaks for itself. Apart from Koeberg for power generation, our current programme includes Pelidaba, currently one of the world's biggest producers of medical radioisotopes from low-enriched uranium. We want to build on the expertise and skills base that already exists in the country. These include the localisation, financing, funding, skills development, fuel cycle and uranium beneficiation strategies to support the Nuclear New Build Programme.

We will intensify our work on the Small Projects Renewable Energy Independent Power Producer Programme (REIPPP) which seeks to procure energy from small-scale IPPs, with projects that are between 1 MW and 5 MW in size. The DoE seeks to buy 200 MW in total from small, medium and micro enterprises (SMMEs), generating energy from solar, wind, biomass and landfill gas projects. One of the biggest challenges regarding the small-scale projects is that of providing equity. The DoE has taken the initiative to develop standard documents for these projects to reduce transaction costs and proposed a dedicated fund to assist small IPPs with transaction costs

We determined 2015 as the date by which crude oil refining companies will have to blend biofuels into petrol and

diesel on a mandatory basis. This has provided certainty to the funders of the potential biofuels manufacturers that their product will indeed enter the market through the oil companies. In the immediate term, our focus will be on finalising the subsidy framework for the manufacturers and the pricing approach for the blended product.

Thousands of jobs are expected to be created through the biofuels value chain, starting with the farming of selected energy crops and the development of the infrastructure for producing, storing and transporting the product to refineries and oil depots. It is also important that small and upcoming farmers enter the production value chain of biofuels. We would also look at opportunities of sourcing these projects from the SADC region to meet our demand.

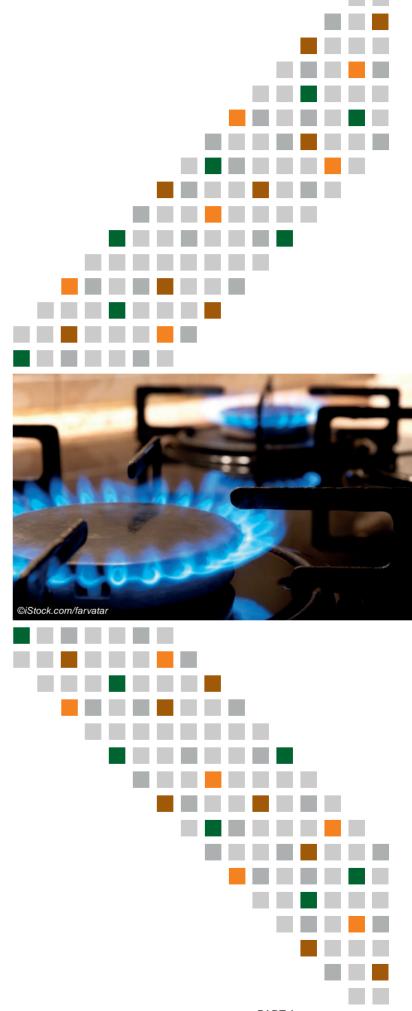
The DoE will continue to implement the successful National Infrastructure Plan (NIP), under the supervision of the Presidential Infrastructure Coordinating Commission (PICC), throughout the country. Our challenge as a developing state is to find a healthy balance between the three pillars of sustainable development, namely economic growth, social development and environmental sustainability.

In this financial year, we intend to submit to Cabinet the following pieces of legislation: the Electricity Regulation Amendment Bill, the National Energy Regulator Amendment Bill, the Gas Amendment Bill and the Independent Systems and Market Operator (ISMO) Bill.

The next five years is about moving South Africa forward toward an energy secure future! I invite all South Africans to be part of this. We have excelled in some areas, but as outlined by the NDP, we need to review our policies and regulations to ensure that we meet the 2030 energy objectives of energy access for all, the security of supply, a diversified energy mix and an energy sector that supports economic growth and prosperity of our country.

Hon. Tina Joemat-Pettersson (MP)

Minister of Energy Executive Authority



## 2 MESSAGE FROM THE DEPUTY MINISTER

#### 2.1 Introduction

The DoE developed this Strategic Plan to map out the way forward for our country as we begin the march into the next 20 years of democracy and freedom. As we enter the second phase of our transition from apartheid to a national democratic society, we have to embark on radical socio-economic transformation to push back the triple challenges of unemployment, inequality and poverty. The growth and development of the economy takes centre stage in this second phase of our transition. It remains our strong belief that the most effective weapon in the campaign against poverty is the creation of decent jobs and that creating these jobs requires faster economic growth and development.

We are mindful of the fact that the ANC Government has correctly identified energy as an apex priority for the attainment of economic growth in the fight against the triple challenges. It is with the overwhelming mandate of the SoNA 2014 (where President Jacob Zuma's 2014 National Address has placed energy at the centre of economic development for the country) that the Strategic Plan outlines how the DoE plans to address the scourge of jobless growth in a very challenging global economic environment. The DoE will do this as part of a larger collective of Government across its three spheres. The DoE is cognisant of the fact that it cannot do this alone and will work together with its people and organised formations of business and civil society.

The NDP has outlined the need for an energy sector that promotes economic growth and development, promotes social equity through expanded access to energy services and promotes environmental sustainability through concerted efforts to reduce pollution and to mitigate the effects of global climate change. The ANC manifesto identified the access to reliable energy supply in all its forms as a priority for this administration. However, if we are to achieve the energy vision as contained in the NDP, skills development in the energy sector is of critical importance. Given the planned energy infrastructure investments, the country will require a substantial investment in technical skills such as engineers, technicians, artisans and project or programme managers.

#### 2.2 Energy Policy and Planning

The right combination of policies and technologies is strategically important to ensure that links between economic growth, the increasing energy demand and the associated energy-related carbon dioxide emissions are



managed as we increase our energy generation capacity. It is thus important that our energy policies address issues of energy access, sustainability, affordability and appropriate quality of service for the end user.



We have the commitment and the ability to respond to President Zuma's call for the radical transformation of the energy sector.

The infrastructure for liquid fuels has served this country for a number of decades. In addition to the 20-Year Energy Security Master Plan – Liquid Fuels, we will conduct a vulnerability assessment of existing fuel

import, manufacturing and distribution infrastructure. This will be done to test the resilience of the plan and its ability to respond to various events. The liquid fuels sector has witnessed some changes in the past decade and we believe that it offers the greatest opportunity for radical economic transformation. In this regard, the DoE will work very closely with the Department of Trade and Industry (DTI) to identify an approach that can accelerate transformation in this sector.

We are acutely aware of the urgency to expedite the finalisation of the Integrated Energy Plan (IEP), which is the updated IRP. These policy development processes are urgent and necessary for the industry. We ask that you bear with us as we strive to ensure that these policies serve both the purpose of providing policy certainty as well as ensuring energy security, support development of local industries, job creation and skills transfer.

#### 2.3 Renewable Energy Independent Power Producer Programme, Integrated National Electrification Programme and Shale Gas

The DoE was elected on a mandate that prioritises energy security and, therefore, our responsibility as the executive is to ensure that the policy trajectory is in line with an optimum and efficient energy mix. The implementation of the REIPPP has been applauded in a number of quarters; however, there seems to be reluctance to embrace the totality of this energy mix that our people have called for. Coal will continue to be a major source of energy, both for liquid fuels and for electricity thanks to the fact that we are a country blessed with abundant coal reserves. It is imperative that we provide leadership in the cleaning of our coal for energy production. This is a resource that we cannot afford not to exploit.

As part of the energy mix, we remain resolute in our belief that the potential for shale gas in the Karoo basin needs to be exploited. This resource has the potential to create a new industry and associated skills. The need to ensure that this resource is exploited with great care to the environment cannot be overemphasised. The use of imported gas will continue and efforts to explore for more gas offshore will also be accelerated. We are aware of a major international oil company with a drilling platform which is about to move into place in the southern Cape which will begin what we believe will be an exciting phase for South Africa.

We will leverage the benefits of the massive investment in the energy sector by ensuring that our departmental programmes display a greater degree of responsiveness to the needs of our people, such as the empowerment of women and the youth, whether it is through the Integrated National Electrification Programme (INEP), the implementation of the National Solar Water Heater Programme (NSWHP), the IPP Programme or the transformation of the liquid fuels sector. We will continue to strengthen interventions and programmes aimed at capacity building among vulnerable sectors to enable their meaningful participation in the energy sector in support of the country's transformation agenda.

As part of the Decade for Women, as declared by the African Union, we will expand our involvement in the SADC region through various programmes which include a planned workshop on Clean Energy, Education and Empowerment which was held in August 2014. The objective of this workshop is to increase the participation and awareness of opportunities in the clean energy sector of our continent. The energy programmes require a capable department that is able to respond with the necessary agility. To this end, we will review the structures of the DoE and ensure that they have the requisite skills and abilities to meet the urgent demands imposed by the need for the security of energy. These are also extended to the state-owned entities (SOEs) as they are important components for the implementation of our policies and plans.

#### 2.4 State-Owned Entities

The DoE and the SOEs for which it is responsible have a mandate, collectively, to ensure that the security of energy is not only about the provision of electricity, liquid fuels and gas, but that it is also about their sustainable utilisation, affordability and accessibility by our people, businesses and industries. It is with this very clear understanding and appreciation of its urgency that we develop energy plans for the short, medium and long term that are supported by effective policies, strong institutions and human resources (HR), effective governance as well as a regulatory framework that addresses the critical needs for skilling and skills transfer, youth unemployment and localisation of energy inputs so as to grow our local industries.

#### 2.5 The Central Energy Fund Group

SOEs form a critical component in the implementation of the DoE's policies. It is with this in mind that we have begun a process of the ensuring that we work very closely with our SOEs so as to ensure that we provide policy guidance and support, where required. Strong, focused and well-governed entities are required for meeting the challenges of the energy security for South Africa. The DoE is currently engaged in discussions with, and provides support to, the Central Energy Fund (CEF) Group which will finalise the ongoing restructuring

process in 2015/16. In the SoNA 2014, President Jacob Zuma identified the CEF Group as one of the institutions that will require restructuring in order to align with the need to respond to the challenges and opportunities in the energy sector.

#### 2.6 The South African National Energy Development Institute

We must reiterate the democratic Government's commitment to give concerted attention to energy efficiency (EE). There is a role for each and every one of us. We all need to know how much energy we consume in our households, in our small enterprises and indeed by each of the major industrial users in order to know if we are in a better position to identify where we can make reductions. The energy consumption I am referring to includes electricity, liquid fuels, and natural and petroleum gas. Inefficient appliances need to be discarded and when purchasing vehicles, fuel efficiency must be a key consideration. The DoE and the National Energy Efficiency Agency within the South African National Energy Development Institute (SANEDI), working with, among others, the National Business Initiative, will ensure that EE programmes touch every facet of our lives. These programmes will include the implementation of the Smart Grids and the EE Tax Incentive schemes.

# 2.7 The South African Nuclear Energy Corporation SOC Limited

As already alluded to by the Minister of Energy, nuclear energy plays an important role in the energy security of our country. Going forward, the South African Nuclear Energy Corporation SOC Limited (NECSA) will play a pivotal role in the localisation of our Nuclear New Build Programme which is in line with our energy policy and in particular the IRP 2010-2030. I would like to pause here, so as to emphasise a point we often forget or conveniently overlook: We have been utilising nuclear power to produce energy for decades and, in fact, our host city, Cape Town, is basically powered by nuclear power. We have the requisite expertise and know-how to ensure the continued safe utilisation of nuclear energy for power generation.

#### 2.8 The National Nuclear Regulator

With regard to the Nuclear New Build Programme, the DoE is cognisant of the fact that providing regulatory oversight over the programme will require a strengthened and better capacitated regulatory body. Together with the National Nuclear Regulator (NNR), the DoE will ensure that capacity enhancement for both human capital and facilities will continue to be the strategic thrust of the regulator over the Medium-Term Expenditure Framework

(MTEF) period. Over and above this, the NNR is in discussions with various stakeholders to establish a Nuclear and Radiation Safety Centre of Excellence in order to create a pipeline of skills. This centre, which will be housed in one of the local universities, will involve the collaboration of the NNR with its international partners as well as with local stakeholders.



The DoE will be engaging with relevant stakeholders in both the public and private sectors to address the challenges in the energy sector.

# 2.9 The National Radioactive Waste Disposal Institute

The National Radioactive Waste Disposal Institute (NRWDI) was established during the 2013/14 fiscal year with a mandate to fulfil the institutional obligation of managing the disposal of radioactive waste on a national scale. The NRWDI board is currently working with the DoE to ensure the operationalisation of the institute.

### 2.10 The National Energy Regulator of South Africa

The National Energy Regulator of South Africa (NERSA) is the country's energy regulator and will, over the medium term, be focusing on improving oversight of the regulated industries by conducting compliance audits and inspections, issuing licenses and setting tariffs. NERSA will do the above in order to encourage investment in the sectors, encourage new entrants and improve competition.

#### 2.11 Other Relevant Stakeholders

The DoE will be engaging with relevant stakeholders in both the public and private sectors to address the abovementioned energy sector challenges. In the meantime, the DoE has formed partnerships with the Energy and Water Services Sector Education and Training Authority (EWSETA) and the Chemical Industries Education and Training Authority (CHIETA) to increase the scope of energy training in order to meet the skills needs in the

energy sector. The critical skills identified are catered for in the approved Sector Skills Plans of the aforementioned Sector Education and Training Authorities.

#### 2.12 International Relations

The DoE has maintained cooperation with the SADC region, the African continent and the rest of the world. These strategic partnerships have been in line with the energy interest of the country, particularity the need for energy security of supply, the diversification of the energy mix and the access to finance, technology, technical skill and information. In line with this imperative, the DoE has forged bilateral and multilateral relations that meet our strategic objectives.

#### 2.13 Conclusion

I believe that as a country we have the commitment and the ability to respond to His Excellency, President Jacob Zuma's call for the radical transformation of the energy sector. The DoE and its entities are ready to meet the challenge and, by working together, we can achieve more.

Amb. Thembisile Majola Deputy Minister of Energy



#### 3 STATEMENT BY THE ACTING ACCOUNTING OFFICER

#### 3.1 Introduction

Strategic Planning is an essential process which affords the DoE an opportunity to critically reflect on the progress and impact made thus far, drawing on the lessons learned and making decisions on future interventions, all of which are necessary to attain our goals. It is more important at this time, as we reflect on commitments made for the past five-year term of the fourth administration, since we seek to align with the priorities as outlined in the MTSF 2014-2019 of Government.

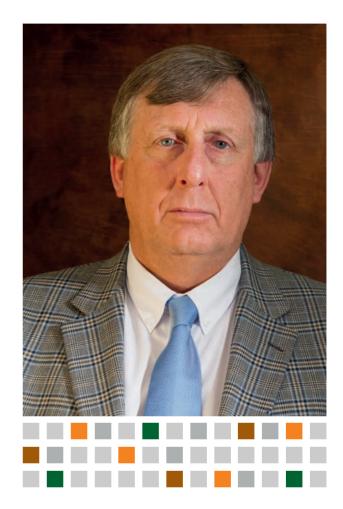
The DoE's mandate is to ensure the secure and sustainable provision of energy for socio-economic development. This Strategic Plan takes guidance from the NDP which envisages that, by 2030, South Africa will have an energy sector that promotes economic growth and development, social equity and environmental sustainability. The plan outlines the DoE's medium-term priorities and highlights the key activities we will undertake in the next five years as we continue to ensure that energy security and the promotion of environmentally-friendly energy carriers are accessible, affordable and reliable for all current and future generations of South Africa.

In the next five years, the implementation of a number of energy policy and plan interventions will be facilitated.

In response to the proposal of the DoE's Minister and Deputy Minister, an overview of the work of each programme and a summary of key immediate- and medium-term priorities are highlighted below.

# 3.2 The Implementation of Best Management Practices

In support of Government's cost-cutting measures, outlined by the Minister of Finance in his medium-term budget policy statement in 2013, the DoE has begun, and will continue, to review and implement internal policies aimed at containing operational costs and eliminating



non-essential expenditure. Furthermore, the DoE will also review, enhance and map key business processes aimed at improving operational efficiencies. This will also assist in streamlining and standardising processes to ensure business continuity, even in times of significant organisational changes and/or uncertainty. Another key initiative which the DoE will continue to implement is the Public Participation Programme of Izimbizo, whereby Ministers are provided with the opportunity to engage with communities on energy issues.

#### 3.3 Policy, Planning and Clean Energy

The Energy Policy and Planning Programme is tasked with the responsibility of ensuring evidence-based planning, policy setting and investment decisions in the energy sector to improve energy security through supply-and demand-side options and increase competition through regulation. The process of developing the IEP has been initiated by the Energy Policy and Planning Programme and a draft plan was approved by Cabinet for public engagement. The IEP forms the core of our

strategy for meeting our future energy requirements up to 2050, covering electricity, gas and liquid fuels and taking into consideration the EE potential within these sectors.

Parallel to the IEP process, two other plans were developed. Firstly the IRP for the electricity sector was updated with the intention of mapping out future power generation technologies and the timing of their introduction. The IRP update was informed by the policy choices that Government has made in order to meet objectives, including keeping electricity prices affordable, integrating regional economies, diversifying energy sources, reducing GHG emissions and reducing water usage. Secondly, the GUMP for the gas sector was created. This outlines the gas infrastructure necessary for the introduction of gas as an energy carrier that would compete where appropriate and subsequently reduce our dependency on coal for power generation and in liquid fuels production. GUMP also considers the regional gas supply-demand dynamic as it relates to the potential exploitation of the natural gas from Mozambique in the near term and the shale gas in the medium to long term.

In the next five years, the implementation of a number of these energy policy and plan interventions will be facilitated. This will include the urgent finalisation of the Electrification Master Plan (EMP) as well as making the IRP applicable for a period of time before updating and transferring certain projects and programmes with immediate effect, which includes the SWH and the IPP programmes. These interventions will align the positions of the Policy and Petroleum Licensing branch regarding the biofuels framework and will work out modalities of resolving clean energy HR implications, emanating from petroleum licensing.

# 3.4 Petroleum and Petroleum Products Regulation

The Petroleum and Petroleum Products Regulation Programme is responsible for the security of the supply of petroleum products in South Africa. Furthermore, the branch has to regulate the petroleum and petroleum products to ensure the optimum and orderly functioning of the petroleum industry's value chain to achieve Government's developmental goals.

In the next five years, the focus will be on strengthening the role of the regional offices in the licensing process by improving the capabilities in the regional offices and delegating certain functions to the regional offices. The branch will develop a quality assurance programme, to standardise and harmonise practices across regions, a client charter and code of conduct in order to enhance service delivery. The branch will develop the

comprehensive risk-based Compliance Monitoring and Enforcement Programme to enhance the Fuel Quality Monitoring Programme. The branch will also develop a dedicated programme for biofuels quality monitoring, a Compliance Monitoring and Enforcement Framework to strengthen the consequences for non-compliance.

The DoE will, in the MTSP, develop and implement an Economic Transformation Programme in the petroleum sector to achieve radical economic transformation.

A comprehensive National Fuel Supply Emergency Response Plan will be developed as part of the fuel supply security. A fuel supply monitoring framework needs to be documented through prioritising international engagements with supplier countries. The DoE will formalise cooperative governance arrangements with other regulators to minimise conflicting regulatory practices and to enhance enforcement.

## 3.5 Electrification and Energy Programme and Project Management

The DoE has, over the years, continued to manage, coordinate and monitor programmes and projects focused on access to energy. The priorities over the medium term in this area are to improve the universal access to electricity by implementing the EMP, conducting electrification (grid and non-grid) programmes and to manage allocations, funding, transfers or technical audits.

Through this programme, the DoE will:

- develop financing plans alongside investment in human capital;
- enhance energy security and infrastructure by assessing the maintenance and refurbishment backlogs;
- review the bulk electrical infrastructure funding required for universal access to electricity;
- prepare and implement an implementation plan;
- fund the constructions of new infrastructure and upgrades, for example substations and medium-voltage power lines; and
- finalise the increasing electricity network capacity to eradicate the electrification backlog.

The DoE will continue to monitor and evaluate projects by enhancing project management in the programme, as all the projects funded by the DoE must be monitored and evaluated for the best service delivery and value for money and assessing whether the contractual obligations and agreements are adhered to with the establishment of electronic monitoring tools for timeously verifications. Other interventions will include empowering regional offices through the establishment of a portfolio of energy

services at the regional offices in order to reduce travelling by head office officials and establishing a fully-fledged structure at regional level with relevant knowledge and skills

Through economic development initiatives, such as Education Projects & Partnerships (EP&Ps), the programme will:

- create job possibilities through EP&Ps;
- create opportunities for skills development within the energy sector;
- re-establish electrical engineering training programmes that support the municipalities' capacity building and poverty alleviation; and
- develop small businesses in rural areas that support the mission of rural development.

#### 3.6 Nuclear Energy

Nuclear energy is one of South Africa's most important drivers for national economic growth. This branch is tasked with managing the South African nuclear industry and controlling nuclear material in terms of international obligations, legislations and policies that will ensure the safe and peaceful usage of nuclear energy. In the next five years the implementation of nuclear energy will be facilitated. This will include the finalisation of the financing strategy for the Nuclear New Build Programme. Investment in the 9.6 GWe Nuclear New Build Programme requires an innovative financing mechanism to provide a firm basis to launch procurement. There are several options being investigated to finalise the nuclear new build financing mechanisms and to optimise localisation and foreign investment.

Through the work of this programme, the DoE will procure the nuclear programme that generates 9.6 GWe of nuclear power to provide base-load electricity. With regard to the finalisation of the Nuclear Fuel Cycle (NFC) Front- and Back-End Strategy, the country needs to be self-sufficient in all aspects of the NFC. Therefore, several options will be studied including uranium beneficiation, job creation, the establishment of the centralised interim storage facility and the reduction of foreign dependency on nuclear fuel.

Other interventions in nuclear energy will include the finalisation of the Industrialisation, Localisation and Skills Development Strategy and the limited capability to attain high levels of localisation and self-sufficiency. This will allow the country to effectively address the issues of the increased participation of SMMEs, SOEs and other participants; demographically represent the nuclear industry; and the decentralisation of industrial activities toward nuclear sites.

In the next five years, the DoE will, through the Nuclear Energy Programme, promulgate the Radioactive Waste Management Fund Bill in order to address the issues of securing finance for the NRWDI. Several options will be studied, including moving the function from NECSA to the NRWDI (through Section 197 of the Labour Relations Act, 1995 [Act No. 66 of 1995]) and recovering funds for waste management from generators (Complementary Money Bill to follow from National Treasury [NT]), which will only be put into effect from 2016.

The programme is responsible for the implementation of South Africa's nuclear energy response interventions and measures as outlined in the NNR and Nuclear Energy Act, 1999 (Act No. 46 of 1999). In this regard, the DoE will finalise the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) and the Nuclear Energy Act, 1999 (Act No. 46 of 1999) amendment to address legislation alignment to the current environment.

The DoE will continue to capacitate the Nuclear New Build Programme by addressing the high levels of unfunded vacancy rates in the nuclear branch (>60%) as well as the general lack of skills for the Programme.



I look forward to the dedication of our staff and to the continued cooperation of our stakeholders as we strive toward a common vision of improving our energy mix.

Through the work of this programme, the DoE will:

- engage NT to increase fiscal allocation for capacitation to deal with current gaps;
- review its organisational structure to align with new build requirements and incorporate nuclear expertise project management, nuclear procurement, nuclear construction management, nuclear financing and nuclear law; and
- allocate nuclear staff in regional offices (nuclear sites).

#### 3.7 Conclusion

The strategic priorities and objectives we have outlined in this MTSP represent our commitment to the people of South Africa. Understanding that the constitution compels us to deliver on economic growth, economic infrastructure networking and sustainable environmental outcomes, we undertake a rigorous process to identify potential risks that could hinder achievement of these commitments. This was coupled with the identification of mitigation actions. I look forward to the dedication and commitment of our staff and to the continued cooperation of our stakeholders as we strive toward a common vision of improving our energy mix by having 30% clean energy by 2025.

**Dr Wolsey Barnard**Director-General: Energy
Acting Accounting Officer





It is hereby certified that this Strategic Plan:

- was developed by the management of the Department of Energy under the guidance of Minister Tina Joemat-Pettersson (MP);
- takes into account all the relevant policies, legislation and other mandates for which the Department of Energy is responsible; and
- accurately reflects the strategic outcomes-orientated goals and objectives which the Department of Energy will endeavour to achieve over the period 2015-2020.

#### Supported by:

Mr Lloyd Ganta

Acting Deputy Director-General Official Responsible for Planning

Ms Yvonne Chetty
Chief Financial Officer

**Dr Wolsey Barnard**Director-General: Energy

Director-General: Energy Acting Accounting Officer Amb. Thembisile Majola Deputy Minister of Energy

Approved by:

Hon. Tina Joemat-Pettersson (MP)

Minister of Energy Executive Authority





On 10 May 2009, President Jacob Zuma announced his new Cabinet and the appointment of, among others, the Minister of Energy. The Department of Energy (DoE) was consequently established. The DoE is mandated to ensure secure and sustainable provision of energy for socio-economic development. This is achieved by developing an Integrated Resource Plan (IRP) for the entire energy sector and promoting investment in accordance with the IRP which focuses on energy. The DoE envisions the pursuance of the aforementioned mandate through the following strategic statements.

#### 1 AIM

Formulate energy policies, regulatory frameworks and legislation, and oversee their implementation to ensure energy security, promotion of environmentally-friendly energy carriers and access to affordable and reliable energy for all South Africans.

#### 2 VISION 2025

Improving our energy mix by having 30% clean energy by 2025. The vision of the DoE will be realised by the following factors as depicted in the figure below.

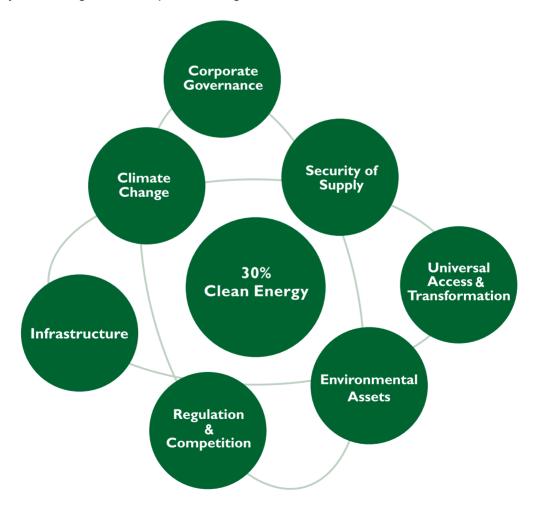


Figure 1: Factors affecting the DoE's 2025 vision of 30% clean energy

#### 3 MISSION

To regulate and transform the energy sector for the provision of secure, sustainable and affordable energy.

#### 4 VALUES

Our service delivery approach is guided by the value system that is demonstrated in the table below.

Table 1: DoE values

Values	Description
Batho-Pele (Sotho for "People First")	Represents a DoE that is service orientated, strives for excellence in service delivery & commits to continuous service delivery improvement for the achievement of a better life for all & seeks to include all citizens through services & programmes.
Ethics	Represents our moral principles as reflected by the Code of Conduct for Public Servants, i.e. how we understand, know about & mean when we resolve what is right and what is wrong.
Honesty	Represents a facet of moral character & denotes positive, virtuous attributes such as integrity, truthfulness & straightforwardness along with the absence of lying, cheating or theft.
Integrity	Represents consistency of actions, values, methods, measures, principles, expectations & outcomes & is regarded as the honesty & truthfulness or accuracy of one's actions.
Accountability	Represents the acknowledgment & assumption of responsibility for our actions, decisions, policies, administration & governance.
Professionalism	Represents workers who enjoy considerable work autonomy & are commonly engaged in creative & intellectually challenging work that requires impressive competence in a particular activity.
Ubuntu	Represents our interconnectedness & our approach that is open, available & affirming of others.
My Public Servant - My Future (We belong, We care, We serve)	Represents public servants at the centre of delivering quality services to the citizens in line with the dictates of the Constitution of the Republic.

#### 5 LEGISLATIVE AND OTHER MANDATES

The following acts regulate the energy sector and reflect the legislative measures that the DoE has instituted:

- The National Energy Act, 2008 (Act No. 34 of 2008);
- The Petroleum Products Act, 1977 (Act No. 120 of 1977), as amended; and
- The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended.

Table 2: The primary legislations that mandate the DoE				
Act	Description			
The National Energy Act, 2008 (Act No. 34 of 2008)	The National Energy Act, 2008, is the enabling legislation that empowers the Minister of Energy to ensure that diverse energy resources are available in sustainable quantities & at affordable prices in the South African economy to support economic growth & poverty alleviation, while also taking into account environmental considerations. The act also provides for:  - energy planning; - increased generation & consumption of renewable energy; - contingency energy supply; - the holding of strategic energy feedstock & carriers; - adequate investment in appropriate upkeep & access to energy infrastructure; - measures for the furnishing of certain data & information regarding energy demand; - supply & generation; & - the establishment of an institution to be responsible for the promotion of efficient generation & consumption of energy & energy research.			
The Petroleum Products Act, 1977 (Act No. 120 of 1977), as amended	The Petroleum Products Act, 1997, provides for:  - measures in the saving of petroleum products & economy & the cost of distribution thereof;  - the maintenance & control of the price thereof;  - the furnishing of certain information regarding petroleum products;  - the rendering of service of a particular kind or standard in connection with petroleum products;  - the licensing of persons involved in the manufacturing, wholesaling & retailing of prescribed petroleum products;  - the promotion of the transformation of the South African petroleum & liquid fuels industry; & the promulgation of regulations relating to such licences & matters incidental thereto.			
The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended	The Electricity Regulation Act, 2006, replaced the Electricity Act, 1987 (Act No. 41 of 1987), as amended, with the exception of Section 5B, which provides for the funds for the energy regulator for the purpose of regulating the electricity industry. The act establishes a national regulatory framework for the electricity supply industry & introduces the NER as the custodian & enforcer of the National Electricity Regulatory Framework. The act also provides for licences & registration as the manner in which generation, transmission, distribution, trading & the import & export of electricity are regulated. Section 34(1) empowers the Minister of Energy to make determinations for the establishment of IPPs for the purpose of creating greater competition in the electricity generation sector so as to increase the supply of electricity.			



Table 3: Acts which provide a broader mandate to the energy sector and are administered by the DoE

Act	Description
The Central Energy Fund Act, 1977 (Act No. 38 of 1977), as amended	<ul> <li>The Central Energy Fund Act, 1977, as amended, provides for:</li> <li>the payment of certain moneys into the CEF &amp; for the utilisation &amp; investment thereof;</li> <li>the imposition of a levy on fuel &amp; for the utilisation &amp; investment thereof;</li> <li>the control of the affairs of the CEF (Pty) Ltd by a board of directors for the safegaurding of records of all transactions entered into for account of the CEF or the Equalisation Fund &amp; of certain other transactions;</li> <li>the investigation, examination &amp; auditing of the books, accounts &amp; statements kept &amp; prepared in connection with the said transactions, &amp; for the submission to Parliament of a report relating to the said investigation, examination &amp; auditing; &amp;</li> <li>matters connected with the act.</li> </ul>
The Nuclear Energy Act, 1999 (Act No. 46 of 1999)	<ul> <li>The Nuclear Energy Act, 1999, provides for:</li> <li>the establishment of NECSA (a public company wholly owned by the state) &amp; the definition of its functions &amp; powers &amp; its financial &amp; operational accountability;</li> <li>its governance &amp; management by a board of directors, the composition of the board &amp; a chief executive officer;</li> <li>the responsibilities for the implementation &amp; application of the Safeguards Agreement &amp; additional protocols entered into by the IAEA in support of the Nuclear Non-Proliferation Treaty acceded to by the Republic for the regulation of the acquisition &amp; possession of nuclear fuel, certain nuclear &amp; related material &amp; equipment, &amp; the importation &amp; exportation of nuclear material, &amp; certain other acts &amp; activities relating to that fuel, material &amp; equipment in order to comply with the international obligations of the Republic; &amp;</li> <li>prescribing measures regarding discarding radioactive waste &amp; the storage of irradiated nuclear fuel &amp; incidental matters.</li> </ul>
The National Nuclear Regulator Act, 1999 (Act No. 47 of 1999)	The National Nuclear Regulator Act, 1999, provides for the establishment of the NNR in order to regulate nuclear activities for:  - its objectives & functions;  - the manner in which it is to be managed & for its staff matters;  - safety standards & regulatory practices; &  - the protection of persons, property & the environment against nuclear damage & matters connected therewith, by developing regulatory standards & practices.
The National Radioactive Waste Disposal Institute Act, 2008 (Act No. 53 of 2008)	The National Radioactive Waste Disposal Institute Act, 2008, provides for the establishment of the NRWDI in order to manage radioactive waste disposal on a national basis, for its functions & for the manner in which it is to be managed & regulation of staff & matters connected therewith.
The Petroleum Pipelines Act, 2003 (Act No. 60 of 2003)	The Petroleum Pipelines Act, 2003, provides for:  the establishment of a national regulatory framework for petroleum pipelines;  a Petroleum Pipelines Regulatory Authority as the custodian & enforcer of the national regulatory framework; &  matters connected therewith.
The Petroleum Pipelines Levies Act, 2004 (Act No. 28 of 2004)	The Petroleum Pipelines Levies Act, 2004, provides for imposition of levies by the Petroleum Pipelines Regulatory Authority & matters connected therewith.
The Gas Act, 2001 (Act No. 48 of 2001)	The Gas Act, 2001, provides for the orderly development of the piped gas industry, establishes a national regulatory framework, a National Gas Regulator as the custodian & enforcer of the national regulatory framework & matters connected therewith.
The Gas Regulator Levies Act, 2002 (Act No. 75 of 2002)	The Gas Regulator Levies Act, 2002, provides for the imposition of levies by the National Gas Regulator & matters connected therewith.
The National Energy Regulator Act, 2004 (Act No. 40 of 2004)	The National Energy Regulator Act, 2004, provides for the establishment of a single regulator to regulate the electricity, piped-gas & petroleum pipeline industries & matters connected therewith.
The Abolition of the National Energy Council Act, 1991 (Act No. 95 of 1991)	The Abolition of the National Energy Council Act, 1991, provides for:  the abolition of the National Energy Council;  the transfer of powers, assets, liabilities, rights, duties, obligations & staff of the Council to the Minister; &  matters incidental thereto.

In addition to the aforementioned acts, the DoE is further mandated by acts not administered by the DoE, including among others:

- The National Environmental Management Act, 1999 (Act No. 107 of 1999);
- The Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002);
- The Disaster Management Act, 2002 (Act No. 57 of 2002);
- The Hazardous Substances Act, 1973 (Act No. 16 of 1973); and
- The National Ports Act, 2005 (Act No. 12 of 2005).

#### 5.1 Relevant Court Rulings

The DoE to date has never experienced any court rulings that may significantly impact on the operations or service delivery obligations.

#### 5.2 Planned Policy Initiatives

The DoE intended to submit the following legislations to Cabinet and Parliment for approval in the next five years.

Table 4: Legislations scheduled for submission to Cabinet and Parliament

Name of the Bill	Strategic Focus of the Bill	Date for Submission of the Bill to Cabinet	Date for Submission of the Bill to Parliament	Impact
Electricity Industry Structure Bill	To encourage increased investment in electricity generation to enable the country to meet the required electricity supply capacity needed for economic growth.	March 2016.	March 2017.	Increased investment in power generation.
Electricity Regulation Amendment Bill (to amend the Electricity Regulation Act, 2006 [Act No. 4 of 2006], as amended)	To provide a regulatory framework that promotes IPP participation.	September 2015.	March 2016.	Increased investment and capacity in power generation.
Energy Regulator Amendment Bill (to amend the National Energy Regulator Act, 2004 [Act No. 40 of 2004])	To promote efficient regulation of the energy sector.	September 2015.	March 2016.	Promotion of administrative justice in the decisions made by the energy regulator.

Table 4: Legislations scheduled for submission to Cabinet and Parliament (continued)

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Name of the Bill	Strategic Focus of the Bill	Date for Submission of the Bill to Cabinet	Date for Submission of the Bill to Parliament	Impact
Promulgated National Nuclear Regulator Amendment Act	To review & update existing legislation, taking into consideration the current developments.	March 2016.	March 2017.	Provide for an efficient & effective regulatory environment.
Nuclear Energy Act Amendment Bill	To review & update existing legislation, taking into consideration the current developments.	March 2016.	March 2017.	Provide for an efficient & effective regulatory environment.
National Radioactive Waste Management Fund Bill	To ensure existence of the funding mechanism for radioactive waste management.	March 2016.	March 2017.	Provide a long-term funding model or mechanism.
Develop SFF Bill	To establish a national petroleum reserve organisation to manage strategic stock of petroleum & gas.	March 2016.	September 2016.	Enhance energy security.



#### 6 SITUATIONAL ANALYSIS

Over the past 20 years, South Africa has not made significant investments in the energy sector. The capacity that was created in the 1980s was sufficient to carry us through to the early 2000s, when it became clear that the demand growth, fuelled by the commodity boom, outpaced power supply and that there was an urgent need to increase supply. External constraints in the global supply chains for power generation technology, particularly for nuclear plants, underscored the importance of improving energy security by way of a timely and sustainable build programme. Most countries faced the same problem of declining generation capacity around the same time as South Africa, which resulted in global supply chains becoming constrained as competition increased for machinery and services.

The investment in social infrastructure programmes is a response to emerging global trends.

The economic crisis, driven by the sub-mortgage contagion, provided some breathing space from an energy demand perspective as economies cooled off around 2008. This reprieve was accompanied by massive job losses as investment declined. South Africa was able to continue to keep the lights burning partly as a consequence of the economic crisis. We must not be complacent in the face of renewed signs that economic activity is picking up again. There is a need to fast track the interventions that will improve the power supply-demand situation.

The severe liquid fuels disruptions which were experienced in 2005/6 came at a significant cost to the economy, while the infrastructure supplying the economic hub of the inland market was constrained. The growth in demand was also dampened by the global economic slowdown experienced in 2008. In response, the DoE has implemented a planning framework for the energy sector, anchored on the Integrated Energy Plan (IEP) and the IRP as the instruments to drive Government's set objectives over and above supply adequacy. Issues like job creation, reducing our greenhouse gas (GHG) emissions and aligning with the New Growth Path (NGP), National Development Plan (NDP) and Government's programme of action form an integral part of this Strategic Plan over the next five years. The emerging

global trends in the provision of energy across the world prompts Government to define objectives driven by outcomes in the supply of energy. The investment in social infrastructure programmes is a response to these emerging global trends.

The social and economic infrastructure investment delivery involves many different implementing spheres of Government (national, provincial and local) as well as their agencies and entities, including the large state-owned entities (SOEs) such as Eskom and the CEF Group, which are key players in the energy sector. There is also a private sector contribution to the built environment, including factories and the industry in general, commercial infrastructure and office space, much of which relies on and is facilitated by the existence of social and economic infrastructure investment. Important improvements have been made in the key social and economic infrastructure sectors of electricity, transport, petroleum pipelines, water and communications as well as in industrial development zone infrastructure, social infrastructure grants and public-private partnership projects. For Government to achieve the 2030 NDP vision, South Africa must have an energy sector that promotes economic growth and development, social equity through expanded access to energy services and environmental sustainability through efforts to reduce pollution and to mitigate the effects of climate change. The DoE needs to be supported by effective policies, institutions, governance systems, regulations and competitive markets.

#### **6.1 Performance Delivery Environment**

In order to ensure that the main strategic goals and outputs of the DoE are achieved, the Executive Authority, each year, announcess the priorities of the DoE, which are informed by both the changed (Government outcomes and priorities and the internal and external environment) and sustained (constitutional and legislative) mandates. Continuous monitoring and evaluation of the performance against the Executive Authority's priorities will provide progress in terms of the extent to which the DoE mandate is being executed in order to realise the intended results. The DoE continues to regulate and transform the energy sector for the provision of secure, sustainable and affordable energy.

In carrying out its mandate, the DoE formulates energy policies, regulatory frameworks and legislation and oversees their implementation to ensure energy security, promotion of environmentally-friendly energy carriers and access to affordable and reliable energy for all South Africans. The energy sector has been shown to be an economic game changer globally. For South Africa, energy is the catalyst to revolutionise our economy and

drive economic transformation. However, the current global energy situation is faced with many uncertainties. These include the complex environmental and climate change issues in which energy is a major player.

There are also persistent global economic challenges still faced by some of our major trade partners as well as continuing turmoil in the Middle East and Ukraine. All of these impact on our energy security and therefore our economic growth. The DoE needs to be responsive to all of these circumstances as we chart a course into the future. These uncertainties and departmental challenges of inadequate generation capacity; distribution infrastructure; cost of energy; access to electricity; and economic transformation as well as how the DoE will respond to them, remind us that, as a nation, South Africa needs to engage in a national dialogue about our energy future.

The introduction of new power stations across a range of technologies is outlined in the IRP, which proposes the development of new generation capacity in a way that optimises costs, promotes job creation and mitigates adverse climate change. The IRP 2010 policy that articulates the country's electricity generation plans to meet the demand over the 20-year horizon. The IRP 2010-2030, is being revised and updated by the DoE. The draft updated plan is in line with the national commitment to start to move toward reducing the country's carbon footprint, lowering the energy intensity of the economy and diversifying the electricity supply mix. Renewable energy is still expected to be a main contributor to the Electricity Supply New Building Programme. South Africa signed Nuclear Cooperation Agreements (NCAs) with countries such as France, China, Russia, South Korea and United States of America that have shown intrest in the nuclear Nuclear New Build Programme. Two more countries that still have to sign Nuclear Cooperation Agreements are Canada and Japan. The signing of the NCAs culminated in a series of vendor parade workshops which form part of a pre-procurement preparatory phase to procure the 9.6 GW of nuclear energy. In the period up to 2030, the IRP makes provision for 9.6 GW of nuclear power, together with 6.3 GW of coal power, 11.4 GW from renewable energy sources and 11.0 GW from other generation sources.

The DoE continues to develop policies to address concerns for energy security and energy access. In an effort to increase security of energy supply, the DoE published a draft Strategic Stock Petroleum Policy with the objective to increase strategic stock reserves for the country in order to adequately mitigate the risks of severe fuel disruptions. In part, the draft policy directs CEF's subsidiary (Strategic Fuel Fund [SFF] Association)

to increase its strategic stock reserve. Currently, the DoE is exploring the potential for substituting coal with gas, developing the West Coast gas resources and investing in liquefied natural gas (LNG) import and landing infrastructure; developing the West Coast off-shore gas resources for power production; securing feedstock for the gas-to-liquid Mossgas plant; conducting exploratory drilling to establish economically recoverable shale gas reserves; and investigating environmental impacts and mitigation by developing and implementing a Gas Utilisation Master Plan (GUMP).

The South African Government's policy intervention to improve the quality of transportation fuels and reduce its impact on the environment is articulated in the Cleaner Fuels Two (CF2) regulations. The CF2 specifications will come into effect in 2017. In addition to CF2, Government has gazetted a 2% mandatory blending of biofuels into transport fuels to come into effect in October 2015. The DoE, with CEF's support, is drafting the regulations governing biofuels blending. Also in process is the development of a 20-Year Liquid Fuels Roadmap (20YRLFRM). This will consider various scenarios satisfying current and future liquid fuel demands by considering CF2 and beyond, current and future domestic refineries, the importation of refined products and the required supporting legislative and regulatory environments.



The DoE continues to regulate and transform the energy sector for the provision of secure, sustainable and affordable energy.

The shale gas potential in South Africa could radically reshape the energy future. The geological extent of the possible resources is vast and is located in the Karoo basin. Theoretical estimates of the Karoo shale gas are extremely high, placing South Africa as having the eighth largest resource of shale gas in the world. The International Energy Agency (IEA) has estimated this resource base to be around 390 Tcf. The Petroleum Oil and Gas Corporation of South Africa (SOC) Limited (PetroSA) has recently estimated that about 10% of the 390 Tcf could materialise as an economically recoverable reserve. A refinery like the PetroSA refinery in Mossel

Bay, which presently supplies 5% of the country's liquid fuels needs, requires about 1 Tcf for 20 years of operation. Another comparison is that 1 Tcf of shale gas can power an 800 MV electricity generator for 25 years.

In less than 20 years, the Government has provided access to electricity to over 5.8 million poor households. The Electrification Programme, which is rolled out by Eskom and municipalities and administered by the DoE, has reduced the percentage of households without electricity to 14% (from approximately 50% in 1994). The programme is ongoing, albeit at a slower pace than in the late 1990s as new connections depend on bulk infrastructure and network extensions being made to enable household connections in the more remote areas, increasing the costs per household connection as well as the resourcing requirements.

Government inherited a modern electricity generation fleet that was largely fuelled by coal and able to deliver electricity at low prices by international standards. Consequently, between 1994 and 2002, comparatively little investment was made in electricity generation, given the low economic growth rates of the past. However, the unprecedented rapid post-apartheid growth of the economy defied decades-old planning expectations in the sector and demand rapidly exceeded supply (compounded by pre-1994 decisions to mothball power stations), resulting in a supply crisis in early 2008.

Since 2005, 6 028 MW of additional capacity has been added to the national grid by upgrading existing stations, returning mothballed stations to service and building new generating plants. Despite this progress, demand has exceeded supply since early 2008. In order to increase the generation of electricity and open up the economy to large investors, two new large coal-fired power stations, each in excess of 4 500 MW generation capacity, are currently under construction (these are Medupi, which is currently 56% complete, and Kusile, which is 24% complete) as well as a pumped storage scheme.

During the current administration, the DoE will invite the private sector to bid for contracts to supply the national grid with renewable energy in terms of the IRP 2010. Three rounds of bidding have been completed and power purchase agreements for 1 442 MW of renewable energy were signed in November 2012. Agreements were also signed for 1 043 MW of renewable energy in May 2013 and 1 456 MW of renewable energy in November 2013. Since 2005, 4 965 km of transmission lines have been installed. This translates to 23 815 MVA of additional transmission capacity. The major drivers of transmission investments have been network links to unserviced areas to enable household connections, economic growth, security of

supply (to the Cape and other internal regions far from coalfields and power stations) and access to generation capacity outside South Africa. Despite the large number of transmission network improvements, more will be required in future to enable larger numbers of electricity connections to unelectrified households and to unlock economic growth in undeveloped regions. This is being addressed within the National Infrastructure Plan (NIP) of the Presidential Infrastructure Coordinating Commission (PICC) as well as the Strategic Integrated Projects (SIPs).

The DoE has maintained cooperation with the Southern African Development Community (SADC) region, the African continent and the rest of the world. These strategic partnerships have been in line with the energy interest of the country, in particular the need for energy security of supply, diversification of the energy mix and access to finance, technology, technical skills and information. In line with this imperative, the DoE has forged bilateral and multilateral relations that meet our strategic objectives.

The IEP has taken cognisance of the abundant clean energy resources available in the region and seeks to incorporate these sources. This marks the DoE's strategy to multi-source, with the objective of reducing our carbon footprint and driving South Africa's low carbon trajectory. In this regard, the DoE initiated and signed a treaty with the Democratic Republic of Congo (DRC) in 2013, which seeks to jointly develop the Grand Inga Hydropower Project (GIHP). The project has an estimated capacity to generate 40 000 MW and will be constructed in phases. The first phase aims to generate 4 800 MW. We are currently exploring ways to operationalise the treaty and initiate the development of Phase 1. South Africa is also exploring other regional projects within the SADC region in countries such as Mozambique and Lesotho.

South Africa, together with the SADC region, will be working on regional integration of the transmission infrastructure. This will be driven by the Southern African Power Pool (SAPP). To date, the SAPP has established a day-ahead market where trading of electricity takes place among member countries. The regional transmission system needs further strengthening and connection of other countries such as Angola, Malawi and Tanzania. Plans are on the table to implement the interconnectors for the SAPP. The main objective of the DoE's approach toward international relations is to advance the South African Energy Agenda and facilitate sustainable development in the energy sector through bilateral, trilateral and multilateral relations with the African region and the rest of the world.

#### 6.2 Taking Government to the People

In line with the Cabinet decision of March 2010, the DoE will implement the annual programme of 20 Izimbizo, whereby ministers are provided with the opportunity to engage with communities on energy issues. Designed to offer quality and value to communities by sharing relevant information with the different target audiences of the DoE, the Izimbizo Outreach Programme aims to be interactive in its engagement with communities in order to better understand their needs, concerns and challenges. During the 2015/16 fiscal year, the DoE will continue with the Izimbizo Outreach Programme, which will be staged among communities in all nine provinces. The focus areas will encompass the DoE's primary areas of delivery including developments in the Integrated National Electrification Programme (INEP), Renewable Energy Independent Power Producer Programme (REIPPP), fuel security and pricing, nuclear build, biofuels, energy efficiency (EE) and the status of energy legislation, among others.

#### 6.3 The Service Delivery Improvement Plan

In accordance with the Public Service Regulations, Chapter 1, Part III C, the DoE has developed and produced a Service Delivery Improvement Plan (SDIP) and Service Delivery Charter which set out the service standards that citizens and customers can expect from the DoE and which serve to explain how the DoE will meet each of these standards.

The DoE has developed an SDIP for the period 1 April 2013 to 31 March 2016 which aims to:

- outline the key services that the DoE provides:
- identify the key services that the DoE will focus on improving during the next three years:
- identify the beneficiaries that coincide with these key services; and
- complete the DoE template to ensure that the DoE is aligned with the norms and standards.

The SDIP working group adopted a three-phased approached to compiling the SDIP, which is indicated in the following table.

Table 5: Three-phased approach to compiling the SDIP

	Establish a Baseline Model	Identify Opportunities	Develop SDIP for the DoE
Key activities	Determine the service delivery baseline model by conducting interviews & workshops in line with the following areas: - Services - Channels - Facilities - IT infrastructure - Organisational structure - Processes - Customers	Analyse data gathered.     Prioritise improvement areas, using data collected during interviews & baseline workshops.     Ensure alignment to the DoE's Strategic Plan & APP & the NDP.	Develop draft SDIP for the DoE to be reviewed at EXCO & MANCO meetings.     Link the SDIP to the Government's & the DoE's strategic objectives.
Key outcomes	Baseline service delivery model.	Prioritised service delivery improvement areas.	Service delivery improvement plans.

The following SDIPs were identified during the SDIP Prioritisation Workshop:

- Improvement of the petroleum licensing process;
- Electrification of the country, in particular low-cost residential housing; and
- Improvement of the nuclear licensing process.

Monitoring the implementation of the SDIP will be done by the DoE on a quarterly basis and will be reported to the Department of Public Service and Administration (DPSA) annually.

Additionally, the reporting cycles will be aligned with the Medium-Term Expenditure Framework (MTEF) period as stipulated by National Treasury (NT). The SDIP will be reviewed on an annual basis as part of the strategic planning process.

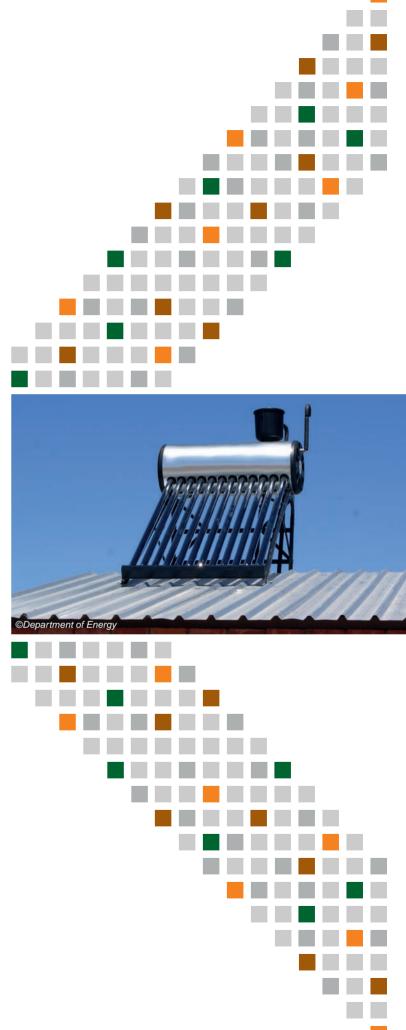
#### 6.4 Alignment to the Medium-Term Strategic Framework and National Development Plan Priorities

The EXCO of the DoE established a Strategic Steering Committee (SSC) which comprised the DoE branch representatives who, working together, interrogate and recommend performance information to the EXCO to approve the DoE's Strategic Plan and Annual Performance Plan (APP). The most critical document that the SSC has developed is the DoE 2014-2019 Strategic Alignment document, that is in line with Government policy priority as envisaged in the NDP, Medium-Term Strategic Framework (MTSF), State of the Nation Address (SoNA) June 2014, Budget Vote Speech 2014 and other relevant policy prescripts.

#### 6.5 Strategic Integrated Projects

The implenetation of the SIPs is coordinated and monitored quarterly by the PICC which is chaired by President Jacob Zuma. The DoE leads the Ministerial Cluster on Economic/Employment and Infrastructure with the following participating departments:

- Economic Development Department
- Department of Transport
- Department of Public Enterprises
- DoE
- Department of Water and Sanitation
- Department of Environmental Affairs
- Department of Communications
- Department of Public Works
- Department of Rural Development and Land Reform
- Department of Cooperative Governance and Traditional Affairs
- NT



- Department of Science and Technology
- Department of Planning, Performance Monitoring and Evaluation

At an SIP level, the Minister, Acting Directors-General (DGs) and other stakeholders will be called upon to participate in or contribute to the processes and proceedings of the PICC as required by the President.

Cabinet adopted an infrastructure plan that is intended to transform the economic landscape of South Africa, create a significant number of new jobs, strengthen the delivery of basic services to the population and support the integration of African economies. Eighteen SIPs have been developed and approved to support economic development and address service delivery in the poorest provinces.

The DoE has observer status in five SIPs where it only attends meetings as and when required. The DoE's chaired or co-chaired involvement in the SIPs can be categorised as indicated in Table 6 below.

Table 6: Departmental involvement in the SIPs

Strategic Integrated Project	Departmental Contribution
6. Integrated Municipal Infrastructure Project	This SIP is chaired by the Minister of Energy.
	The main functions of this SIP are to address all maintenance backlogs & upgrades required in water, electricity & sanitation bulk infrastructure in the 23 least resourced district municipalities, covering 17 million people, in a project that is nationally managed, but locally delivered. The DoE is contributing to this SIP through the following programmes:  - INEP - NSWHP
Green Energy in Support of the South African     Economy	This SIP is co-chaired by the Minister of Economic Development & the Minister of Energy.
	The main functions of this SIP are to support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the IRP 2010 & to support biofuel production facilities.
	The DoE is contributing to this SIP through the following programmes:  - IPP - Biofuels
	- Clean Energy - NSWHP - Solar Park
10. Electricity Transmission & Distribution for all	This SIP is co-chaired by the Minister of Public Enterprises & the Minister of Energy.
	The main functions of this SIP are:  to accelerate the transmission & distribution network to address historical imbalances, provide access to electricity for all & support economic development; and  to align the 10-Year Transmission Plan, the service backlogs, the national
	broadband rollout & the freight rail line development to leverage off regulatory approvals, supply chain & project development capacity.
	The DoE is contributing to this SIP through the following programmes: - INEP - ADAM
	<ul> <li>Mini-ADAM (providing subsidies to 9 municipalities to address the maintenance, refurbishment &amp; backlog concerns in order to improve the quality of electricity supply).</li> </ul>

Table 6: Departmental involvement in the SIPs (continued)

Strategic Integrated Project	Departmental Contribution
17. Regional Integration for African Cooperation & Development	<ul> <li>Develop Southern Africa's hydroelectric resources and enhance inter-regional electricity trade.</li> <li>At least 1 major regional hydro scheme approved over MTSF.</li> <li>Participate in mutually beneficial infrastructure projects to unlock long-term socio-economic benefits by partnering with fast growing African economies with projected growth ranging between 3% &amp; 10%.</li> <li>The projects involving transport, water &amp; energy also provide competitively-priced, diversified, short- &amp; medium- to long-term options for the South African economy where, for example electricity transmission in Mozambique (Cesul) could assist in providing cheap, clean power in the short term whilst the GIHP in the DRC is long term.</li> <li>All these projects complement the FTA discussions to create a market of 600 million people in South Africa, Central Africa and East Africa.</li> </ul>

#### 6.6 Organisational Environment

The DoE was established in 2009 with a permanent staff complement of 426 and 97 additional employees comprising interns and contract employees. Following the development of the strategic outcomes for the DoE, the approved organisational structure was reviewed to align it with the mandate as well as the strategic priorities of the DoE. The alignment of the revised organisational structure with the strategic outcomes and service delivery agreements, as signed between the Minister and the President, led to the creation of the following line function branches:

- Energy Policy and Planning;
- Petroleum and Petroleum Products Regulation;
- Nuclear Energy;
- Clean Energy; and
- Energy Programmes and Projects.

The aforementioned realignment of the structure has, among others, ensured that previous challenges relating to reporting and accountability lines are properly addressed. The approved organisational structure was implemented in a phased approach due to financial constraints within the DoE's MTEF allocations. As a result, the DoE has continued to explore and embark on various interventions to improve the efficiency and effectiveness of the organisation within the baseline allocations and has creatively and innovatively implemented key aspects of an approved Integrated Human Resources Plan in order to improve its human resources (HR) capacity and capabilities.

The Minister of Energy indicated that the revised DoE organisational structure is not adequately configured to respond effectively and efficiently to the ANC Manifesto and the NDP on the energy mandate, as it does not respond to the radical economic transformation of the country as pronounced by the President. The DoE will therefore embark on the review of the structure in

partnership with DPSA and to, among others, do an in-depth analysis of the structure so as to ensure realignment thereof with the mandate and strategic priorities of the DoE. It is envisaged that this priority process will form the foundation of HR processes to follow during the next five years.

As at the end of the 2013/14 fiscal year, the DoE's permanent staff complement had increased to 550 employees, with a further 57 employees appointed additional to the approved establishment. The DoE relocated to a stand-alone building, Matimba House, with branding that reflects its image and the work it does as the DoE. The annual programme for employee performance management and development commenced with the submission of performance agreements and the overall submission rate exceeded the target of 80%, although an improved compliance rate is desired. The performance review moderation for the 2012/13 performance cycle was timeously concluded and performance rewards were paid on time and within budget. The Performance Management and Development System (PMDS) workshops undertaken during the year were well attended by staff members below senior management service (SMS) level.

The DoE conducted a culture survey to determine the current underlying challenges within the organisation. Some of the critical issues identified included the enhancement and/or better application of the performance management and development system; enhancement of the leadership and management capability; and project management. The development and implementation of the HR Development Strategy has, among others, resulted in a programme that aims to address the critical skills shortages in the energy sector and has led to the placement of 54 interns in various municipalities around the country. To enhance the DoE's capacity to deliver on its mandate, partnerships were formed in addition to the focused HR development

interventions with the Energy and Water Service Sector Education and Training Authority (EWSETA) and the Chemical Industries Education and Training Authority (CHIETA) to increase the scope of energy training to meet the growing skills needs of the energy sector.

In terms of communication, the planned programme of public outreach and awareness campaigns and interactions with specific external audiences as well as the general public was implemented to increase awareness of the Government's energy programme. A schedule of activities and events, aimed at broadening access to energy sector information, was implemented to ensure the communication and distribution of relevant information to defined internal and external stakeholders. In this way, energy sector target markets were also informed of the continuously growing and evolving energy issues.

Recognising the importance of an informed staff complement for enhanced service delivery, the Acting DG continued to engage with employees at quarterly staff interaction sessions. Through these sessions, employees were provided with an opportunity to constructively engage with the leadership of the DoE on issues that affect their ability to implement the DoE's mandate. During the 2013/14 fiscal year, the DoE further enhanced internal communication by introducing a number of platforms for direct interaction between the ministry, the executive and officials. Among the most successful vehicles used were the *Daily Team Energy Update*, providing updates on internal developments; the *Energy Update* monthly

newsletter; biquarterly information sessions; and periodic ministerial staff interaction sessions.

The DoE trained 282 officials on various skills programmes during the 2013/14 fiscal year, as part of the implementation of the Workplace Skills Plan (WSP). Among these were Project KHAEDU; the Advanced Management Development Programme; the Compulsory Induction Programme; the Basic and Advanced Project Management Course; the Basic Charts of Accounts and Economic Reporting Format; Legislative Drafting; Policy Development; the Leadership and Management Development Programme; and Excellent Customer Service for Frontline Staff and Financial Management. The DoE also offered 66 new bursaries to serving employees with effect from the beginning of the 2014 academic year. This brought the total number of employees studying part-time at various institutions to 77.

Following the outcome of the skills audit conducted within the DoE, a WSP was compiled to address requirements. The WSP was submitted to the Public Service Education and Training Authority (PSETA), EWSETA and CHIETA for implementation.

In addition, the DoE successfully implemented an internship programme with various municipalities with a total of 54 interns being beneficiaries of this programme.

The following table and figure summarise the six departmental programmes and overall structure of the organisation, respectively.

Table 7: Departmental programmes

Programme	Programme Purpose
1. Administration	Provide strategic support & management services to the Ministry & the DoE.
2. Energy Policy & Planning	Ensure evidence-based planning, policy setting & investment decisions in the energy sector to improve energy security through supply- & demand-side management options & increase competition through regulation.
3. Petroleum & Petroleum Products Regulation	Manage the regulation of petroleum & petroleum products to ensure optimum & orderly functioning of the petroleum industry to achieve Government's developmental goals.
Electrification & Energy Programme &     Project Management	Manage, coordinate & monitor programmes & projects focused on access to energy.
5. Nuclear Energy	Manage the South African nuclear energy industry & control nuclear material in terms of international obligations, nuclear legislation & policies to ensure the safe & peaceful use of nuclear energy.
6. Clean Energy	Manage & facilitate the development & implementation of clean & renewable energy initiatives as well as EEDSM initiatives.

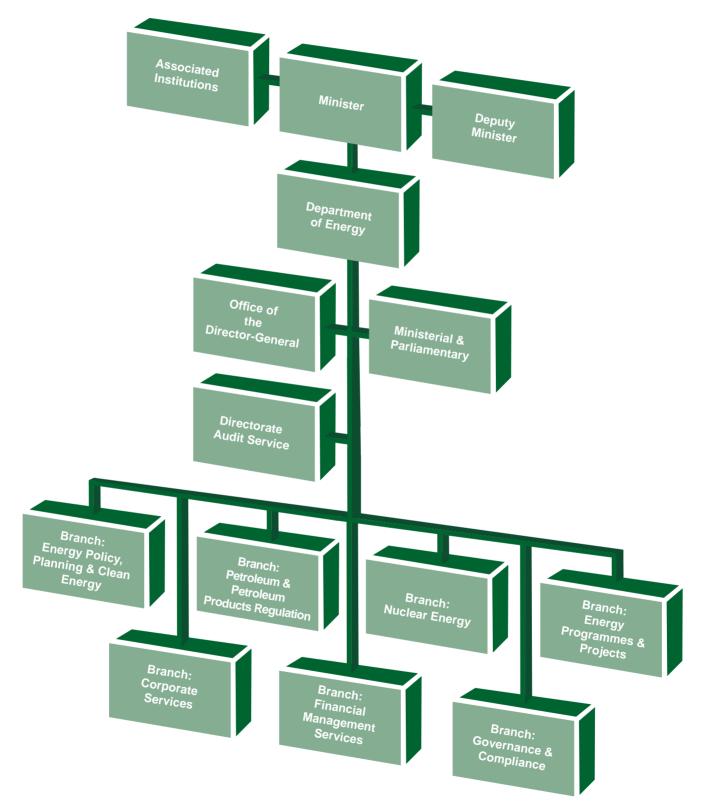


Figure 2: Macro-organisational structure of the DoE

#### 6.7 Description of the Strategic Planning Process

The DoE, through Executive Committee decision, established an SSC to drive the entire strategic agenda planning procees across. The SSC consists of branch representatives from both support and line function.

The SSC has developed what is termed the Strategic Alignment Document with the purpose of ensuring that the DoE Strategic Plan and APP are aligned to the MTSF and NDP as approved by Cabinet respectively, including Government broader policy priorities.

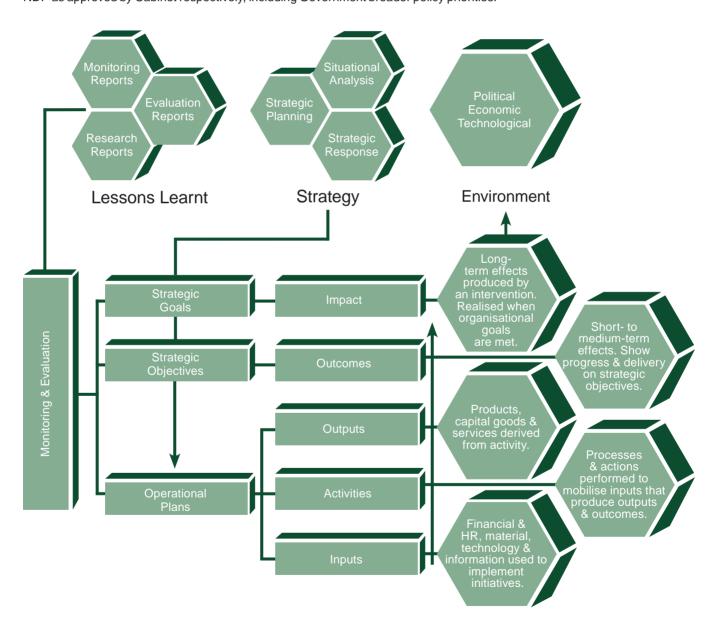


Figure 3: DoE strategic planning process

Figure by Dr Clifford Ferguson, Director of Strategy and Policy, Government Pensions Administration Agency.

# 7 STRATEGIC OUTCOMES-ORIENTATED GOALS

Table 8: DoE's Strategic Outcomes-Orientated Goals

Strategic Outcomes-Orientated Goals	Goal Statement
1. Security of Supply	To ensure that energy supply is secure & demand is well managed.
2. Infrastructure	To facilitate an efficient, competitive & responsive energy infrastructure network.
3. Regulation & Competition	To ensure that there is improved energy regulation & competition.
4. Universal Access & Transformation	To ensure that there is an efficient & diverse energy mix for universal access within a transformed energy sector.
5. Environmental Assets	To ensure that environmental assets & natural resources are protected & continually enhanced by cleaner energy technologies.
6. Climate Change	To implement policies that adapt to & mitigate the effects of climate change.
7. Corporate Governance	To implement good corporate governance for effective & efficient service delivery.





### 1 PROGRAMME 1: ADMINISTRATION

### 1.1 Purpose

To provide strategic support and management services to the Ministry and the Department of Energy (DoE).

- Ministry
- Departmental Management
- Governance and Compliance
- Finance Administration
- Audit Services
- Corporate Services
- Office Accommodation



promoting openness, integrity & service delivery within the DoE Improved service delivery & responsible governance will attainment of positive audit ensure effective & efficient Effective, responsive & accountability. outcome. making & control efficiently whilst ensuring compliance to the To ensure responsiveness through improved decision upholding accountability. performance of the DoE To improve the financial Justification egislation framework. 100% approved invoices paid Clean audit outcome for the Average MPAT score of at least assessment of 2018/19; with at 5 Institutional Operational Plan least the following sub-scores: reports & 20 quarterly reports within 30 days of receipt. 3.75 achieved for moderated Five-Year Target KPA 1 – 3.75; KPA 2 – 3.75; KPA 3 – 3.75; & KPA 4 – 3.75. produced. Based on the MPAT published by the DPME for 2012/13, the DoE assessment of 2013/14; with at 2013/14 unqualified audit least the following sub-scores: 100% approved invoices report by AG achieved. achieved 3.1 for moderated paid within 30 days of KPA 3-3.1; & KPA 1 – 3.3; KPA 2 – 3.2; KPA 4 – 2.9. receipt. chain management annually over long- & short-term strategic management processes; & planning processes toward a Five-Year Strategic Plan decision making in the top corruption levels annually; administrative leadership approved annual Internal To promote & ensure effective annual monitoring of the responsive & compliant supply improvement planning & governance & integrity of the & quarterly oversight of Objective Statement 3-year service delivery governance structures evaluation & reporting DoE's operations through: accordance with the quarterly monitoring, support to political & reduction of fraud & effectiveness for the DoE Fable 9: Strategic Objective 1.1-1.5 of Programme 1 monthly & quarterly management, integrated improved systems governance & risk annual strategic & through sound financial of internal control, of organisational management in financial planning, & operational risk To achieve financial sector entities. performance; the MTEF period. Audit Plan; & APP; SDIP: Resource Management Corporate Governance Resource Management SO 1.2 To Ensure Effective & SO 1.2 To Ensure Effective & Corporate Resource Practices within the SO 1.3 To Ensure Effective SO 1.1 To Promote Sound Strategic Objective Sound Financial Sound Financial Management

Table 9: Strategic Objective 1.1-1.5 of Programme 1 (continued)

Linke	Compliance tregulatory recto ensure traraccountability service-driver	n 2014-2019 MTSF. and livery rowth; sive are for all; ble tare tt are inually
unstification.	- Effective resource management is a priority for the DoE to improve efficiency & service delivery In this regard, the Corporate Services branch will assign the appropriate resources to the required functions as & when required.	The approach is to broaden our focus & response beyond outcomes in the signed delivery agreements by the Minister.  The Minister signed the following delivery agreements:  Outcome 4: Decent employment through inclusive economic growth;  Outcome 6: An efficient, competitive & responsive economic infrastructure network;  Outcome 7: Vibrant, equitable, sustainable rural communities contributing toward food security for all;  Outcome 8: Sustainable human settlement & improved quality of household life; & Outcome 10: Environmental assets & natural resources that are well protected & continually
Five-Year Target	100% support provided to the core business of DoE through HRMD, auxiliary support services, security risk management, legal services & communications.	5 annual progress reports which detail the implementation of the 2014-2019 MTSF Outcomes 4, 6, 8 & 10 signed by DoE Minister.
Raseline	- Vacancy rate below 10% maintained Implementation of the - HR Plan (Phase 2) 1.8% of people with disabilities employed 50% of women in SMS positions.	<b>∀</b> X
Objective Statement	To annually improve the operational excellence within the organisation through the management of strategic corporate services to the DoE.	To provide executive, coordination, facilitation & administration services to the Ministry, DG & DDGs.
Strategic Objective	SO 1.3 To Ensure Effective Corporate Resource Management	SO 1.4 To Provide Executive & Administration Support Services to the Ministry, DG & DDGs

	Links	SoNA 2015
:	Justification	<ul> <li>South Africa is surrounded by gas-rich countries, while we have discovered shale gas deposits in our own Karoo region.</li> <li>Government is also exploring the procurement of the 9 600 MW Nuclear New Build Programme as approved in the IRP 2010-2030.</li> <li>To date, Government has signed inter-governmental agreements &amp; carried out vendor parade workshops in which 5 countries came to present their proposals on nuclear.</li> <li>These include the United States of America, South Korea, Russia, France &amp; China. All these countries will be engaged in a fair, transparent, &amp; competitive procurement process to select a strategic partner or partners to undertake the Nuclear New Build Programme. Our target is to connect the first unit to the grid by 2023, just in time for Eskom to retire part of its aging power plants.</li> <li>With regards to hydro power, the GIHP partnership with the DRC will generate over 48 000 MW of clean hydroelectricity. South Affrica will have access to over 15 000 MW.</li> </ul>
;	Five-Year larget	- 90 bilateral intergovernmental engagements or visits hosted in the energy sector, excluding African (inbound & outbound) countries, including; China, Russia, France, USA, South Korea, Japan, Canada, Brazil & Iran regarding the Nuclear Programme.  50 Bilateral intergovernmental engagements or visits hosted in the energy sector, with African states (inbound & outbound), countries, including; Mozambique, Angola, Namibia, Tanzania & Algeria regarding shale gas; & DRC, Zimbabwe & Zambia regarding hydro power.
(	Baseline	intergovernmental engagements or visits hosted in the energy sector, excluding Africa (inbound & outbound).  16 bilateral intergovernmental engagements or visits hosted in the energy sector, with African states (inbound & outbound).
Table 9: Strategic Objective 1.1-1.5 of Programme 1 (continued)	Objective Statement	Monthly & quarterly support to political & administrative leadership decision making in the top governance structures & quarterly oversight of sector entities.
Table 9: Strategic Objective	Strategic Objective	SO 1.5 To Provide Strategic Support of Energy Security

Table 10: Overview of Programme 1: Administration

		Baseline					MTEF		
				Appropriation					
	Audited Outcome			Voted (Main)	Adjusted	Revised Indicative Baseline		Baseline	
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18	
Sub-Programmes				Rand Th	ousand				
Ministry	28 510	23 552	35 536	25 414	30 427	27 308	28 130	29 350	
Departmental Management	25 770	32 822	43 271	51 434	51 265	52 092	54 133	57 153	
Finance Administration	39 358	30 116	27 204	35 369	35 551	34 292	34 978	36 899	
Audit Services	4 471	5 863	4 564	5 530	5 592	7 727	7 669	7 989	
Corporate Services	69 320	97 854	97 290	91 127	105 257	86 678	88 581	93 327	
Office Accommodation	25 260	25 617	24 693	35 248	29 198	34 501	32 061	33 311	
Total	192 689	215 824	232 558	244 122	257 290	242 598	245 552	258 029	

<b>Economic Classification</b>				Rand Th	ousand			
Current payments	188 472	205 086	221 076	238 553	250 846	237 281	240 063	252 226
Compensation of employees	82 526	91 419	112 636	132 787	136 564	131 214	140 782	149 390
Salaries & wages	72 706	80 859	99 403	114 197	117 974	117 833	126 491	134 242
Social contributions	9 820	10 560	13 233	18 590	18 590	13 381	14 291	15 148
Goods & services of which:	105 946	113 667	108 440	105 766	114 282	106 067	99 281	102 836
Administrative fees	1 130	1 335	1 803	1 144	1 819	1 884	1 747	1 827
Advertising	1 363	1 089	5 707	1 679	4 113	4 099	3 231	3 258
Assets less than the capitalisation threshold	198	124	380	3 098	3 118	2 953	2 732	2 834
Audit costs: External	4 104	4 781	4 460	3 149	3 149	3 572	3 313	3 450
Bursaries: Employees	837	793	696	871	871	853	792	823
Catering: Departmental activities	1 304	663	610	637	639	621	588	614
Communication (G&S)	4 532	4 716	5 375	6 640	7 020	4 253	4 014	4 126
Computer services	6 598	3 927	7 397	5 743	5 743	6 854	6 284	6 533
Consultants & professional services: Business & advisory services	20 064	5 578	3 511	3 966	3 968	6 098	5 614	5 800
Consultants & professional services: Legal costs	914	4 374	504	491	1 457	450	418	435
Contractors	1 387	3 020	1 912	1 347	1 347	1 295	1 203	1249
Agency & support/outsourced services	371	355	995	790	790	772	719	748
Entertainment	114	57	67	169	169	142	132	137
Fleet services (including Government motor transport)	-	162	301	515	662	505	471	488

Table 10: Overview of Programme 1: Administration (continued)

		Baseline				MTEF			
		Audited Outcome			Appropriation  Voted (Main)  Adjusted		Revised Indicative Baseline		
	Aud								
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18	
<b>Economic Classification</b>				Rand Th	nousand				
Inventory: Clothing material & accessories	-	,	-	2	2	2	2	2	
Inventory: Fuel, oil & gas	16	20	-	4	4	4	4	4	
Inventory: Learner & teacher support material	-	1	-	-	-	-	-	-	
Inventory: Materials & supplies	121	228	-	33	33	32	30	31	
Inventory: Medicine	24	-	-	-	-	-	-	-	
Inventory: Other supplies	385	384	-	-	-	-	-	-	
Consumable supplies	-	-	597	340	350	1 711	1 605	1 781	
Consumable: Stationery, printing and office supplies	2 059	1 810	3 274	2 630	2 744	3 468	3 186	3 277	
Operating leases	25 829	27 575	26 297	36 858	36 106	36 083	33 531	34 837	
Property payments	472	20 147	6 181	2 307	3 357	-	-	-	
Transport provided: Departmental activity	-	-	90	16	16	16	15	15	
Travel & subsistence	24 214	24 020	29 870	22 922	26 302	21 089	20 874	21 458	
Training & development	2 058	1 396	3 077	5 239	4 364	4 269	3 955	4 099	
Operating payments	2 516	5 176	1 939	1 892	2 112	1 930	1 925	1 999	
Venues & facilities	5 334	1 936	3 369	2 931	3 674	2 767	2 574	2 677	
Rental & hiring	2	-	28	353	353	345	322	334	
Transfers & subsidies	129	156	170	374	1 249	1 310	1 394	1 476	
Departmental agencies & accounts	-	-	-	-	875	922	985	1 047	
Households	129	156	170	374	374	388	409	429	
Payments for capital assets	4 029	10 548	11 312	5 195	5 195	4 007	4 095	4 327	
Transport equipment	1 259	350	-	-	-	-	-	-	
Other machinery & equipment	2 770	9 583	11 312	5 195	5 195	4 007	4 095	4 327	
Software & other intangible assets	-	615	-	-	-	-	-	-	
Payments for financial assets	-	-	-	-	-	-	-	-	
Total	192 689	215 824	232 558	244 122	257 290	242 598	245 552	258 029	

### 1.4 Risk Management

The DoE fully understands its statutory obligations in respect of enterprise risk management. To that end, the DoE will continue to enhance the risk management culture as contemplated in Section 38(1)(a)(i) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), as amended. The DoE is guided by the Public Sector Risk Management Framework, 2008, which aims to support institutions to improve and sustain their performance by enhancing systems of risk management.

Internal audit will play a pivotal role in the combined assurance framework by providing independent assurance over governance, risk management and systems of internal control as well as over the combined assurance framework. Contributors in this role predominantly include internal audit, risk management, quality assurance, external auditor and management. This is based on the best practices adopted by the King III Report and Code on Good Corporate Governance (King III).

Table 11: Risk exposures for Programme 1

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 1.2 To Ensure Effective & Sound Financial Resource Management	To provide financial management, accounting, & supply chain & asset management services to the DoE.	Termination of services by service providers.	Reputation of DoE tarnished.     Failure to meet service delivery targets on time.     Failure to spend budget.     Financial loss.	<ul> <li>Improve the process of appointment of reputable service providers.</li> <li>Enforcement of penalty clauses for non-compliance.</li> <li>Supplier performance management.</li> </ul>
		Provision of inaccurate & unreliable financial information.	<ul> <li>Audit findings.</li> <li>Inaccurate         <ul> <li>annual financial</li> <li>statements.</li> </ul> </li> <li>Incorrect decisions.</li> </ul>	<ul> <li>Automated controls.</li> <li>Training on financial reporting skills.</li> <li>Increase coordination between the role players.</li> </ul>



## 2 PROGRAMME 2: ENERGY POLICY AND PLANNING

### 2.1 Purpose

To ensure evidence-based planning, policy setting and investment decisions in the energy sector to improve energy security through supply- and demand-side management options and increase competition through regulation.

- Policy Analysis and Research
- Energy Planning
- Hydrocarbon Policy
- Electricity, Energy Efficiency and Environment Policy



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Table 12. Strategic Objective 2.1-2.0 of Programme 2	3 2.1-2.0 UI FIUGIAIIIII 2				
Strategic Objective	Objective Statement	Baseline	Five-Year Target	Justification	Links
SO 2.1 To Improve Energy Security	To improve energy security by:  regulating demand & introducing a diversified mix of energy generation & EE technologies on an ongoing basis;  increasing competition in the energy sector by introducing IPPs, using renewable technologies through a bidding process on an annual basis;  planning interventions to expand energy infrastructure through the development of a policy framework for the IEP, IRP, the 20YLFIRM, GUMP, the TDP & the Major Distribution Infrastructure Plan over the medium term; & publishing an Annual Energy Statistics Report to facilitate information-based decision-making.	Annual Energy Balance (2012) published by March 2015.	Annual Report on Energy Balances provided to support compilation of the GHG inventory.	South Africa has committed to implement mitgation actions that will collectively result in a 34% & 42% deviation below its "business as usual" emissions growth trajectory by 2020 & 2025. Actions will include interventions that will mitgate against the effects of climate change. The NDP also recognises that the actions related to adaptation will depend on strong policies supported by a sound technical understanding & operational capacity to deal with developmental challenges. The desired outcomes include a reduction in impacts of climate change, risk mitigation through appropriate disaster responses & the deployment of innovative technologies that combat the effects of climate change.	Outcome 10, Sub-Outcome 2: Effective climate change mitigation & adaptation response.
	,				

Table 12: Strategic Objective 2.1-2.6 of Programme 2 (continued)

Justification Links	Take a decision on expanding outcome 6: An efficient competitive & responsive economic infrastructure network.
Justi	
Five-Year Target	Liquid fuels energy security developed & implemented & the 20YRLFMP improved (Cabinet approval of proposals) by June 2016. Introduce biofuels into the liquid fuels industry through mandatory blending. Develop a national coal policy with regulations that will include a strategy to secure coal supply & that aligns with the Mining Beneficiation Action Plan by July 2016.  The draft GUMP submitted for Ministerial approval state inputs. GUMP publication by March 2015.
ine	Refinery audits completed for the 20YRLFMP. The draft GUMP submitted for Ministerial approval for state inputs.
Baseline	- Refinery audits complete for the 20YRLFMP The draft GUMP submitted for Ministerial approval for state inputs.
Objective Statement	To improve energy security by: regulating demand & introducing a diversified mix of energy generation & EE technologies on an ongoing basis; increasing competition in the energy sector by introducing IPPs, using renewable technologies through a bidding process on an annual basis; planning interventions to expand energy infrastructure through the development of a policy framework for the IEP, IRP, the 20YLFIRM, GUMP, the TDP & the Major Distribution Infrastructure Plan over the medium term; & publishing an Annual Energy Statistics Report to facilitate information-
Strategic Objective	SO 2.2 To Improve Liquid Fuels Energy Security by Developing & Implementing the Liquid Fuels 20-Year Infrastructure Plan

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Table 12: Strategic Objective 2.1-2.6 of Programme 2 (continued)
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Links	Outcome 6: An efficient competitive & responsive economic infrastructure network.
Justification	Review economic regulators (existing & potential), consider further consolidation &/or additions & update related legislation & subsidiary regulations.
Five-Year Target	The Electricity Regulation Amendment Bill & National Energy Regulator Amendment Bill introduced for consideration & support their promulgation if approved by Cabinet & Parliament.  Develop an electricity price path in line with the updated IRP & promulgate by March 2015.  Develop a PSP Framework in the energy sector in base-load & renewable electricity generation, liquid fuels & gas within the context of Cabinet-approved policy & with an analysis of the implications for tariffs. Develop SFF Bill & improve LPG usage, shale gas, fuel gas, bio-mass & Operation Phakisa.  Renewable energy IPP Bid Windows 1, 2, 3 & 4 of 6 725 MW of renewable energy by 31 March 2019.  Hydropower IPP based on Inga &/or Mozambique's hydro resources launched. Hydropower Procurement Framework completed by March 2015.  Ratification of the Inga Treaty by Cabinet by March 2016.  Procurement of power from Inga supported by March 2017.  Review the bulk electrical infrastructure required for universal access to electricity, prepare an implementation plan & implementi it (submission of implementation plan to Cabinet).  The NESMO Bill introduced for consideration & support its promulgation by March 2015.  Position paper based on stakeholder re-engagement on establishment of the NESMO Bill introduced to Cabinet by March 2016.  Regulations emanating from the NESMO Bill drafted by March 2017.  Regulations emanating from the NESMO Bill drafted & reviewed by March 2018.  Regulations emanating from the NESMO Bill drafted & reviewed by March 2018.
Baseline	with updated IRP.  Updated IRP presented to Cabinet for approval.  Introduce the National Energy Regulator Bill for consideration & support by Cabinet & by Parliament.  Review & integrate the STDP, including international connections into neighbouring countries into the IRP.
Strategic Objective Objective Statement	To address current & envisaged energy supply & distribution constraints by developing the planned ADAM for the rehabilitation of critical municipal electricity distribution infrastructure.
Strategic Objective	SO 2.3 To Review Policy & Regulations to Ensure Security of Supply SO 2.4 To Review the Bulk Electrical Infrastructure Required for the Universal Access to Electricity SO 2.5 To Establish Mechanisms to Refund Capital & to Create a Smooth Price Path over the Long Term SO 2.6 To Ensure Security of Supply through Additional Power Generation Capacity

Table 13: Overview of Programme 2: Energy Policy and Planning

	Baseline						MTEF		
				Appro	priation				
	Aud	dited Outco	me	Voted (Main)	Adjusted	Revised	I Indicative	Baseline	
	2011/12	2012/13	2013/14	20°	14/15	2015/16	2016/17	2017/18	
Sub-Programmes				Rand Th	ousand				
Policy Analysis & Research	3 443	11 595	2 337	4 425	3 486	1 450	1 417	1 483	
Energy Planning	17 120	14 376	18 380	25 356	32 112	23 004	23 335	24 574	
Hydrocarbon Policy	1 515 456	1 513 077	15 402	14 519	13 900	12 860	13 542	14 323	
Electricity, EE & Environmental Policy	5 901	5 181	11 637	8 283	8 055	7 782	8 171	8 624	
Total	1 541 920	1 544 229	47 756	52 583	57 553	45 096	46 465	49 004	
Economic Classification				Rand Th	ousand				
Current payments	41 920	44 190	47 748	52 583	57 553	45 096	46 465	49 004	
Compensation of employees	30 390	32 309	28 348	35 495	33 148	31 735	33 894	35 928	
Salaries & wages	26 924	28 426	25 153	30 525	28 178	28 243	30 164	31 974	
Social contributions	3 466	3 883	3 195	4 970	4 970	3 492	3 730	3 954	
Goods & services of which:	11 530	11 881	19 400	17 088	24 405	13 361	12 571	13 076	
Administrative fees	259	252	368	485	485	453	425	469	
Advertising	159	299	1 012	450	450	303	283	294	
Assets less than the	22	299	1012	33	33	27	31	31	
capitalisation threshold	22	'	_	33	33	21	31	31	
Catering: Departmental activities	74	36	51	189	189	186	172	180	
Communication (G&S)	235	432	441	794	794	626	565	594	
Computer services	-	-	439	27	27	26	49	66	
Consultants & professional services: Business & advisory services	6 681	5 928	9 643	1 107	8 424	5 998	4 674	4 936	
Contractors	-	172	59	109	109	106	98	102	
Agency & support/outsourced services	3	-	-	-	-	-	-	-	
Inventory: Learner & teacher support material	2	1	-	-	-	-	-	-	
Inventory: Materials & supplies	1	-	-	-	-	-	-	-	
Consumable supplies	-	-	8	1	1	21	19	20	
Consumable: Stationery, printing & office supplies	285	58	334	417	417	342	343	311	
Operating leases	1	-	10	-	-	-	-	-	
Property payments	-	-	-	-	-	-	116	49	
Travel & subsistence	3 334	3 776	4 993	9 171	9 171	4 428	4 216	4 439	
Training & development	123	136	151	-	-	14	156	130	
Operating payments	107	211	381	488	488	480	217	247	
Venues & facilities	244	579	1 510	3 817	3 817	351	1 207	1 208	

Table 13: Overview of Programme 2: Energy Policy and Planning (continued)

			Baseline				MTEF		
				Appro	priation				
	Audited Outcome			Voted (Main)	Adjusted	Revised Indicative Baseline			
	2011/12	2012/13	2013/14	201	14/15	2015/16	2016/17	2017/18	
Economic Classification	Rand Thousand								
Transfers & subsidies	1 500 000	1 500 031	8	-	-	-	-	-	
Public corporations	1 500 000	1 500 000	-	-	-	-	-	-	
Households	-	31	8	-	-	-	-	-	
Payments for capital assets	-	7	-	-	-	-	-	-	
Other machinery & equipment	-	7	-	-	-	-	-	-	
Payments for financial assets	-	1	-	-	-	-	-	-	
Total	1 541 920	1 544 229	47 756	52 583	57 553	45 096	46 465	49 004	

## 2.4 Risk Management

Table 14: Risk exposures for Programme 2

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 2.1 To Improve Energy Security	To improve energy security by:  - regulating demand & introducing a diversified mix of energy generation & EE technologies on an ongoing basis;  - increasing competition in the energy sector by introducing IPPs, using renewable technologies through a bidding process on an annual basis;  - planning interventions to expand energy infrastructure through the development of a policy framework for the IEP, the IRP, the 20YLFIRM, the GUMP, the TDP & the Major Distribution Infrastructure Plan over the medium term; &  - publishing an Annual Energy Statistics Report to facilitate information-based decision making.	<ul> <li>Poor IEP.</li> <li>Inability to plan for future energy supply.</li> </ul>	<ul> <li>Wrong decision making in terms of policy, structure, investment, planning, etc.</li> <li>Lack of security in energy supply.</li> <li>Bad reputation.</li> <li>Lack of economic growth.</li> <li>Outdated or irrelevant National Energy Policy.</li> </ul>	<ul> <li>Develop SOPs for data collection &amp; management processes.</li> <li>Develop a standard template for the collection of data.</li> <li>Liaison with local energy stakeholders to provide accurate &amp; correct energy data.</li> <li>Establishment of the energy data task teams for interpretation, analyses &amp; classification of energy data across various energy commodities.</li> <li>Automation &amp; streamlining of energy data.</li> <li>Increase capacity by employing permanent members.</li> <li>Increase capacity by employing permanent staff members or interns until the full functioning of the programme.</li> </ul>

# 3 PROGRAMME 3: PETROLEUM AND PETROLEUM PRODUCTS REGULATION

### 3.1 Purpose

To manage the regulation of petroleum and petroleum products to ensure optimum and orderly functioning of the petroleum industry to achieve Government's developmental goals.

- Petroleum Compliance, Monitoring and Enforcement
- Petroleum Licensing and Fuel Supply
- Fuel Price Regulation
- Regional Petroleum Regulation Offices



Compliance with import & export Outcome 4: Decent employment economic infrastructure network. conditions & enforcement of the submission of data by industry. through inclusive economic Outcome 6: An efficient, competitive & responsive growth. wholesalers & retailers to ensure of access to information requests industry retail & site licence governmental departments will align their programmes turnaround time to 60 days. arbitration requests & promotion adjudicated within 90 days. competitive pricing of petroleum margins & the process of paying updating elements of the BFP & determination, review, update & Conduct retail site inspections ensuring secure audit services has made a commitment In an effort to contribute a licence application be to job creation, the DoE for petroleum manufacturers, conditions is a priority for the egal & commercial licensing on behalf of the controller of The act prescribes that maintenance of fuel levies & for the auditing of fuel prices to ensure the internationally to reduce the new-tocompliance with the Liquid sub-programme, including Job creation remains Fuels Charter & technical, This objective entails the developing, evaluating & monitoring price models; a central priority of Justification Government & all administration includes with job creation fuel levies. Fuel price petroleum products. imperatives. products. margin adjustments using RAS Enforcement notices issued in inspections (target 1 200 retail non-compliance is identified site compliance inspections Report on the fuel prices & 45% of license applications during routine compliance approved have 50% BEE Five-Year Target conducted). ownership. inspections (baseline 2 000 retail Implementation of RAS margins Enforcement notices issued in non-compliance is identified site compliance inspections 30% of license applications during routine compliance approved have 50% BEE 85% of cases where (submission). conducted). ownership. investors in the liquid fuels sector pricing mechanism that rewards to legislation & its regulations in to achieve affordable petroleum compliance to the RAS in order To monitor & enforce technical, order to promote development & economic transformation of wholesalers, manufacturers & To promote a transparent fuel legal & economic compliance retailers with the Liquid Fuels licences on an ongoing basis. Charter in the adjudication of by implementing, continuous the South African liquid fuels HDIs in the petroleum sector **Objective Statement** by enforcing compliance by To facilitate participation of throughout the value chain Table 15: Strategic Objective 3.1-3.3 of Programme 3 monitoring & evaluation of products prices. ndustry. South African Petroleum SO 3.1 To Ensure Compliance & Liquid Fuels Industry SO 3.3 To Ensure Transparent Transformation of the Petroleum Products Strategic Objective Enforcement in the through Issuing of Petroleum Sector SO 3.2 To Promote the Fuel Pricing of Monitoring & Licences

Table 16: Overview of Programme 3: Petroleum and Petroleum Products Regulation

		Baseline					MTEF		
					oriation				
	Audited Outcome			Voted (Main)	Adjusted	Revised	ised Indicative Baseline		
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18	
Sub-Programmes	Rand Thousand								
Petroleum Compliance, Monitoring & Enforcement	1 240	4 215	6 797	16 277	18 147	15 143	13 502	14 126	
Petroleum Licensing & Fuel Supply	13 927	11 625	15 473	21 051	21 013	20 291	23 967	25 638	
Fuel Price Regulation	-	12 423	3 566	14 920	14 874	8 631	8 035	8 439	
Regional Petroleum Regulation Offices	-	-	-	30 497	30 497	30 313	31 034	32 463	
Total	15 167	28 263	25 836	82 745	84 531	74 378	76 538	80 666	

Economic Classification				Rand Th	ousand			
Current payments	15 153	28 255	25 783	82 745	84 531	74 378	76 538	80 666
Compensation of employees	13 843	22 752	19 084	50 347	49 106	50 926	54 389	57 653
Salaries & wages	12 059	19 510	16 592	43 299	42 058	45 329	48 411	51 316
Social contributions	1 784	3 242	2 492	7 048	7 048	5 597	5 978	6 337
Goods & services of which:	1 310	5 503	6 699	32 398	35 425	23 452	22 149	23 013
Administrative fees	46	119	128	383	383	375	349	363
Advertising	43	352	3 175	1 104	1 104	1 080	1 004	1 043
Assets less than the capitalisation threshold	-	-	2	197	197	194	181	186
Catering: Departmental activities	10	272	217	489	489	432	444	462
Communication (G&S)	99	194	302	710	710	695	647	673
Computer services	-	-	-	1 111	1 111	194	182	189
Consultants & professional services: Business & advisory services	287	1 743	396	14 784	17 654	9 673	9 789	10 528
Consultants & professional services: Laboratory services	-	-	-	-	-	-	-	-
Contractors	35	2	-	23	23	22	22	22
Agency & support/outsourced services	-	2	-	8	8	8	7	7
Entertainment	-	-	-	5	5	6	5	5
Fleet services (including Government motor transport)	-	-	-	192	192	188	175	182
Inventory: Materials & supplies	-	-	-	-	-	-	-	-
Inventory: Other supplies	3	2	-	82	82	81	75	78
Consumable supplies	-	-	6	314	321	307	286	297

Table 16: Overview of Programme 3: Petroleum and Petroleum Products Regulation (continued)

			Baseline				MTEF	
					oriation			
	Audited Outcome		Voted (Main)	Adjusted	Revised Indicative Baseline		Baseline	
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18
Economic Classification				Rand Th	nousand			
Consumable: Stationery, printing & office supplies	15	171	47	92	242	90	84	87
Operating leases	-	-	9	-	-	-	-	-
Property payments	-	4	-	30	30	29	27	28
Transport provided: Departmental activity	-	-	-	47	47	46	43	45
Travel & subsistence	668	1 929	1 649	8 230	8 230	5 652	4 748	4 586
Training & development	97	537	608	-	-	-	-	-
Operating payments	7	30	108	2 865	2 865	2 804	2 617	2 710
Venues & facilities	-	146	52	1 658	1 658	1 504	1 397	1 452
Rental & hiring	-	-	-	74	74	72	67	70
Transfers & subsidies	14	8	53	-	-	-	-	-
Households	14	8	53	-	-	-	-	-
Total	15 167	28 263	25 836	82 745	84 531	74 378	76 538	80 666

### 3.4 Risk Management

Table 17: Risk exposures for Programme 3

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 3.2 To Promote the Transformation of the South African Petroleum & Liquid Fuels Industry through Issuing of Licenses	To facilitate participation of HDIs in the petroleum sector by enforcing compliance by wholesalers, manufacturers & retailers with the Liquid Fuels Charter in the adjudication of licences on an ongoing basis.	Lack of scientific market analysis to determine number of operators.     GIS information not included in the PPALS.	Oversaturation of the market.     Unutilised trading infrastructure.     Retrenchment of employees.     Unwarranted pressure on social security system.     Failure to meet licensing objectives targets.	<ul> <li>Develop scientific analysis tool.</li> <li>Finalise SOPs.</li> <li>International benchmark.</li> <li>Alignment with macro-spatial framework (national, regional, etc. Spatial Development Framework).</li> </ul>
		- Regulatory framework not achieving objectives.	<ul> <li>Possible litigations.</li> <li>Unlawful operators.</li> <li>Increased non-compliance.</li> </ul>	- Make recommendations to the Policy & Planning branch to amend the legislative frameworks Approval of SOPs.

# 4 PROGRAMME 4: ELECTRIFICATION AND ENERGY PROGRAMME AND PROJECT MANAGEMENT

### 4.1 Purpose

To manage, coordinate and monitor programmes and projects focused on access to energy.

- Integrated National Electrification Programme
- Programmes and Projects Management Office
- Energy Infrastructure



sustainable & reliable access Outcome 7, Sub-Outcome 5: Outcome 9, Sub-Outcome 1: services, particularly in education oublic transport in the rural increased access to quality economic infrastructure network. Infrastructure & functional healthcare & public transport in Members of society have education, healthcare & services, particularly in Outcome 7, Sub-Outcome 5: Increased access to quality infrastructure & functional competitive & responsive Outcome 6: An efficient, to basic services. rural areas. areas. major projects such as new Compliance to contractual Monitor implementation of the needs of the economy with the IRP 2010 to meet New Electrification Household Reporting systems in the development. Accelerate of the DoE are delivered on time, at cost & within the construction of new capacity in accordance To ensure that projects & to address historical generation to support electricity generation obligations in the IPP signed agreements. SIP 9: Electricity Justification DoE streamlined. socioeconomic imbalances. Strategy (2025) scope. 1 089 000 grid connections 1 050 000 (75%) household Develop a coherent project households by March 2019 Total non-grid connections the SWH quantity installed, 1 452 000 total grid target) amount of energy saved & successfully implemented Monitoring & reporting on reports on the number of of 1 400 000 households by March 2019 of which will be in the rural areas. by March 2019 of which 86 250 (75%) are in the availability of resources. training conducted with of 115 000 households contractual obligations. A total grid connection management business Ensure compliance to of rural households by (75% of 105 000 total the NSWHP, pending Development of rural Five-Year Target March 2019 (75% of connections of rural Quarterly progress 78 750 non-grid non-grid target). energy centres. rural areas. process. projects. Electrification infrastructure The number of households To improve project management the current REIPPP, future cogeneration & coal & gas & training conducted with implementation of energy practices across the branches amount of energy saved determination, including availability of resources. Monitor & report on the SWH quantity installed, non-grid electrification the NSWHP, pending electrified with grid & through the National projects emanating Electrification Plan. rom the Ministerial Baseline Monitoring the National EMP. IPP projects. completed. To improve project management practices across the branches. Facilitate universal access to **Objective Statement** infrastructure development Fable 18: Strategic Objective 4.1-4.3 of Programme 4 projects programmes. Monitoring of energy energy. Programmes & Projects Strategic Objective SO 4.1 To Ensure Access SO 4.3 To Monitor Energy to Electricity by Infrastructure Development Management Households SO 4.2 To Enhance

power stations.

Table 19: Overview of Programme 4: Electrification and Energy Programme and Project Management

			Baseline				MTEF		
				Approp	riation				
	Aud	dited Outco	me	Voted (Main)	Adjusted	Revised	d Indicative E	Baseline	
	2011/12	2012/13	2013/14	2014	4/15	2015/16	2016/17	2017/18	
Sub-Programmes				Rand Ti	nousand				
INEP	3 264 539	3 110 878	3 907 895	4 165 901	4 175 122	5 741 708	5 996 367	6 353 231	
Energy Regional Office	18 086	19 472	33 204	7 831	7 831	11 950	12 763	13 528	
Programme & Projects Management Office	-	1 498	5 926	8 994	9 138	9 640	9 498	9 955	
Energy Infrastructure/Industry Transformation	349	845	4 262	9 798	8 385	9 420	9 938	10 515	
Community Upliftment Programmes & Projects	3 515	3 662	7 238	6 688	8 140	5 579	5 712	6 021	
Total	3 286 489	3 136 355	3 958 525	4 199 212	4 208 616	5 778 297	6 034 278	6 393 250	
Economic Classification				Rand Th	nousand				
Current payments	43 208	47 092	72 011	49 896	50 396	53 647	55 274	58 303	
Compensation of employees	31 832	35 078	46 050	35 343	33 810	38 864	41 507	43 998	
Salaries & wages	27 949	30 828	40 759	30 395	28 862	34 627	36 982	39 201	
Social contributions	3 883	4 250	5 291	4 948	4 948	4 237	4 525	4 797	
Goods & services of which:	11 376	12 014	25 961	14 553	16 586	14 783	13 767	14 305	
Administrative fees	659	372	1 152	674	724	906	824	839	
Advertising	471	307	1 544	538	1 038	139	145	168	
Assets less than the capitalisation threshold	7	-	4	728	728	595	562	591	
Catering: Departmental activities	130	452	1 096	616	666	696	661	674	
Communication (G&S)	596	734	485	653	653	792	735	760	
Computer services	-	1	2	316	316	31	42	56	
Consultants & professional services: Business & advisory services	-	2	1	-	2	-	-	-	
Consultants & professional services: Infrastructure & planning	-	-	-	-	-	-	-	-	
Contractors	57	54	67	-	-	-	-	-	
Entertainment	-	-	2	-	-	-	-	-	
Fleet services (including Government motor transport)	-	-	3	1	3	1	1	1	
Inventory: Fuel, oil & gas	1	1	-	-	-	-	-	-	

Table 19: Overview of Programme 4: Electrification and Energy Programme and Project Management (continued)

Table 19: Overview of Program			Baseline			MTEF		
				Approp	riation			
	Au	dited Outco	me	Voted (Main)	Adjusted	Revised	Revised Indicative Basel	
	2011/12	2012/13	2013/14	2014	1/15	2015/16	2016/17	2017/18
Economic Classification				Rand Th	nousand			
Inventory: Materials & supplies	-	3	-	-	-	-	-	-
Inventory: Medicine	-	-	-	1	1	-	-	-
Inventory: Other supplies	6	105	-	-	-	-	-	-
Consumable supplies	-	-	136	160	160	81	79	82
Consumable: Stationery, printing & office supplies	55	276	20	856	856	263	249	265
Operating leases	-	-	390	-	14	-	-	-
Transport provided: Departmental activity	-	-	233	105	105	29	14	19
Travel & subsistence	8 241	7 784	15 273	8 516	9 192	9 333	8 660	8 955
Training & development	6	-	133	-	9	-	-	-
Operating payments	72	688	232	586	586	142	154	189
Venues & facilities	1 075	1 225	5 188	803	1 533	1 775	1 641	1 706
Rental & hiring	-	10	-	-	-	-	-	-
Transfers & subsidies	3 243 281	3 089 263	3 886 157	4 149 316	4 158 220	5 724 650	5 979 004	6 334 947
Municipalities	1 096 611	1 151 443	1 634 772	1 104 658	1 104 658	1 980 340	2 036 246	2 197 048
Public corporations	2 018 810	1 879 368	2 141 027	2 948 037	2 948 037	3 613 243	3 776 334	3 946 154
Private enterprises	127 860	58 328	110 320	96 621	105 525	131 067	166 424	191 745
Households	-	124	38	-	-	-	-	-
Payments for capital assets	4 029	10 548	357	-	-	-	-	-
Transport equipment	1 259	350	-	-	-	-	-	-
Other machinery & equipment	2 770	9 583	9	-	-	-	-	-
Software & other intangible assets	-	615	348	-	-	-	-	-
Payments for financial assets	-	-	-	-	-	-	-	-
Total	3 286 489	3 136 355	3 958 525	4 199 212	4 208 616	5 778 297	6 034 278	6 393 250
Transfers & Subsidies				Dond T	nousand			
INEP	127 860	58 328	110 320	96 621	105 525	131 067	166 424	191 745
Eskom - INEP - Indirect grant  Local organising committee for the 2010 FIFA World Cup	1 737 810 281 000	1 879 368	2 141 027	2 948 037	2 948 037	3 613 243	3 776 334	3 946 154
Employee social benefits	_	124	38	_	_	_	_	_
INEP grant	1 096 611	1 151 443	1 314 772	1 104 658	1 104 658	1 980 340	2 036 246	2 197 048
INEP - ADAM	_		320 000	-	_	_	-	_
Total	3 243 281	3 089 263	3 886 157	4 149 316	4 158 220	5 724 650	5 979 004	6 334 947

# 4.4 Risk Management

Table 20: Risk exposure for Programme 4

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 4.1. To Ensure Access to Electricity by Households	To improve the monitoring of provision of electrification programmes in support of universal access to energy.	Non-alignment of INEP with IDPs of municipalities.	- Political instability Policy change.	- Involvement of all the relevant stakeholders during the IDP process & alignment with the electrification strategy Development of implementation plan to drive the electrification between the DoE & municipalities Electrification discussions feature as a standing item on the agenda of municipality EXCOs Discussion of energy-related issues for resolution at Provincial energy forums Escalation of unresolved energy-related issues from Provincial energy forums to MinMec Communication & resolution of energy-related issues during lzimbizos (public engagements).



## 5 PROGRAMME 5: NUCLEAR ENERGY

### 5.1 Purpose

To manage the South African nuclear energy industry and control nuclear material in terms of international obligations, nuclear legislation and policies to ensure the safe and peaceful use of nuclear energy.

- Nuclear Safety and Technology
- Nuclear Non-Proliferation and Radiation Security
- Nuclear Policy



economic infrastructure network. economic infrastructure network. NDP & Outcome 6: An efficient, NDP & Outcome 6: An efficient, competitive & responsive competitive & responsive Thorough investigation of the implications of greater use of Thorough investigation of the implications of greater use of nuclear energy, including its nuclear energy, including its enrichment, fuel fabrication enrichment, fuel fabrication & the dangers of weapons & the dangers of weapons ocalisation & employment ocalisation & employment Justification environmental benefits, opportunities, uranium environmental benefits opportunities, uranium potential costs, safety, potential costs, safety, proliferation. proliferation. National Nuclear Regulator 1999 (Act No. 46 of 1999) relevant decision-making submitted to the relevant submitted to the relevant reports submitted to the amendment completed. applications processed Management Fund Bill within the 8-week time 40 nuclear safeguard 20 nuclear safeguard Act, 1999 (Act No. 47 of 1999) amendment 70% of authorisation Promulgation of the Five-Year Target Promulgation of the Nuclear Energy Act, Promulgation of the compliance reports compliance reports Radioactive Waste 20 nuclear security decision-making compliance audit decision-making completed. completed. structures. structures. structures. period. presentation to the FOSAD relevant decision-making submitted to the relevant submitted to the relevant reports submitted to the Management Fund Bill. applications processed within the 8-week time Consultation with the 70% of authorisation 8 nuclear safeguard 4 nuclear safeguard Consultation with & compliance reports compliance reports presentation of the Radioactive Waste FOSAD Cluster & 2 nuclear security decision-making compliance audit decision-making structures. structures. structures. Cluster. period. & related equipment by enforcing frameworks on an ongoing basis. accounting for nuclear materials To improve the nuclear security relevant regulations & statutory to align with international best To strengthen the control of & statutory framework of South Africa by updating legislation Objective Statement Table 21: Strategic Objective 5.1-5.4 of Programme 5 practices. Material & Equipment Strategic Objective SO 5.1 To Improve Nuclear SO 5.2 To Strengthen the Control of Nuclear Security

Table 21: Strategic Objective 5.1-5.4 of Programme 5 (continued)

Links	NDP & Outcome 6: An efficient, competitive & responsive economic infrastructure network.
Justification	Nuclear procurement process that will culminate in the finalisation of procurement decisions for the Nuclear New Build Programme.
Five-Year Target	- Launch of procurement of the NFC facilities as per the implementation plan Completion of procurement of the NFC facilities as per the implementation plan Commencement of the Construction of the NFC facilities as per the implementation plan Continued construction of the NFC facilities as per the implementation plan Launch of procurement of the nuclear power reactor as per the procurement of the nuclear power reactor as per the procurement of the nuclear power reactor Completion of procurement of the procurement process Commencement process Commencement of the pre-construction of 1 nuclear power station Report on pre-construction of 1 nuclear power station Report on pre-construction activity progress Commencement of process that will culminate in the finalisation of procurement decisions for the Nuclear New Build
Baseline	- Approved NNEECC/ESC procurement framework of October 2013 Implementation plan to NFC strategy submitted to NNEECC/ESC for approval Nuclear localisation strategy submitted to NNEECC/ESC for approval.
Objective Statement	To contribute toward ensuring the security of energy supply by leading, developing & overseeing the implementation of the Nuclear Energy Expansion Programme as guided by the Nuclear Energy Policy & the decision of the NNEECC of October 2013, in accordance with timelines as stipulated in the IRP 2010-2030.
Strategic Objective Objective Statement	SO 5.3 To Improve Security of Energy Supply

Table 21: Strategic Objective 5.1-5.4 of Programme 5 (continued)

Links		NDP & Outcome 6: An efficient, competitive & responsive economic infrastructure network.
uoitegification		Thorough investigation of the implications of greater use of nuclear energy, including its potential costs, safety, environmental benefits, localisation & employment opportunities, uranium enrichment, fuel fabrication & the dangers of weapons proliferation.
Five-Year Target	The following deliverables will be done:  Develop Nuclear New Build Programme Roadmap. Complete financing model in time for the procurement process. Complete Industrialisation Programme to ensure localasation Rindustrialisation Programme to ensure localasation Rindustrialisation Programme to ensure localasation A industrialisation goals are realised. Transactional advisor appointed to provide necessary advice on the Nuclear New Build Programme. Establish the Nuclear PMO to expidite rollout of the New Nuclear Build Programme.	31 public awareness campaigns & community outreach events held.
Baseline		5 public awareness campaigns & community outreach events held.
Objective Statement		Improve nuclear awareness by ensuring compliance with international nuclear obligations by developing, maintaining & implementing an appropriate statutory framework on an ongoing basis.
Strategic Objective	SO 5.3 To Improve Security of Energy Supply (continued)	SO 5.4 To Increase Nuclear Awareness (Nuclear Legislation Framework)

Table 22: Overview of Programme 5: Nuclear Energy

			Baseline				MTEF		
				Approp	oriation				
	Aud	dited Outco	me	Voted (Main)	Adjusted	Revised	Revised Indicative Base		
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18	
Sub-Programmes				Rand Th	nousand				
Nuclear Safety & Technology	637 985	638 887	712 386	832 246	828 481	638 784	653 903	749 723	
Nuclear Non-Proliferation & Radiation Security	519	3 846	5 461	7 338	6 782	7 385	7 861	8 324	
Nuclear Policy	3 762	684	4 654	10 918	8 566	8 229	7 571	7 881	
Total	642 266	643 417	722 501	850 502	843 829	654 398	669 335	765 928	
Economic Classification				Rand Th	nousand				
Current payments	20 781	32 921	23 249	44 072	37 399	35 941	35 986	38 076	
Compensation of employees	7 522	8 875	10 058	20 100	17 427	18 479	19 735	20 919	
Salaries & wages	6 690	7 915	8 859	17 286	14 613	16 492	17 613	18 670	
Social contributions	832	960	1 199	2 814	2 814	1 987	2 122	2 249	
Goods & services of which:	13 259	24 046	13 191	23 972	19 972	17 462	16 251	17 157	
Administrative fees	139	170	410	225	155	120	81	88	
Advertising	150	1 327	4 129	219	219	2 880	2 695	2 797	
Assets less than the capitalisation threshold	-	-	3	1	1	-	-	-	
Catering: Departmental activities	35	88	594	76	51	134	162	178	
Communication (G&S)	104	151	166	188	188	254	244	269	
Computer services	-	-	6	12	12	-	-	-	
Consultants & professional services: Business & advisory services	495	2 738	3 252	9 735	7 902	11 052	10 417	11 039	
Contractors	2	305	3	1	1	-	-	-	
Agency & support/outsourced services	-	-	-	1 712	1 712	-	33	34	
Inventory: Materials & supplies	-	1	-	-	-	-	-	-	
Inventory: Other supplies	8	-	-	218	218	-	-	-	
Consumable supplies	-	-	3	-	-	-	-	-	
Consumable: Stationery, printing & office supplies	-	59	236	4	4	402	439	487	
Operating leases	-	-	3	-	-	-	-	-	
Transport provided: Departmental activity	-	-	22	-	-	267	225	235	
Travel & subsistence	1 408	1 750	3 485	5 899	5 341	1 676	1 317	1 309	

Training & development

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Table 22: Overview of Programme 5: Nuclear Energy (continued)

			Baseline	MTEF				
				Appropriation				
	Audited Outcome			Voted (Main)	Adjusted	Revised Indicative Baseline		
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18
Economic Classification				Rand Th	ousand			
Operating payments	10 624	17 065	71	28	9	4	-	-
Venues & facilities	58	366	774	5 654	4 159	673	638	721
Transfers & subsidies	621 485	610 496	699 252	806 430	806 430	617 857	633 349	727 852
Departmental agencies & accounts	35 430	42 912	68 160	33 697	33 697	21 487	16 636	38 573
Foreign governments & international organisations	-	-	38 910	12 055	12 055	16 012	17 375	17 907
Public corporations	586 034	567 579	592 182	760 678	760 678	580 358	599 338	671 372
Households	21	5	-	-	-	-	-	-
Total	642 266	643 417	722 501	850 502	843 829	654 398	669 335	765 928

Transfers & Subsidies		Rand Thousand						
NECSA	586 034	567 579	592 182	760 678	760 678	580 358	599 338	671 372
NNR	35 430	42 912	48 360	33 697	33 697	21 487	16 636	38 573
Employee social benefits	21	5	-	-	-	-	-	-
IAEA	-	-	38 910	12 055	12 055	16 012	17 375	17 907
NRWDI	-	-	19 800	-	-	-	-	-
Generation IV International Forum	-	-	-	-	-	-	-	-
Total	621 485	610 496	699 252	806 430	806 430	617 857	633 349	727 852



# 5.4 Risk Management

Table 23: Risk exposures for Programme 5

Stratagia Objective	Objective Statement	Stratonia Biola	Biok Concenuence	Mitigation Stratage
Strategic Objective SO 5.1 To Improve Nuclear Security	Objective Statement To improve the nuclear security statutory framework of South Africa by updating legislation to align with international best practices.	Strategic Risk Illicit trafficking of nuclear material.	Risk Consequence     Unable to account for nuclear material in the country.     Possible diversion of nuclear material for non-peaceful purposes, including development of WMDs.     Vulnerability to security breach.     Theft of nuclear material.	Mitigation Strategy     Facilitation for installation of nuclear material detection system, including radiation portal monitors.     Draft MoU with SARS in place.     Provision of the detection training to SARS officials.     Legislating installation of detection instruments.     Illicit trafficking cases are reported to the IAEA's ITDB & perpetrators are dealt with accordingly.
SO 5.2 To Strengthen the Control of Nuclear Material & Equipment	To strengthen the control of & accounting for nuclear materials & related equipment by enforcing relevant regulations & statutory frameworks on an ongoing basis.	Proliferation of nuclear material.	Result in sanctions by international communities.     Materials falling into the wrong hands.	- Fast-track removal of the safeguard function from the operator (NECSA) Allocation of additional resources Amend the Nuclear Energy Act, 1999 (Act No. 46 of 1999).

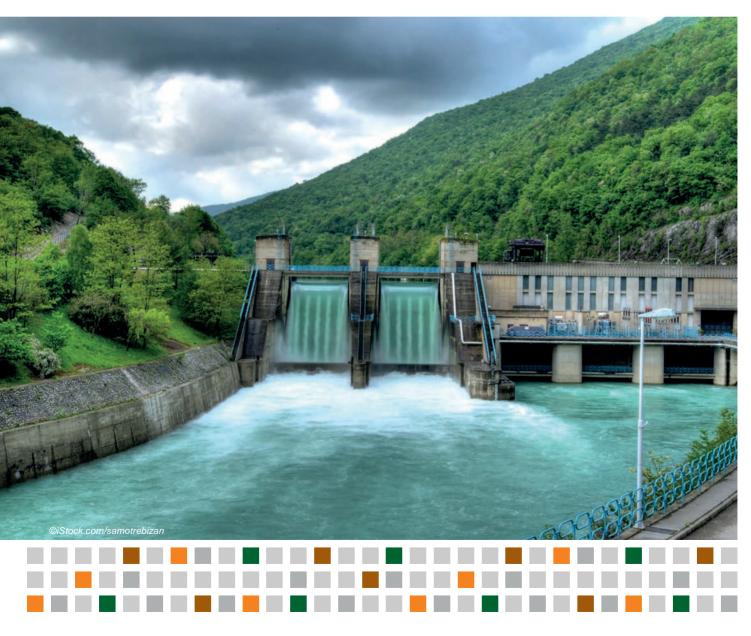


## 6 PROGRAMME 6: CLEAN ENERGY

### 6.1 Purpose

To manage and facilitate the development and implementation of clean and renewable energy initiatives as well as EEDSM.

- Energy Efficiency
- Renewable Energy
- Climate Change and Designated National Authority



Outcome 10, Sub-Outcome 2: An effective climate change enhance our environmental assets & natural resources. Outcome 10: To protect & mitigation & adaptation response In 2012/13, the regulations on the strategy will be completed by the stakeholders. These regulations energy intensity reduction target of 12% by 2015 was reviewed in incentives for EE improvements promote a low carbon economy. Income Tax (12L) Allowance for 2013 & post-2015 EE targets & verified energy savings through EE savings were promulgated frameworks & programmes to addition, the National Energy This objective will develop a registration with SANEDI. In strategic policy & regulatory independently measured & Efficiency Strategy with an for businesses, based on Justification & formally presented to will provide SARS tax end of March 2016. 6% (or 2 600 MW) by 2030 2030 for renewable energy Develop & implement the for import of hydropower 42% (or 17 800 MW) by 12% by 2015 (EE target post-2015 EE targets & to be tabled for Cabinet consumption baselines for 2019 to be finalised Five-Year Target for an additional 100 by 2015 as outlined by the NEEAP & Develop energy consideration). municipalities. developed. developed. strategy. 1.5 TWh of energy savings consumption baselines for NCCRP, EMP, Departmental Environmental Policy (2 460 Planning & developing projects to achieve Developing energy Baseline an additional 30 municipalities. per annum. MW). developing & implementing EEDSM strategies by 2015; developing & implementing programmes measurement strategies & environmental publishing climate change response & voltage power To promote & facilitate EEDSM interventions to increase factor methodologies; & & environmental compliance energy-related climate management plans; & Objective Statement implementing demand To manage climate change planning & developing increase the impact of developing policies to energy savings on an Fable 24: Strategic Objective 6.1-6.3 of Programme 6 response strategies management plans. incentive schemes; change response implementing EE & environmental ongoing basis; verification. matters by: by: SO 6.2 To Coordinate & Monitor SO 6.1 To Coordinate & Monitor Response Measures & the EEDSM Measures the Implementation of Strategic Objective the Implementation of Energy-Related across all Sectors Climate Change Environmental Compliance

Table 24: Strategic Objective 6.1-6.3 of Programme 6 (continued)

	Links	Outcome 10, Sub-Outcome 2: An effective climate change mitigation & adaptation response.
	Justification	Expand use of renewable energy through off-grid electrification.
:	Five-Year Target	- 15 MW of renewable energy deployed off-grid 105 000 of solar home systems (PV) installed 1 million SWHs, increased biogas uptake & use Deployment of solar PV rooftops.
	Baseline	371 862 solar home systems (PV) installed.
1-0.3 of Flogramme O (confine	Objective Statement	To ensure the integration of renewable energy into the mainstream energy supply of South Africa by planning & coordinating initiatives & interventions focused on the development & improvement of the renewable energy market through:  - facilitating the incorporation of renewable energy policy documents; - establishing a conducive environment for the growth of decentralised (renewable energy based) embedded electricity generation; - providing up-to-date data on performance & costs of renewable energy based) embedded electricity generation; - providing up-to-date data on performance & costs of renewable energy technologies as inputs to the IEP; - identity further development opportunities & providing necessary support to other renewable energy technologies - identity further development opportunities & providing support & monitoring of renewable energy technologies - continuing support & monitoring of renewable energy initiatives & programmes that are already under way; & implementing awareness campaigns to increase awareness of renewable energy & its benefits within the public sector & the qeneral public.
Table 24. Strategic Objective 0.1-0.3 or Frogramme o (continued)	Strategic Objective	SO 6.3 Effective Renewable Energy

Table 25: Overview of Programme 6: Clean Energy

	Baseline					MTEF			
				Approp	oriation				
	Au	dited Outco	ome	Voted (Main)	Adjusted	Revised Indicative Baseline			
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18	
Economic Classification				Rand Th	nousand				
EE	418 839	1 026 869	1 347 547	1 810 348	1 808 757	608 429	587 578	712 286	
Renewable Energy	73 618	60 626	137 538	168 437	170 689	71 416	27 352	66 865	
Climate Change & Designated National Authority	3 274	3 401	4 802	7 690	6 529	7 482	7 858	8 310	
Total	495 731	1 090 896	1 489 887	1 986 475	1 985 975	687 327	622 788	787 461	
Economic Classification				Rand Th	nousand				
Current payments	31 640	14 149	24 918	50 485	49 985	46 252	44 065	46 439	
Compensation of employees	18 724	11 051	12 369	17 875	15 966	18 261	19 501	20 672	
Salaries & wages	16 410	9 734	11 025	15 373	13 464	16 320	17 429	18 476	
Social contributions	2 314	1 317	1 344	2 502	2 502	1 941	2 072	2 196	
Goods & services of which:	12 916	3 098	12 549	32 610	34 019	27 991	24 564	25 767	
Administrative fees	98	52	162	126	126	123	140	157	
Advertising	517	157	403	3 741	3 361	3 826	865	971	
Assets less than the capitalisation threshold	3	-	-	1 979	1 979	371	-	812	
Catering: Departmental activities	70	26	73	15	15	478	110	126	
Communication (G&S)	260	275	84	734	724	575	472	308	
Computer services	-	-	131	-	-	-	130	135	
Consultants & professional services: Business & advisory services	8 036	187	8 584	5 265	5 155	14 012	15 508	16 314	
Contractors	-	167	-	293	293	-	-	-	
Entertainment	-	-	-	-	-	464	21	20	
Inventory: Clothing material & accessories	-	-	-	-	-	279	205	243	
Inventory: Medicine	-	1	-	-	-	-	-	-	
Medsas inventory interface	-	-	-	2	2	-	-	-	
Consumable supplies	-	-	45	-	-	-	-	-	
Consumable: Stationery, printing & office supplies	38	60	-	33	33	73	173	184	
Operating leases	-	-	-	56	56	54	-	-	
Property payments	-	-	-	-	-	-	717	745	
Transport provided: Departmental activity	-	-	-	4 070	4 070	2 773	-	-	

Table 25: Overview of Programme 6: Clean Energy (continued)

	Baseline						MTEF		
				Approp	riation				
	Audited Outcome			Voted (Main)	Adjusted	Revised Indicative Base		Baseline	
	2011/12	2012/13	2013/14	201	4/15	2015/16	2016/17	2017/18	
Economic Classification				Rand Th	nousand				
Travel & subsistence	2 256	1 280	2 764	3 020	3 020	2 932	4 732	4 140	
Training & development	2	-	-	-	-	-	-	-	
Operating payments	137	819	86	805	805	33	33	38	
Venues & facilities	1 499	74	217	12 471	14 380	1 998	1 458	1 574	
Transfers & subsidies	464 091	1 076 746	1 464 955	1 935 990	1 935 990	641 075	578 723	741 022	
Municipalities	280 000	200 000	180 718	136 905	136 905	177 899	185 625	203 236	
Departmental agencies (non-business entities)	20 100	56 110	134 344	162 685	162 685	64 861	20 625	59 774	
Foreign governments & international organisations	-	-	-7	-	-	-	-	-	
Public corporations	118 800	820 629	1 149 900	1 636 400	1 636 400	398 315	372 473	478 012	
Private enterprises	45 191	-	-	-	-	-	-	-	
Households	-	7	-	-	-	-	-	-	
Payments for capital assets	-	-	14	-	-	-	-	-	
Other machinery & equipment	-	-	14	-	-	-	-	-	
Payments for financial assets	-	1	-	-	-	-	-	-	
otal	495 731	1 090 896	1 489 887	1 986 475	1 985 975	687 327	622 788	787 461	

Transfers & Subsidies		Rand Thousand						
Eskom - NSWHP	118 800	820 629	1 149 900	1 636 400	1 636 400	398 315	372 473	478 012
EEDSM grant	280 000	200 000	180 718	136 905	136 905	177 899	185 625	203 236
SANEDI	20 100	56 110	63 344	51 685	51 685	29 861	20 625	59 774
SANEDI: Working for Energy	25 000	-	-	-	-	-	-	-
Renewable Energy Subsidy Scheme	20 191	-	-	-	-	-	-	-
SANEDI	-	-	69 000	103 000	103 000	35 000	-	-
SANEDI	-	-	2 000	8 000	8 000	-	-	-
Employee social benefits	-	7	-	-	-	-	-	-
Employee social benefits	-	-	-	-	-	-	-	-
IAEA	-	-	-7	-	-	-	-	-
Total	464 091	1 076 746	1 464 955	1 935 990	1 935 990	641 075	578 723	741 022

# 6.4 Risk Management

Table 26: Risk exposures for Programme 6

Table 20. Fish exposures for Frogramme o					
Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy	
SO 6.1 To Coordinate & Monitor the Implementation of Energy-Related Climate Change Response Measures & Enviromental	To manage climate change & environmental compliance matters by: - developing & implementing energy-related climate change response strategies	Inability to respond to national climate change response measures.	Inability to contribute to GHG emission reductions.	<ul> <li>Develop energy sector climate change strategy.</li> <li>Develop mitigation &amp; adaptation plans for the energy sector.</li> <li>Allocation of additional funding.</li> </ul>	
Compliance	& environmental management plans; & - publishing climate change response	Limited CDM project uptake & uncertainty of the form of the KYOTO Protocol 2nd commitments.	Minimum contribution to GHG through the CDM.	Lobby for bilateral trading with Japan & other EU members.	
	strategies & environmental management plans.	South Africa not gaining maximum benefit from the KYOTO Protocol.	CDM collapse.	Lobby for bilateral trading with Japan & other EU members.	





# 1 LINKS TO LONG-TERM INFRASTRUCTURE AND OTHER CAPITAL PLANS

The Department of Energy (DoE) leads three Strategic Integrated Projects (SIPs), namely Integrated Municipal Infrastructure Projects, Green Energy in Support of the South African Economy and Electricity Transmission and Distribution for All. In addition, the DoE is further required to directly or indirectly participate in other SIP initiatives for coordinating and reporting purposes.



Table 27: Expenditure on long-term infrastructure and capital plans

seline	2016/17	R 6 040 148	R 3 875 085	R 2 165 063	
Indicative Baseline	2015/16	R 5 736 133	R 3 680 043	R 2 056 090	•
Adjusted Appropriation	2014/15	R 4 052 695	R 2 948 037	R 1 104 658	•
Total Project	1800	R 4 500 000	•	1	R 4 500 000
SIP Category			SIP 10: Electricity Transmission & Distribution for all	SIP 6: Integrated Municipal Infrastructure Project	SIP 7: Integrated Urban Space & Public Transport Programme
SCOA Item			Public corporations & private enterprises.	Provinces & municipalities.	Public corporations & private enterprises.
Current	Fioject Stage	t life cycle)	Various	Various	Various
Current or Capital	Transfer	n over the project	Capital	Capital	Capital
Project	Describion	of at least R 1 billic	Provision of capital subsidies to Eskom to address electrification backlogs for permanently occupied residential dwellings, install bulk infrastructure & rehabilitate electrification infrastructure.	Provision of capital subsidies to municipalities to address electrification backlogs for permanently occupied residential dwellings, install bulk infrastructure & rehabilitate electrification infrastructure.	Construction of petroleum pipeline, branch lines & storage facilities.
Type of	mirastructure	Mega Projects (total project cost of at least R 1 billion over the project life cycle)	Electrification backlog of permanently occupied residential dwellings.	Electrification backlog of permanently occupied residential dwellings.	Petroleum pipeline, branch lines & storage facilities.
Programme or	Project Name	Mega Projects (1	INEP: Eskon	INEP: Municipalities	Petronet: Transnet pipelines

# **2 CONDITIONAL GRANTS**

The DoE administers conditional grants with regard to the National Electrification Programme, the Energy Efficiency Demand-Side Management (EEDSM) Programme and the National Solar Water Heating Programme (NSWHP). These conditional grants are summarised as follows (details provided in the Division of Revenue Act, 2014 [Act No. 10 of 2014]):

Table 28: Conditional grants

adio 201 Containonal granto				
Conditional Grant 1: National Electrification Programme (Equitable Share)				
Department or municipality where the grant has been transferred	Several municipalities.			
Purpose of the grant	Electricity connections.			
Expected outputs of the grant	87 231 connections.			
Actual outputs achieved	89 771 connections.			
Amount per amended DoRA (rand thousand)	1 634 772			
Amount transferred (rand thousand)	1 634 772			
Reasons if amount as per DoRA not transferred	N/A			
Amount spent by the department or municipality (rand thousand)	1 634 772			
Reasons for the funds unspent by the entity	Resource constraints.			
Monitoring mechanism by the transferring department	Technical audits & monthly reports.			

Conditional Grant 2: National Electrification Programme (Eskom)				
Department or municipality where the grant has been transferred	Eskom			
Purpose of the grant	Electricity connections.			
Expected outputs of the grant	157 839 connections.			
Actual outputs achieved	202 943 connections.			
Amount per amended DoRA (rand thousand)	2 141 027			
Amount transferred (rand thousand)	2 141 027			
Reasons if amount as per DoRA not transferred	N/A			
Amount spent by the department or municipality (rand thousand)	2 141 027			
Reasons for the funds unspent by the entity	N/A			
Monitoring mechanism by the transferring department	Eskom			

Table 28: Conditional grants (continued)

rabio 20. Containonal granto (containa ca)	
Conditional Grant 3: EEDSM (Equitable Share)	
Department or municipality where the grant has been transferred	Several municipalities.
Purpose of the grant	Implementation of EE technologies.
Expected outputs of the grant	Energy consumption baselines determined from 10 municipalities.
Actual outputs achieved	Energy consumption baselines determined from 10 municipalities. Energy savings to be quantified by 2015/16.
Amount per amended DoRA (rand thousand)	180 722
Amount transferred (rand thousand)	180 718
Reasons if amount as per DoRA not transferred	N/A
Amount spent by the department or municipality (rand thousand)	Actual amount spent by municipalities to be verified by 2015/16.
Reasons for the funds unspent by the entity	Municipal fiscal year ends in June.
Monitoring mechanism by the transferring department	The DoE developed a monitoring & evaluation tool indicating the pay-back period to achieve kWh savings; energy savings (kWh) achieved by each municipality & R (million)/kWh.

Conditional Grant 4: EEDSM (Eskom)	
Department or municipality where the grant has been transferred	Eskom
Purpose of the grant	Implementation of the NSWHP.
Expected outputs of the grant	Number of SWH technologies installed in residential & commercial sectors; local content verification of SWH technologies; & finalisation of the revised SWH contracting model.
Actual outputs achieved	Verified local content thresholds of SWH technologies & finalisation of the revised SWH contracting model.
Amount per amended DoRA (rand thousand)	1 149 900
Amount transferred (rand thousand)	1 149 900
Reasons if amount as per DoRA not transferred	N/A
Amount spent by the department or municipality (rand thousand)	355 200
Reasons for the funds unspent by the entity	Installation of SWH units delayed due to the verification of local content threshold of SWH technologies by the SABS.
Monitoring mechanism by the transferring department	The DoE developed monthly & quarterly reporting templates & an online SWH monitoring tool to monitor programme implementation.

### 3 PUBLIC ENTITIES

The Minister of Energy is responsible for overseeing the following state-owned entities (SOEs) and their subsidiaries, which are either classified as Schedule 2 or as Schedule 3A institutions according to the Public Finance Management Act, 1999 (Act No. 1 of 1999), as amended:

- The National Nuclear Regulator (NNR);
- The Central Energy Fund (CEF) Group of companies under CEF (Proprietary)
- The South African Nuclear Energy Corporation SOC Limited (NECSA);
- The National Radioactive Waste Disposal Institute (NRWDI);
- The National Energy Regulator of South Africa (NERSA); and
- The South African National Energy Development Institute (SANEDI).

The enabling legislation requires that the Minister appoint members of the board for all SOEs reporting to him or her. Boards are ultimately accountable and responsible for the performance of their respective entities. They give strategic direction in line with the DoE's strategy within their respective mandate and implementation is undertaken by management.

Table 29: Public entities' mandate, outputs, annual budget and the next evaluation date of the SOEs

Name of Public Entity	Mandate	Outputs	Current Annual Budget 2015/16	Date of Next Evaluation
NNR	The NNR is established in terms of the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).  The act establishes the regulator as a competent authority for nuclear regulation in South Africa.  The purpose of the NNR, as outlined in Section 5 of the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) is to essentially provide for the protection of persons, property & the environment against nuclear damage through the establishment of safety standards & regulatory practices.	Refer to the NNR's 2015/16 APP of for details regarding the specific outputs planned by the NNR for the period 2014/15 to 2016/17.	R 170 742 million.  NNR total budgeted revenue comes from:  - fiscal grant allocation R 21 487 million; &  - authorisation fees R 149 255 million.	As needed.
CEF	To finance & promote the acquisition of, research into & exploitation of oil, gas & renewable or clean energy related products & technology.	Refer to CEF's 2015/16 APP for details regarding the specific outputs planned by CEF for the period 2014/15 to 2016/17.	R 26 519 billion.  The following companies contribute toward the total revenue for CEF Group:  CEF (SOC) Ltd;  African Exploration;  PetroSA; &  SFF.	As needed.

Table 29: Public entities' mandate, outputs, annual budget and the next evaluation date of the SOEs (continued)				
Name of Public Entity	Mandate	Outputs	Current Annual Budget 2015/16	Date of Next Evaluation
NECSA	NECSA is established in terms of Section 3(1) of the Nuclear Energy Act, 1999 (Act No. 46 of 1999).  The act provides for the commercialisation of nuclear & related products & services, & delegates specific responsibilities to the corporation, including the implementation & execution of national safeguards & other international obligations.  The Nuclear Energy Policy of 2008 reinforced NECSA's mandate relating to R&D & NFC responsibilities.	Refer to NECSA's 2015/16 APP for details regarding the specific outputs planned by NECSA for the period 2014/15 to 2016/17.	R 2 380 billion.  NECSA's total budgeted revenue comes from:  - fiscal grant allocation R 528 673 million;  - budgeted sales revenue R 1 711 billion; &  - other income R 140 034 million.	As needed.
NRWDI	NRWDI is a Nuclear Waste Disposal Institute established in terms of Section 3 of the National Radioactive Waste Disposal Institute Act, 2008 (Act No. 53 of 2008).  The act provides for the establishment of an NRWDI in order to manage radioactive waste disposal on a national basis & to provide for its functions & for how it is to be managed.	N/A	N/A	As needed.
NERSA	NERSA is a regulatory authority established as a juristic person in terms of Section 3 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004).  NERSA's mandate is to regulate the electricity, piped-gas & petroleum pipelines industries in terms of the Electricity Regulation Act, 2006 (Act No. 4 of 2006), Municipal Finance Management Act, 2003 (Act No. 56 of 2003), the Gas Act, 2001 (Act No. 48 of 2001) & the Petroleum Pipelines Act, 2003 (Act No. 60 of 2003).	Refer to NERSA's 2015/16 APP for details regarding the specific outputs planned by NERSA for the period 2014/15.	R 315 693 million.  Total budgeted revenue comes from:  - levies of 3 regulated industries R 308 945 million; &  - interest received from investments & other income R 6 748 million.	As needed.
SANEDI	SANEDI is an applied energy research institute established in terms of Section 7(1) of the National Energy Act, 2008 (Act No. 34 of 2008).	Refer to SANEDI's 2015/16 APP for details regarding the specific outputs planned by SANEDI for the period 2014/15.	R 82 061 million.  The total budgeted revenue is:  - grant allocation R 64 861 million (operations R 29 861 million & carbon R 35 000 million); &  - other income R 23 200 million.	As needed.

# **4 PUBLIC-PRIVATE PARTNERSHIPS**

No public-private partnerships exist between the DoE and other stakeholders.

# Part E ANNEXURE

# 1 LIST OF ACRONYMS

Acronym	Description
20YRLFMP	20-Year Liquid Fuels Master Plan
20YRLFRM	20-Year Liquid Fuels Roadmap
ADAM	Approach to Distribution Asset Management
AG	Auditor General
APP	Annual Performance Plan
BEE	Black Economic Empowerment
BFP	Basic Fuel Price
CC	Competition Commission
CDM	Clean Development Mechanism
CEF	Central Energy Fund
CF2	Cleaner Fuels Two
CHIETA	Chemical Industries Education and Training Authority
DDG	Deputy-Director General
DG	Director-General
DoE	Department of Energy
DoRA	Division of Revenue Act
DPE	Department of Public Enterprises
DPME	Department of Performance Monitoring and Evaluation
DPSA	Department of Public Service and Administration
DRC	Democratic Republic of Congo
DTI	Department of Trade and Industry
EE	Energy efficiency
EEDSM	Energy Efficiency and Demand-Side Management
EMP	Energy Master Plan
EP&P	Education Project & Partnership
ESC	Energy Sciences Coalition
Eskom	Electricity Supply Commission
EU	European Union
EWSETA	Energy and Water Services Sector Education and Training Authority
EXCO	Executive Committee
FIFA	Fédération Internationale de Football Association
FTA	Free Trade Agreement
FOSAD	Forum of South African Directors-General
G&S	Goods and Services
GHG	Greenhouse Gas
GIHP	Grand Inga Hydropower Project
GIS	Geographic Information System
GUMP	Gas Utilisation Master Plan
GW	Gigawatt
GWe	Gigawatt electric
HDI	Historically Disadvantaged Individuals

Acronym	Description
HR	Human Resources
HRMD	Human Resource Management Division
IAEA	International Atomic Energy Agency
IDP	Integrated Development Plan
IEA	International Energy Agency
IEC	Integrated Energy Centre
IEP	Integrated Energy Plan
INEP	Integrated National Electrification Programme
IPP	Independent Power Producer
IRP	Integrated Resource Plan
ISMO	Independent Systems and Market Operator
IT	Information Technology
ITDB	Incident and Trafficking Database
km	Kilometres
KWh	Kilowatt hour
KPA	Key Performance Area
LNG	Liquefied natural gas
MANCO	Management Committee
MinMec	Ministers and Members of Executive Councils Meeting
MoU	Memorandum of Understanding
MPAT	Management Performance Assessment Tool
MTEF	Medium-Term Expenditure Framework
MTSF	Medium-Term Strategic Framework
MTSP	Medium-Term Strategic Plan
MV	Mega volt
MVA	Megavolt ampere
MW	Megawatt
NCCRP	National Climate Change Response Policy
NDP	National Development Plan
NECSA	South African Nuclear Energy Corporation SOC Limited
NEEAP	National Energy Efficiency Action Plan
NER	National Energy Regulator
NERSA	National Energy Regulator of South Africa
NESMO	National Energy Systems and Market Operator
NFC	Nuclear Fuel Cycle
NGP	New Growth Path
NIP	National Infrastructure Plan
NNEECC	National Energy Executive Coordination Committee
NNR	National Nuclear Regulator
NRWDI	National Radioactive Waste Disposal Institute
NSWHP	National Solar Water Heater Programme
NT	National Treasury

Acronym	Description
PetroSA	Petroleum, Oil and Gas Corporation of South Africa (SOC) Limited
PICC	Presidential Infrastructure Coordinating Commission
PMDS	Performance Management and Development System
PMO	Programme Management Office
PPALS	Petroleum Products Act Licensing System
PSETA	Public Service Education and Training Authority
PSP	Procurement Strategy Panel
PV	Photovoltaic
R&D	Research and Development
RAS	Regulatory Accounting System
REIPPP	Renewable Energy Independent Power Producer Programme
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SANEDI	South African National Energy Development Institute
SAPP	Southern African Power Pool
SARS	South African Revenue Service
SCOA	Standard Chart of Action
SDIP	Service Delivery Improvement Plan
SED	Strategic Energy Dialogue
SFF	Strategic Fuel Fund
SIP	Strategic Integrated Project
SMME	Small, medium and micro enterprises
SMS	Senior management service
SO	Strategic objective
SOE	State-owned entity
SoNA	State of the Nation Address
SOP	Standard Operating Procedure
SSC	Strategic Steering Committee
STDP	Strategic Transmission Development Programme
SWH	Solar Water Heaters
Tcf	Trillion cubic foot
TDP	Transmission Development Plan
TWh	Terawatt hour
WMD	Weapon of Mass Destruction
WSP	Workplace Skills Plan

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