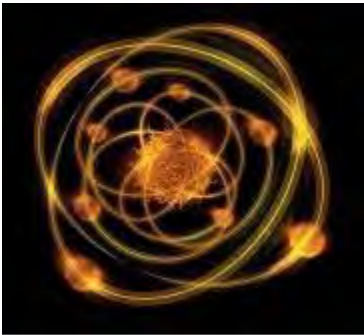


# 2016/17

## Annual Performance Plan



energy

Department:  
Energy  
REPUBLIC OF SOUTH AFRICA



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# OFFICIAL SIGN-OFF

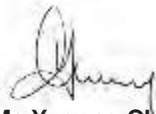
It is hereby certified that this Annual Performance Plan:

- was developed by the management of the Department of Energy under the guidance of Hon. Minister Tina Joemat-Pettersson (MP)
- takes into account all the relevant policies, legislation and other mandates for which the Department of Energy is responsible
- was prepared in line with the current Strategic Plan of the Department of Energy
- accurately reflects the performance targets which the Department of Energy will endeavour to achieve, given the resources made available in the budget for the 2016/17 fiscal year

## Supported by:



**Mr Muzi Shange**  
Chief Operating Officer  
Official Responsible for Planning



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## Approved by:



**Hon. Tina Joemat-Pettersson (MP)**  
Minister of Energy  
Executive Authority



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# PART A


## INTRODUCTION

### 1 FOREWORD BY THE MINISTER

I hereby present the Department of Energy's (DoE) Annual Performance Plan (APP) 2016/17 to Parliament for the Medium-Term Expenditure Framework (MTEF) period. This APP showcases the Energy Sector's approach to formulating energy policies, regulatory frameworks and legislation, and oversees their implementation to ensure energy security, the promotion of environmentally-friendly energy carriers and access to affordable and reliable energy for all South Africans for the 2016/17 financial year, as defined by a strategically determined transformative agenda. More attention will be placed on managing South Africa's broader energy challenges, including the need for the radical transformation of South Africa's energy mix and effecting structural changes to public sector entities in order to assist them with addressing South Africa's energy challenges.

Government's national priorities support the DoE's policy imperatives, including the National Development Plan (NDP), the Medium-Term Strategic Framework (MTSF), the National Infrastructure Plan (NIP), the State of the Nation Address (SoNA) and the Industrial Policy Action Plan (IPAP). During this critical phase of South Africa's democratic transformation, we are still confronted with the triple challenges of inequality, unemployment and poverty, as highlighted in the NDP and the Presidency Twenty-Year Review. We continue to embark on radical socio-economic transformation to push back the triple challenges through the NDP, which seeks to eradicate poverty in South Africa by

2030. This overarching development goal creates the opportunity for an intensive programme for job creation. The past year has seen a rapid evolution of our energy system and we are poised at the fissure of a world-class, dependable and sustainable Energy Sector. The national energy backbone we are building creates hope for an increased energy security, economic benefits, industrial development, job creation and clean energy.

 The past year has seen a rapid evolution of our energy system and we are poised at the fissure of a world-class, dependable and sustainable Energy Sector.

One of the key lessons learnt from our past and current power challenges is the need to coordinate our planning and timing of new energy investments. In response to this, Government has put in place a planning framework for the Energy Sector, anchored in the Integrated Energy Plan (IEP) and the Integrated Resource Plan (IRP). These are the instruments to drive Government's set objectives beyond just energy security. They include policy objectives such as job creation through localisation, reducing our greenhouse gas (GHG) emissions and reducing water usage. Our efforts also continuously seek to diversify supply through regional integration, energy efficiency, lowering the cost of energy and importantly,



increasing access to energy. These elements form an integral part of our strategic orientation toward energy security and access.

Infrastructure investment is a key priority of both the NDP and the New Growth Path (NGP). We are transforming the economy, directing national growth and driving job creation by implementing a long-term, Government-led infrastructure investment programme. In the process, we are leveraging the investment and participation of business, labour and civil society. Government is laying the foundation for growth and decent work for all South Africans, ultimately to improve the prosperity of our country. Leveraging job creation, skills development and localisation throughout the 20-year infrastructure pipeline will be one of the ways that South Africans can collectively build an equitable society.

In 2012, Government adopted an NIP that intends to transform our economic landscape while simultaneously creating significant numbers of new jobs and to strengthen the delivery of basic services. The plan also supports the integration of African economies. Eighteen Strategic Integrated Projects (SIPs) have been developed and approved to support economic development and address services delivery in the poorest provinces. The SIPs cover social and economic infrastructure across all nine provinces with an emphasis on lagging regions. SIPs cover catalytic projects that can fast-track development and growth.

Further investments in renewable energy and the provision of support for the transition to a low-carbon economy will remain our key objective in the 2016/17 financial year. Notwithstanding these focus areas, we will continue to exploit coal for producing electricity and liquid fuels. Closer to home, both in terms of liquefied petroleum gas (LPG) and the South Africa market, some contextual information is required. The consumption of LPG accounts for about 3% of

the total South African fuel consumption, of which household use of LPG amounts to only 3% of the national LPG consumption. The remainder is used in commercial and industrial applications. The use of LPG has remained constant over the past 10 years despite the DoE's focus on promoting the household use of LPG in South Africa.

Compared to other developing countries, South Africa still has a large potential for increasing the role of LPG in its energy mix. In this context, the DoE is working with the industry to develop the market and the regulations related to the pricing of LPG, including several other objectives to promote the shift toward increased gas and LPG consumption as listed in the Gas Act, 2001 (Act No. 48 of 2001). These objectives include the following:

- Facilitating investment in the gas industry
- Ensuring the safe, efficient, economic and environmentally-responsible transmission, distribution, storage, liquefaction and regasification of gas
- Promoting companies in the gas industry which are owned or controlled by historically disadvantaged South Africans by means of licence conditions so as to enable them to become competitive
- Promoting skills development among employees in the gas industry
- Promoting the development of competitive markets for gas and gas services
- Promoting access to gas in an affordable and safe manner

Currently, the DoE is aware of the pricing structure challenge in terms of the maximum refinery gate price (MRGP) of LPG which remains the highest cost fuel alternative to the consumer. An unintended consequence of the current MRGP is that the reduction of the selling price (by R 74/t) relative to the price of 93 octane petrol, makes the refining margin on producing

LPG negative. During the 2016/17 financial year, the DoE will be working on rectifying this aspect of the LPG market in consultation with relevant stakeholders through the development of the 20-Year Liquid Fuels Master Plan (20YRLFMP) process.

Furthermore, the DoE has developed a Gas Utilisation Master Plan (GUMP) for South Africa. The GUMP is a roadmap for the development of a gas economy. It analyses the potential and opportunity for the development of South Africa's gas economy and sets out a plan of how this could be achieved. One of the key objectives of the GUMP is to enable the development of indigenous gas resources and to create the opportunity to stimulate the introduction of a portfolio of gas supply options. The demand from the Gas-to-Power Programme will provide a market for a potential supply of gas. It will also provide long-term gas demand sinks for future indigenous gas supplies.

To support the effective implementation of the National Energy Efficiency Strategy, regulations have been published for compulsory energy management plans to be developed and put in place by intensive energy end users whose consumption at a contiguous site is above a certain threshold. By law, such users are required to submit these energy management plans so as to assist Government in its planning and monitoring functions. Without the collaboration of the private sector in providing energy statistics, our country will be unable to plan appropriately and the advancement of our energy security agenda will be compromised. Collaboration by all stakeholders is therefore essential to make the drive for energy efficiency successful.

In order to stimulate investment in more energy-efficient technologies and the adaptation to more energy-efficient processes, the 12L Energy Efficiency Tax Incentive scheme has been introduced in the form

of section 12L of the Income Tax Act, 1962 (Act No. 58 of 1962). These regulations provide incentives for the retrofitting of capital equipment that will improve energy efficiency in production processes.

It is important to note that although the building sector contributes a relatively minor percentage to national energy usage, savings through low-cost and medium-cost technical interventions can exceed 25% through energy efficiency in the building sector.

During the 2016/17 financial year, the DoE will increase energy efficiency in the industry. The industrial and mining sectors combined are the largest users of energy in South Africa and are highly energy intensive, a legacy of the past. A relatively high theoretical potential for energy saving exists in the magnitude of 25% of current consumption in comparison with international best practice, on a sector-by-sector basis.



The rollout of more renewable energy projects is important and forms part of the solution to the country's continued energy challenges.

By setting regulations and enforcing an Energy Efficiency Strategy, energy efficiency standards have been successfully applied overseas and have brought about significant improvements in efficiencies. South Africa has a well-developed system of standards and codes of practice that, in some cases, may be amended to include efficiency aspects without the need to establish completely new standards.

In order to encourage the successful change of South Africa into a more energy-efficient society,

it is essential to raise awareness by exchanging information regarding the Energy Efficiency Strategy. Once laws and regulations have been established, architects will draw guidance from standards and codes of practice regarding the design of houses which meet new regulations. Plumbers will also need to be informed about the need to insulate geysers. Various media avenues are currently being used in order to raise the profile of energy efficiency in the minds of the key stakeholders and the public at large.

The South African solar water heating market has a considerable potential to leverage electricity savings, increase employment opportunities, improve electricity demand management and reduce GHG emissions. The DoE will develop the Solar Water Heater (SWH) Programme Implementation Plan to install 38 375 SWH units for the residential and commercial sector during the 2016/17 financial year. The project will install high-pressure, high quality local SWHs in the domestic sector. In parallel, the project seeks to facilitate standardising the SWH quality and testing regime, consolidating a widened distribution and maintenance infrastructure, offering attractive financing options and ensuring awareness and involvement on both the supply side and the demand side.

The DoE recognises that there are barriers which impede the achievement of our energy efficiency targets, of which one barrier is the available financing for such energy efficiency technologies. The DoE has developed a number of policy initiatives and financing options in order to catalyse the South African market.

As a caring Government, South African policies intend to ensure that the electricity tariffs are sensitive to the plight of poverty afflicting many communities. We urge municipalities to promote appropriate tariff designs for indigent end-users. Over and above inclining block tariffs, numerous other mechanisms have been put in place to protect the poor against high electricity tariffs.

The free basic electricity (FBE) and free basic alternative energy (FBAE) policies serve as a cushion to those that have been identified to be in need. Approximately R 20 billion has been transferred to municipalities for the distribution of FBE. The effectiveness of these policies is measured by the rate of utilisation of the FBE by municipalities, of which all are participating. In addition, the SWH Programme is meant to reduce the financial burden on beneficiaries by providing a cost effective technology for heating water. We believe that a combination of cross-subsidisation, free basic electricity and solar water heating should cover the energy needs of indigent households.

The DoE further aims to expand both traditional and green energy resources in order 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 to promote environmental sustainability. The DoE will intensify work to ensure that further hydroelectric energy is secured for our national grid, both domestically and regionally. Over the 2016/17 financial year period, more than 260 000 additional households will be electrified with grid electrification and 18 500 additional households will be electrified with non-grid electrification, ensuring cheaper and lower energy use for more than 7 million South Africans. An additional 1.5 million households will be connected to energy sources, either through the grid or through non-grid 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 in catalysing and spurring positive

economic growth and job creation as well as making 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.

In South Africa, the rollout of more renewable energy projects is important and forms part of the solution to the country's continued energy challenges. It is thus our responsibility to make the most of the energy we can generate from our proven natural resources. Our renewable energy journey, which began in earnest with the release of our IRP and the subsequent launch of the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) in 2010, has seen Government and IPPs make great strides toward rolling out renewable energy projects in South Africa in five short years. To date, more than 6 000 MWh of electricity has been procured from 37 REIPPPs.

This success in transforming natural resources into electricity on the grid is entirely due to a demonstrated political will, policy coherence, clear regulatory frameworks, convergence between energy generation and transmission planning, and fiscal plans. The competitive procurement approach which the DoE followed has also helped to maintain electricity prices. Over the past five years, the average prices which have been bid across all renewable technologies have declined by 67.5%.

Our renewable energy rollout has not only contributed to energy access, security and reduced emissions but has resulted in other significant benefits. To date, renewable energy projects in South Africa have resulted in 20 000 jobs for South Africans and have attracted R 192.6 billion in investment. Furthermore, IPPs have committed a total of R 19.1 billion toward socio-economic development initiatives within the communities in which they operate, thereby positively contributing to livelihoods and income generation.

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 implementation of the plan is well underway. This is evidenced by the IPP Bidding Programme, which has approved the provision of more than 6 900 MW of capacity from renewable IPPs and has attracted international investment to the value of about R 120 billion. We are confident that this will boost employment growth and we know that 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 that is associated with GHG emissions.



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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 Pelindaba, which is 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. To date, the DoE has managed to establish a Programme Management Office (PMO) for the rollout of the Nuclear New Build Programme.

In conclusion, as the global economy grows so will the demand for energy. We will continue to call upon the private sector to collaborate in finding mutually beneficial solutions. I wish to extend my sincere appreciation to Amb. Thembisile Majola, the Deputy Minister of Energy, for her support, dedication and commitment to the DoE. I also wish to express my gratitude to the Portfolio Committee on Energy in the National Assembly and Select Committee on Economic and Business Development for their guidance and oversight. My sincere thanks also goes to the departmental entities, unions and the broader energy industries for their continued efforts in making the objectives of the NDP and the manifesto of the ruling party a reality. Lastly, I wish to thank Team Energy, and all Energy Sector stakeholders for their ongoing engagement and support.

**Hon. Tina Joemat-Pettersson (MP)**  
Minister of Energy  
Executive Authority

## 2 STATEMENT BY THE ACCOUNTING OFFICER

The APP for the DoE highlights the strategic objectives that the DoE seeks to achieve during the 2016/17 financial year and MTEF period as well as measures to track our future performance. The DoE is mandated by the constitution and other legislation to ensure a secure and sustainable provision of energy for socio-economic development. This plan takes into account all the relevant policies, legislation and other mandates that the DoE is responsible and accountable for.

 Energy security remains at the core of current and future industrial and technological advancement.

The development of the APP was guided by Government's key policy objectives as set out in the NDP, the NGP, the IPAP and the Presidential Infrastructure Coordinating Commission (PICC). Our service delivery targets are aligned with 14 priority outcomes for Government, which are to be implemented through intergovernmental cooperation over the MTSF period. The DoE focuses on the implementation of six of the 14 outcomes for Government to achieve related outputs.

These six outcomes are:

- 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

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

The NDP envisages that "by 2030 South Africa will have an Energy Sector that promotes economic growth and development through adequate investment in energy infrastructure and the provision of quality energy services that are competitively priced, reliable and efficient. Local production of energy technology will support job creation". The 2030 vision is balanced against current economic initiatives to pull the economy forward, attract investment, create internal stability and improve our competitiveness locally and globally. Energy security remains at the core of current and future industrial and technological advancement.

In line with the NDP, the DoE will:

- within the next 12 months, make recommendations and proposals on the refining capacity in South Africa as informed by the IEP
- provide a reliable, efficient and continuous supply of electricity for our economy to flourish and grow. We plan to intensify the Electricity Infrastructure Investment Programme through the process of determinations that the Minister of Energy makes under Section 34 of the Electricity Regulation Act, 2006 (Act No. 4 of 2006)
- continue to promote the optimal use of the country's renewable energy resources to ensure that the country's sustainable energy agenda is adhered to. This includes expanding our Independent Power Producers Procurement Programme. Renewable energy is an essential part of the country's low emissions development strategy and is vital to addressing the challenges of climate change, access to energy and energy security



- finalise a funding model, enter into negotiations and sign contracts for the construction of the first new nuclear power plants. The Nuclear Energy Expansion Programme remains a central feature in our future energy mix. In addition, the Nuclear New Build Programme will enable the country to generate baseload electricity, reduce GHG emissions, create jobs, develop skills, create industries and catapult the country into a knowledge economy
- accelerate the implementation of the revised SWH Programme as part of the load reduction, but also enable the maturity of the industry value chain through the revised localisation targets and small business development
- continue to expand access to electricity through its Integrated National Electrification Programme (INEP) in spite of the constrained fiscal environment

In this financial year, the DoE will invest in improving its administration, systems, processes and capacities so as to provide an efficient and effective service. The values of equity and equality will continue to be entrenched to ensure that the dignity of our people is respected and restored where necessary through our efforts.



**Mr Thabane Zulu**  
Director-General: Energy  
Accounting Officer



## 1 SITUATIONAL ANALYSIS

### 1.1 External Environment

Africa's Energy Sector is vital to its future development and yet it remains one of the most poorly understood regions within the global energy system. The continent is huge in scale – around the size of the United States of America (USA), China, India and Europe combined – and while it has sufficient energy resources to meet domestic needs, more than two-thirds of the population does not have access to modern energy. Those who do have access to modern energy often face high prices for poor quality supply and they rely on an under developed system that is not able to meet their needs. The effective development of Africa's energy resources, and of the Energy Sector as a whole, could unlock huge gains across the economy. But how quickly can modern energy be brought to the huge population that is currently deprived of it? How can existing and emerging energy-rich countries maximise the value of their resources? What actions in the Energy Sector can unleash stronger economic and social development? These are crucial questions which the Department of Energy (DoE) aims to address.

There is a wide diversity of sub-Saharan countries from those that are energy-resource rich to many that are among the world's most energy poor. The region's Energy Sector is not well understood and faces challenges that, in many cases, differ from those of North Africa. For example, gross domestic

product (GDP) per capita in North Africa is around two-and-a-half times that of sub-Saharan Africa and less than 1% of the population do not have access to electricity. There are, however, positive signs of progress in sub-Saharan Africa, such as economic growth, higher income per capita and a longer life expectancy. Areas of potential advantage that have yet to be exploited fully include rich natural resource endowments and a growing working-age population. However, there are also numerous challenges, such as high levels of poverty and inequality, a major shortage of infrastructure, poor governance and corruption, relatively low levels of productivity and skills, and varying levels of political stability. Many of these factors contribute to a business environment in which it is often judged as difficult and costly to operate.

#### *1.1.1 Economy trends and outlook*

The sub-Saharan economy has more than doubled in size since 2000, reaching \$2.7 trillion in 2013 (year-2013 dollars, purchasing power parity terms). Yet, even after such strong growth, the economic output of the almost 940 million people in sub-Saharan Africa in 2013 remains significantly below that of the 82 million in Germany. Recent sub-Saharan economic growth can be attributed to a variety of factors, including a period of relative stability and security, improved macroeconomic management, strong domestic demand driven by a growing middle class, an increased global appetite for Africa's resources (coupled with the rising price of many of these

resources), population growth and urbanisation. However, rapid population growth has meant that GDP per capita has increased more slowly (about 45%).

South Africa and Nigeria are the largest sub-Saharan economies by far – together accounting for more than half of the area's economy – with Angola, Ethiopia, Sudan and Ghana being the next largest. Agriculture remains a large sector in many economies, accounting for around 20% of regional GDP (compared with a 6% share globally) and around 65% of employment (AfDB, OECD and UNDP, 2014). But it also remains largely unmodernised, with huge scope for productivity gains through the application of modern energy. Mining (energy and non-energy commodities) is an important industry in several sub-Saharan economies, both as an employer and as a source of export revenue, with mining output typically exported in a raw or semi-processed state. In resource-rich countries, energy export revenues are an important source of government income but the sector is not necessarily a large employer, nor does it constitute a large share of the economy overall. Improved macroeconomic stability has been important in underpinning growth, but it has not been achieved uniformly and many countries still struggle to balance their budgets.

Rapid economic growth has yet to change the fact that sub-Saharan Africa is home to a large proportion of the world's poorest countries. Even though increasing average incomes across much of sub-Saharan Africa have helped to lift a large number of people out of


absolute poverty, defined as living on less than \$1.25 per day, sub-Saharan Africa accounts for 27 out of 36 low-income countries and only one high-income country (Equatorial Guinea). While the share of the total population living in absolute poverty has declined (from around 56% in 1990 to below 49% in 2010) rapid population growth means that the number of people currently living in absolute poverty has actually increased (World Bank, 2014). Broader measures of human development, such as the Inequality-adjusted Human Development Index (IHDI), also show improvement in many sub-Saharan countries over time while also consistently ranking them very low.

From very low levels of trade and foreign direct investment (FDI), sub-Saharan Africa has seen rapid growth in recent years, with commodities continuing to dominate the export picture for most countries. While the European Union (EU) is the largest trade partner, China, India and other emerging markets have been the major drivers of growth, with China's total trade with the sub-Saharan region having increased from around \$6 billion in 2000 to \$160 billion in 2013. The role of China is notable both for the increase of bilateral trade, which has grown by more than 25% per year since 2000, and its increasing willingness to invest in the region, particularly in oil, gas and other natural resources, which account for 80% of China's imports from Africa (Sun, 2014).

### 1.12 Demography

The population changes underway in sub-Saharan Africa have major implications for the development of the Energy Sector. Growth is rapid, having increased by 270 million people since 2000 to around 940 million in 2013, and it is expected to reach one billion well before the end of this decade. This huge increase, concentrated mainly in West and East Africa, brings about new opportunities, such as a rising working-age population, but also magnifies many existing

challenges, such as the quest to achieve modern energy access. Population growth has been split relatively evenly between urban and rural areas, in contrast to the strong global trend to urbanisation. Only 37% of the sub-Saharan population lives in urban areas – one of the lowest shares of any world region – which has important implications for the approach to solving the energy challenges. The average life expectancy has increased by 5.5 years since 2000, to reach 55 years (UNDP, 2013), and the young, working-age population is increasing, with both factors serving to boost the available labour force. Some elements of the existing Energy Sector are relatively labour-intensive, such as charcoal production and distribution, while many aspects of a modern Energy Sector instead are capital-intensive, such as power generation and oil and gas production.

 The Energy Sector has supported major investments in heavy industry and mining, which shape the economic and energy structure of the country.

Improving the relatively poor state of the existing energy infrastructure, as a contribution towards a more modern energy system, will require an expanded skilled and semiskilled workforce throughout the Energy Sector, including technical skills, as well as skills related to policy, regulation and project management. The need to invest in building human capacity is increasingly recognised and is reflected in projects such as the EU Energy Initiative – Partnership Dialogue Facility (EUEI PDF) and Barefoot College, which train solar engineers in rural communities. Nevertheless, the population of sub-Saharan Africa receives less than five years of schooling on average (UNDP, 2013), suggesting that

the level of education and skills will remain a key challenge.

### 1.13 The South African Energy Sector

The South African Energy Sector has been, and continues to be, at the centre of the country's development. The origins of the electricity supply industry in the first years of the twentieth century, for example, were driven by the needs of the booming mining industry. Later, the development of a local nuclear capacity reflected concerns for power supply security. In the 1950s the apartheid Government decided to develop a synthetic petroleum industry as a response to threats to crude oil imports. Today, with the present Government's focus on widening household access to electricity, making modern energy services more equitable and also affordable for the poor, and increasing empowerment of the disadvantaged in the Energy Sector, the sector remains at the heart of structural developments in the economy.

The Energy Sector has supported major investments in heavy industry and mining, which shape the economic and energy structure of the country. Much of the manufacturing sector is also linked to mining activities through minerals beneficiation and metals production. All of these activities are energy-intensive, relying on the availability of coal for electricity production. Low electricity prices, mainly due to the high dependence of indigenous supply of coal and early investments in the power sector, have been one of South Africa's key competitive advantages and continue to drive much of the new investment in industry (Eberhard & Van Horen, 1995; Visser et al., 1999).

### 1.14 Access to electricity

Sub-Saharan Africa has the highest percentage of people living without access to electricity in the

world – more than 620 million people and nearly half of the global total. It is also the only region in the world where the number of people living without electricity is increasing, as rapid population growth is outpacing the many positive efforts to provide access. In 37 sub-Saharan countries the number of people without electricity has increased since 2000 while the regional total rose by around 100 million people. On a more positive note, about 145 million people gained access to electricity since 2000, which have been led by improvements in Nigeria, Ethiopia, South Africa, Ghana, Cameroon and Mozambique.

Overall, the electricity access rate for sub-Saharan Africa has improved from 23% in 2000 to 32% in 2012. In North Africa, more than 99% of the total population has access to electricity. Nearly 80% of those lacking access to electricity across sub-Saharan Africa are in rural areas, which is an important distinction when considering appropriate energy access strategies and technical solutions. Around the world, increasing urbanisation has often facilitated increasing household access to modern energy. While it can play a similar role in sub-Saharan Africa, the extent to which this will occur is less clear because, unlike many world regions, sub-Saharan Africa is expected to continue to see significant growth in both its urban and rural populations. In lieu of this, efforts toward universal modern energy access will require effective solutions for rural as well as urban and peri-urban communities. Several African countries have dedicated policies, programmes or institutions to provide electricity access in rural areas. While such a tailored approach appears warranted, the success rate has been uneven.

In West Africa, electricity access rates range from below 20% in Liberia, Sierra Leone, Niger and Burkina Faso to more than 50% in Senegal and above 70% in Ghana. More than 90 million people in Nigeria (55% of the population) do not have access to (grid) electricity.

However, the widespread use of back-up generators suggests that the population without access to any form of electricity is smaller. Nigeria's own targets are to make reliable electricity available to 75% of the population by 2020 and to make it available to 100% of the population by 2030 (Energy Commission of Nigeria, 2013). Ghana is among the most successful countries in improving electricity access, having shown long and strong political commitment since the launch of its National Electrification Scheme in 1989. Mali, a large and sparsely-populated country, has seen electricity access reach 27%, with a focus on mini-grid solutions.



About 145 million people gained access to electricity since 2000, which have been led by improvements in Nigeria, Ethiopia, South Africa, Ghana, Cameroon and Mozambique.

Electrification rates in Central Africa show very large variation across the region, from the relatively high levels in Equatorial Guinea (66%), Gabon (60%) and Cameroon (54%) to the very low levels in Central African Republic (less than 3%), Chad (4%) and the Democratic Republic of Congo (DRC) (9%). Chad is one of many countries where low levels of energy access go hand-in-hand with low rates of access to other basic services, such as potable water, basic sanitation and paved roads. This is in spite of the fact that crude oil has become the country's primary source of export earnings. Around 60 million people in DRC do not have access to electricity, even though the country has very high hydropower potential. More than 200 million people in East Africa do not have access to electricity, which is around 80% of its population.

Ethiopia, Kenya and Uganda are among the most populous countries in East Africa, and they have the largest populations both with and without access to electricity. Kenya established a Rural Electrification Authority in 2006 with the goal of achieving universal access to electricity by 2030. As of 2013, 90% of public facilities have access to electricity, but household access remains low. Rwanda's electrification rate has increased rapidly in recent years (from 6% in 2008 to 17% in 2012). Its Electricity Access Rollout Programme offers ready-to-use switchboards that can be paid for in instalments and enable low-income households to connect to grid electricity without the need for expensive house wiring.

The picture in the Southern Africa sub-region is skewed by the unique situation of South Africa: At around 85%, South Africa has the highest electrification rate on mainland sub-Saharan Africa. Around 11% of households do not have access to electricity and a further 4% rely on illegal access (non-paying) or obtain access informally (from one household to another but paying) (Statistics South Africa, 2012). More than three-quarters of households use pre-paid meters, which helps overcome the problem of non-payment. Despite positive overall progress to improve access, the most recent National Development Plan in South Africa warns that reliability of supply has deteriorated and prices are rising quickly. In Mozambique, around 40% of people have access to electricity, either through the grid or mini/off-grid systems. The Government has promoted solar photovoltaic (PV) and mini-hydropower solutions in rural areas, reporting that 700 schools, 600 health centres and 800 other public buildings in rural areas now have electricity from solar PV (AllAfrica, 2014). Electricity access in Tanzania increased from around 13% in 2008 to 24% in 2012, with a reduction in connection fees (by 40% in urban areas and 60% in rural areas) recognised as an important contributory factor. For those who do have electricity access in sub-Saharan Africa, average

residential electricity consumption per capita is 317 kWh per year (225 kWh excluding South Africa), equivalent to around half the average level of China, 20% of Europe and 7% of the USA. Consumption per capita is significantly lower in rural areas, typically in the range of 50-100 kWh per year. For a five-person household, an annual consumption of 50 kWh per person could, for instance, allow the use of a mobile phone, two compact fluorescent light bulbs and one fan for five hours a day. In urban areas, households generally own more appliances, such as televisions, refrigerators or an electric water heater. There are also disparities in consumption levels across and within subregions. Levels in Central Africa average on 220 kWh per capita per year but vary from less than 100 kWh in Cameroon to around 900 kWh in Gabon. In Southern Africa, the average consumption per capita is the highest of all subregions, but this is driven principally by very high levels in South Africa and relatively high levels in Zambia, Botswana and Zimbabwe (all above 500 kWh per capita per year). Levels in Mozambique and Tanzania are much lower at less than 200 kWh per capita per year.



South Africa supplies two-thirds of Africa's electricity and is one of the four cheapest electricity producers in the world.

Excluding South Africa, appliances account for an average of 70% of residential electricity consumption across the other sub-regions. There are an estimated 43 million televisions (equivalent to about one in every four households), 17 million refrigerators (around one in every ten households) and 450 million mobile phones (about one for every two people). The ownership of mobile phones in sub-Saharan Africa

has risen at a brisk pace as they provide access to multiple services, such as personal and business communications and online banking, for relatively low electricity consumption. In reality, a small share of households owns a relatively large share of electric appliances. An even smaller share uses electricity for water heating or cooking, both of which consume relatively high levels of electricity (mainly households in Southern Africa).

South Africa supplies two-thirds of Africa's electricity and is one of the four cheapest electricity producers in the world. Almost 90% of South Africa's electricity is generated in coal-fired power stations. Koeberg Nuclear Power Station, a large nuclear station near Cape Town, provides about 5% of capacity. A further 5% is provided by hydroelectric and pumped storage schemes. In South Africa there are few, if any, new economic hydro sites that could be developed to deliver significant amounts of power. Generation is dominated by the Electricity Supply Commission (Eskom), the national wholly state-owned utility, which also owns and operates the national electricity grid. Eskom supplies about 95% of South Africa's electricity. In global terms, the utility is among the top seven in generating capacity, among the top nine in terms of sales, and has one of the world's biggest dry-cooled power stations (Matimba Power Station). Eskom was converted into a public company on 1 July 2002. It is financed by net financial market liabilities and assets as well as reserves. While Eskom does not have exclusive generation rights, it has a practical monopoly on bulk electricity. It also operates the integrated national high-voltage transmission system and supplies electricity directly to large consumers such as mines, mineral beneficiaries and other large industries. In addition, it supplies electricity directly to commercial farmers and, through the Integrated National Electrification Programme (INEP), to a large number of residential consumers.

Eskom sells in bulk to municipalities, which distribute to consumers within their boundaries. Access to electricity in 1994 was at 34%. Since 1994, INEP has made it possible to electrify 5.977 million households, which translates to 88% access to electrification nationwide. Between January 2003 and January 2004, South Africa increased its electricity output by 7.1%, with a peak demand of 34 195 MW on 13 July 2004, as opposed to the 31 928 MW peak in 2003. Of the new capacity to be built, Eskom will target about 70% in MW, with the balance from independent power producers (IPPs). The consumption levels of energy, particularly electricity, in South Africa are significantly higher than in many other developing countries, mainly because of its strong industrial base. South Africa, which makes up 5% of Africa's population, consumes about 40% of all electricity used in Africa. The overall rate of electrification in the country was 88% in 2014 (NER, 2001). Table 1 (on the following page) represents the DoE's connections from October 2011 to March 2015.

Table 1: DoE's household connections from October 2011 to March 2015

Province	Households 2011 Census	Houses Electrified Census 2011	Backlog Census 2011	% Access per Province	Project Households with 2% Growth	Total Households Connected	Houses Without Electricity	Houses Electrified	% Access per Province (Average %)	Projected Households with 2% Growth (April-March 2015)	Total Households Connected (April-March 2015)	Houses Without Electricity	Houses Electrified	% Access per Province (Average %)
Eastern Cape	1 687 385	1 265 759	421 626	75.01%	1 721 133	102 498	352 876	1 368 257	79.50%	1 755 555	37 820	349 478	1 406 077	80.09%
Free State	823 316	740 500	82 816	89.94%	839 782	15 450	83 832	755 950	90.02%	856 578	14 854	85 774	770 804	89.99%
Gauteng	3 909 022	3 416 360	492 662	87.40%	3 987 202	62 985	507 857	3 479 345	87.26%	4 066 946	22 037	565 564	3 501 382	86.09%
KwaZulu-Natal	2 539 429	1 977 257	562 172	77.86%	2 590 218	115 958	497 003	2 093 215	80.81%	2 642 022	39 621	509 186	2 132 836	80.73%
Mpumalanga	1 075 488	929 372	146 116	86.41%	1 096 998	75 364	92 262	1 004 736	91.59%	1 118 938	28 584	85 618	1 033 320	92.35%
Northern Cape	301 405	257 255	44 150	85.35%	307 433	22 097	28 081	279 352	90.87%	313 582	5 625	28 605	284 977	90.88%
Limpopo	1 418 102	1 237 495	180 607	87.26%	1 446 464	103 803	105 166	1 341 298	92.73%	1 475 393	40 103	93 992	1 381 401	93.63%
North West	1 062 015	892 424	169 591	84.03%	1 083 255	43 177	147 654	935 601	86.37%	1 104 920	25 972	143 347	961 573	87.03%
Western Cape	1 634 000	1 525 980	108 020	93.39%	1 666 680	41 121	99 579	1 567 101	94.03%	1 700 014	18 839	114 074	1 585 940	93.29%
<b>Total</b>	<b>14 450 162</b>	<b>12 242 402</b>	<b>2 207 760</b>	<b>84.72%</b>	<b>14 739 165</b>	<b>582 453</b>	<b>1 914 310</b>	<b>12 824 855</b>	<b>88.13%</b>	<b>15 033 949</b>	<b>233 455</b>	<b>1 975 639</b>	<b>13 058 310</b>	<b>88.23%</b>
Census 2011 figures on power for lighting			DoE calculations with additional households electrified from October 2011 to March 2014						Additional households electrified from April to March 2015					

Table notes: These statistics include electrification through INEP. The information released is based on the financial year end of the municipality (which runs from June to July).

South Africa's energy intensity (the amount of energy per unit of economic output, and a function of both economic structure and the energy efficiency of individual sectors) is high due to the large share of energy-intensive activities within the economy, based on the historical development of the economy around the "minerals-energy complex" (Fine & Rustonjee, 1996).

Compared to an industrialising nation like South Korea, South Africa's energy intensity is high per GDP,

but similar if adjusted for power purchasing parity, and the per capita consumption of primary energy is lower. South Africa's intensity is more comparable to that of Indonesia, albeit at a higher level of primary energy and electricity consumption per capita. There is room for energy efficiency improvements, when compared to other middle-income countries. Areas for such improvements, and also requiring high amounts of energy per unit of output, include mining, iron and steel, aluminium, ferrochrome and chemicals – the same sectors that make up a large

share of South African exports. The abundance of cheap coal for generation has provided little incentive for the efficient use of energy, and the specific energy efficiency of many sectors is low by international comparison; for example, energy intensity for iron and steel improved from 40 TJ/t of steel in 1971 to 30 TJ/t in 1991, but in Taiwan the improvement was seen in the decrease from 31 to 14 TJ/t. In gold mining, while annual production has generally declined since the 1970s, the input of energy per unit (TJ/t) has shown an increasing trend. However, effective comparison of

intensity levels would require more details regarding resource endowment, type of mining and industrial processes.

South African industry at present depends largely on primary extraction and relatively low-grade processing, making it a heavy user of energy; but as it diversifies into higher technology manufacturing and processing, its energy intensity should reduce. However, international trends show that countries like South Africa become receptors of energy-intensive investment as developed countries shed them in favour of more service-orientated and lucrative activities. Recent investments in aluminium smelters, iron and steel mills, and the Southern African Power Pool (SAPP) strategy, suggest the trends in the country's industrial future.

The electricity supply sector plays a pivotal role in the South African energy economy and the Southern African region. Its importance lies both in improving the quality of life for the previously disadvantaged majority as well as supporting large-scale industrial development. As Figures 1 and 2 show (on the following page), the total electricity exported (volume GWh) makes up 13 929 in 2013 compared with 9 428 total electricity imports for the same year. This results in a total net electricity export of 4 501 GWh (Electricity Trade Data, 2013). This share underplays the role of electricity, however, as a high quality energy carrier and as a critical input to key economic sectors. On the industry and manufacturing side, the electricity-intensive industries are some of the largest contributors to both economic growth and exports, and take up more than 60% of national electricity sales (Trollip, 1996; Berger, 2000; DME 2000).

#### 1.15 *Natural gas production*

Gas production increased from around 7 bcm in 1990 to 58 bcm in 2012, making it a small but

growing contributor to global gas supply. Growth has largely come from associated gas linked to the West African offshore oil boom. Historically, much of the produced gas has been flared, but more stringent regulations have excluded this option for most of the new developments in the last decade. Production made available to the market is five times greater than it was in 2000, mainly from Nigeria, which now has six liquefied natural gas (LNG) trains, but also from Equatorial Guinea and Angola, which joined the ranks of global LNG exporters in 2007 and 2013 respectively. The only other gas-exporting country in sub-Saharan Africa is Mozambique, which exports around 3.5 bcm per year by pipeline to South Africa. The main countries currently making use of their gas resources domestically are Cameroon, Congo, Côte d'Ivoire, Nigeria, South Africa (mainly at the Mossel Bay gas-to-liquids [GTL] plant) and Tanzania. A huge scope remains across many countries to increase natural gas supply, exports and domestic consumption. Major tasks for governments in the region include putting gas-gathering and processing facilities in place, building gas networks and developing effective markets and pricing, as the local availability of gas for power generation or industrial use is very low in most countries.

#### 1.16 *Renewable energy*

Renewable energy technologies (mainly hydropower) make up a large share of the total power supply in Africa and there is potential for this to expand as a wider range of technologies is deployed. Many countries are actively developing or considering developing their renewable energy resource potential. Renewable energy can potentially improve energy security by reducing the reliance on imported fuels and they help diversify the power mix. They can be deployed in a decentralised manner, which may enable them to be deployed faster than centralised power plants (although small-scale projects can be costly in

terms of scarce administrative skills), and can provide local employment for deployment and maintenance. Renewables are also critical technologies to help provide access to remote communities.

#### 1.17 *Bioenergy*

Bioenergy dominates the sub-Saharan energy mix, mainly accounted for by the traditional use of solid biomass in the residential sector, while the modern use of solid biomass and biogas for power generation and heat make up only a very small share. Around one-third of sub-Saharan Africa is covered by forest, with total forest biomass stock estimated to be 130 billion tonnes in 2010, but the amount available annually without causing deforestation is much smaller. In addition to forest products and residues, agricultural residues represent a significant portion of the available biomass resources, though some residues must be left in-field to maintain the agricultural productivity of the land. Biomass is spread throughout much of the African continent, with forested areas most prevalent in Central Africa and parts of Southern Africa, while agricultural activities occur largely in East and West Africa. Tapping into these available resources could provide fuel for a significant share of electricity supply in some countries. For example, sustainably extracted agricultural and forestry residues could supply close to 40% of Cameroon's electricity consumption (Ackom et al., 2013). There is existing installed capacity of around 325 MW of electricity from bioenergy, mainly spread across East and South Africa. However, largescale deployment will be challenging, as the levelised costs of power generation from bioenergy are often higher than gas-fired generation and hydropower, due in part to the cost of collecting the biomass feedstocks.

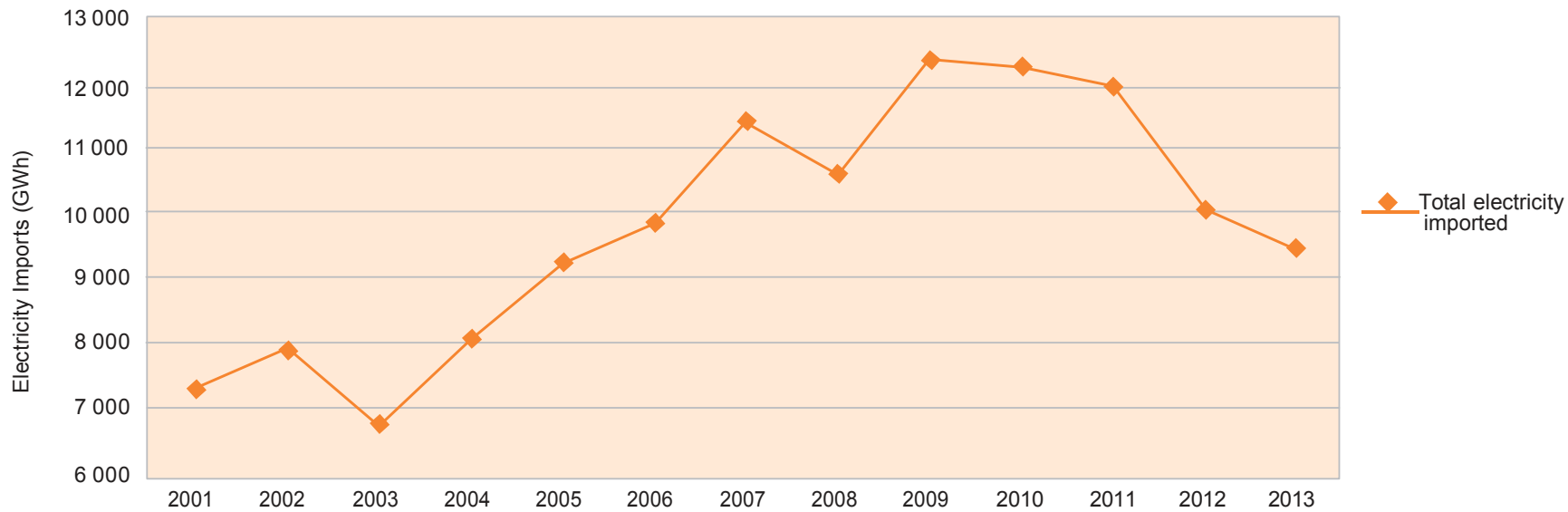


Figure 1: Total electricity imported as at 2013

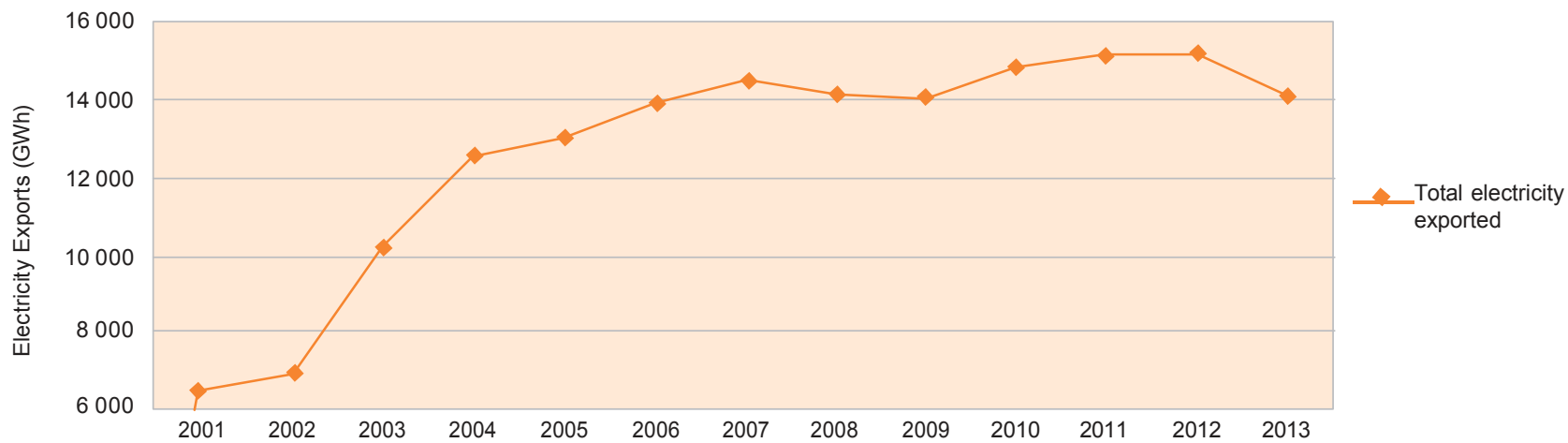


Figure 2: Total electricity exported as at 2013

### 1.18 *Hydropower*

Hydropower has long been an important part of many African power systems and is the most used renewable energy source (excluding bioenergy). Hydropower is attractive because of the large scale of potential development and the low average costs of electricity generated – lower than any other technology, renewable or otherwise. The technical hydropower potential in Africa is estimated at 283 GW and is able to generate close to 1 200 TWh per year – 8% of the global technical potential. This amount of electricity is more than three times the current electricity consumption in sub-Saharan Africa. Less than 10% of the technical potential has so far been tapped. More than half of the remaining potential is in Central and East Africa, particularly in Cameroon, Congo, DRC, Ethiopia and Mozambique, but there are also significant opportunities in Southern Africa (Angola, Madagascar, Mozambique and South Africa) and West Africa (Guinea, Nigeria and Senegal). The large hydropower potential in DRC has long been a focus of policy makers, both in terms of the Inga III project (4.8 GW) that is planned and the several phases of the long-discussed Grand Inga project (around 44 GW) which, if constructed, could transform the African power supply picture.

Several barriers exist to exploiting the economic hydropower potential in sub-Saharan Africa. Large hydropower projects require large sums of upfront capital and, often, for power purchase agreements to be in place to raise the necessary financing. Low levels of regional interconnection mean that there are limited opportunities to export large volumes of electricity, while domestic markets can be small. While hydropower is a low-cost source of baseload power generation, it can also be subject to seasonal and annual variations. Environmental concerns, social considerations and competition for water resources also require very careful consideration and

public consultation, as hydropower dams may require flooding large land areas, potentially displacing communities and reducing the flow of water that is available for other uses downstream, such as agriculture. In addition, a lack of required technical expertise is a brake on hydropower development in some countries.

### South Africa and parts of East Africa are leading the way in increasing their wind capacity.

Currently, 20 GW of hydropower capacity is installed in sub-Saharan Africa, with several countries, including Mozambique, DRC, Uganda and Kenya, relying on it for a significant share of power generation. Many large projects are planned, e.g., further developments at the Inga site in DRC and Mphanda Nkuwa Dam in Mozambique. Many smaller projects are also being developed, as perennial rivers cover much of sub-Saharan Africa. Small hydropower may be an economic means of electricity access for communities near these waterways.

### 1.19 *Solar power*

Solar technologies have played a limited role in the power sector in Africa, but they are gaining attention in many countries. Africa is particularly rich in solar energy potential, with most of the continent enjoying an average of more than 320 days per year of bright sunlight and experiencing irradiance levels of almost 2 000 kWh/m<sup>2</sup> annually (twice the average level in Germany) (European Commission JRC, 2011). The best solar resources stretch across the Sahara, North Africa and parts of Southern Africa, with irradiation levels close to 2 500 kWh/m<sup>2</sup>. Central and West Africa generally have lower irradiance levels,

particularly near the Gulf of Guinea. Potential solar power generation far exceeds electricity demand today and into the foreseeable future, though vast areas of land or rooftops would be required. For example, to generate the same amount of power as current electricity consumption in sub-Saharan Africa (352 TWh) would require more than 200 GW of solar PV, spanning an area close to 7 000 km<sup>2</sup>.

The average cost to generate electricity from solar PV in sub-Saharan Africa currently exceeds \$175 per MWh, which is above the average cost of electricity generated from other grid technologies. In some cases, the existence of very high quality solar resources and technology that are readily available can result in lower costs, as recent bids in the Renewable Energy Independent Power Producer Procurement Programme (REIPPP) in South Africa have indicated. Despite the apparent cost disadvantage, solar is gaining a foothold in sub-Saharan Africa where installed capacity increased from 40 MW in 2010 (mainly small-scale PV) to around 280 MW in 2013 (including some large PV and concentrating solar power plants). There are several grid-connected projects under construction, including the 155 MW Nzema solar plant in Ghana and 150 MW of projects in South Africa, for example. In addition, other countries are considering projects on the scale of 100 MW or more, including Mozambique, Sudan, Nigeria and Ethiopia.

Solar PV is much more competitive in off-grid or mini-grid applications, where the main alternative at present is generation fuelled by diesel or gasoline. Where adequate resources are available, small hydro and wind projects can compete with solar PV for off- or mini-grid uses. Solar can also be an effective element in a broader suite of modern energy solutions, such as solar lanterns, ovens and water heaters.

### 1.1.10 Wind power

Wind power deployment to date has been very limited when compared to hydropower, with only 190 MW in all of sub-Saharan Africa, even though the levelised cost of electricity from onshore wind technologies has declined significantly in recent years. Sub-Saharan Africa's wind potential is estimated at around 1 300 GW (Mandelli et al, 2014), which would produce several times the current level of total African electricity consumption. Much the same as solar, there are medium- to high-quality wind resources across most of North Africa (European Commission JRC, 2011), though harsh desert conditions pose a significant challenge to the long-term operation of wind turbines. In sub-Saharan Africa, high quality wind resources are confined to a few areas, mainly the Horn of Africa, eastern Kenya, parts of West and Central Africa bordering on the Sahara and parts of Southern Africa. Somalia has the highest onshore potential of any country, followed by Sudan, Libya, Mauritania, Egypt, Madagascar and Kenya (AfDB, 2013). The offshore wind energy potential is best off the coast of Madagascar, Mozambique, Tanzania, Angola and South Africa. Wind can be cost competitive with other technologies where the resources are good, but other factors could limit its deployment. For instance, in East and West Africa, where the greatest potential lies, domestic markets are small and the power grids are not well developed, meaning that variable generation from wind would introduce additional challenges to an already unstable and intermittent system. With improvements in the operations of power systems in Africa and the increasing size of the systems, the amount of wind power that can be added without creating formidable operational challenges will increase. For those systems with hydropower, the variability of wind power can be accommodated more readily. South Africa and parts of East Africa are leading the way in increasing their wind capacity with,

for example, Kenya planning to add over 400 MW of wind capacity by 2020.

## 1.2 Organisational Environment

As at the end of the year under review, the DoE had a staff complement of 610, with 541 full time employees and 69 contract employees. The post of the Director-General (DG) was vacant since December 2014 and was filled in October 2015. Of the two Deputy Director-General (DDG) posts which were vacant, one was filled through secondment whereas the other one was re-advertised in January 2016.

The DoE has also commenced with the process of reviewing the functionality of its operational structure in order to accurately respond to its mandate and the challenges facing the Energy Sector. Specific changes were effected during the year under review which, amongst others, includes relocation of the Chief Directorate: Communications and Knowledge Management to the Office of the DG. The DoE is striving to ensure that the organisational structure responds to its mandate.

### 1.2.1 Training and development

The challenges of technical skills required in the Energy Sector have continued to be of concern to the DoE. In response to these challenges, the DoE has developed a Workplace Skills Development Plan (WSP), based on the training needs of individual employees and their managers. As part of the implementation of the WSP, a number of training and development interventions were identified and implemented. The DoE has also offered 32 new bursaries to serving employees of the department, effective from the beginning of the 2015 academic year. The DoE has also implemented different youth development interventions such as the provisioning of bursaries to external applicants, with

a special emphasis on the youth. As a result thereof, 11 applicants resonating within the Youth Programme were offered bursaries that were sponsored by the Chemical Industries Education and Training Authority (CHIETA) including four work integrated learners, 32 interns and 15 people on learnership programme. The DoE has also sought alternatives to training and development, such as free training offered by external service providers as well as involving the Energy Sector Education and Training Authorities on the different areas of training highlighted above.

### 1.2.2 Regional offices of the DoE

In its quest to improve and bring service delivery closer to the people, the DoE has thus far managed to secure permanent office space for its regional offices in the Mpumalanga, KwaZulu-Natal, North West and Limpopo provinces. The procurement of permanent office space for the Western Cape, Eastern Cape and Gauteng provinces is underway and in an advanced stage. The process of procuring permanent office space in the Northern Cape and Free State provinces will be advertised and it is anticipated that it will be finalised before the end of the financial year.

## 2 REVISIONS TO 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
- The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended

Table 2: The primary legislation that mandates the DoE

Act	Description
The National Energy Act, 2008 (Act No. 34 of 2008)	<p>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 &amp; at affordable prices in the South African economy to support economic growth &amp; poverty alleviation, while also taking into account environmental considerations. The act also provides for:</p> <ul style="list-style-type: none"> <li>- energy planning</li> <li>- increased generation &amp; consumption of renewable energy</li> <li>- contingency energy supply</li> <li>- the holding of strategic energy feedstock &amp; carriers</li> <li>- adequate investment in appropriate upkeep &amp; access to energy infrastructure</li> <li>- measures for the furnishing of certain data &amp; information regarding energy demand</li> <li>- supply &amp; generation</li> <li>- the establishment of an institution to be responsible for the promotion of efficient generation &amp; consumption of energy &amp; energy research</li> </ul>
The Petroleum Products Act, 1977 (Act No. 120 of 1977), as amended	<p>The Petroleum Products Act, 1977 provides for:</p> <ul style="list-style-type: none"> <li>- measures in the saving of petroleum products &amp; economy in the cost of distribution thereof</li> <li>- the maintenance &amp; control of the price thereof</li> <li>- the furnishing of certain information regarding petroleum products</li> <li>- the rendering of service of a particular kind or standard in connection with petroleum products</li> <li>- the licensing of persons involved in the manufacturing, wholesaling &amp; retailing of prescribed petroleum products</li> <li>- the promotion of the transformation of the South African petroleum &amp; liquid fuels industry</li> <li>- the promulgation of regulations relating to such licences &amp; matters incidental thereto</li> </ul>
The Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended	<p>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 &amp; introduces the NER as the custodian &amp; enforcer of the National Electricity Regulatory Framework. The act also provides for licences &amp; registration as the manner in which generation, transmission, distribution, trading &amp; the import &amp; 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.</p>

Table 3: The 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	<p>The Central Energy Fund Act, 1977, as amended provides for:</p> <ul style="list-style-type: none"> <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 safeguarding 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</li> <li>- the submission to Parliament of a report relating to the said investigation, examination &amp; auditing</li> <li>- matters connected with the act</li> </ul>

*Table 3: The acts which provide a broader mandate to the Energy Sector and are administered by the DoE (continued)*

Act	Description
The Nuclear Energy Act, 1999 (Act No. 46 of 1999)	The Nuclear Energy Act, 1999 provides for: <ul style="list-style-type: none"> <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</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: <ul style="list-style-type: none"> <li>- the establishment of the NNR in order to regulate nuclear activities, its objectives &amp; functions, the manner in which it is to be managed &amp; its staff matters, safety standards &amp; regulatory practices</li> <li>- the protection of persons, property &amp; the environment against nuclear damage &amp; matters connected therewith</li> </ul>
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 PPRA & 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, an NGR 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 NGR & 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 & for matters incidental thereto

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

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

## 21 Relevant Court Rulings

To date, the DoE did not experience any court rulings.

## 22 Planned Policy Initiatives

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

*Table 4: Legislation 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 & 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
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 the strategic stock of petroleum & gas	March 2016	September 2016	Enhance energy security

## 2.3 Strategic Outcomes-Orientated Goals

Table 5: The DoE's strategic outcomes-orientated goals

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

## 2.4 Alignment of the Annual Performance Plan with the National Development Plan and Medium-Term Strategic Framework

The National Development Plan (NDP) envisages that by 2030 South Africa will have an Energy Sector that promotes:

- economic growth and development through adequate investment in energy infrastructure. The sector should provide a reliable and efficient electricity service at competitive rates, while supporting economic growth through job creation
- social equity through expanded access to electricity at affordable tariffs and through targeted, sustainable subsidies for needy households
- environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change

The DoE has aligned its Annual Performance Plan (APP) with the NDP and various outcomes of Medium-Term Strategic Framework 2014-2019 (MTSF) that directly or indirectly affect it, as indicated in the following table.

Table 6: Alignment of APP to NDP and various outcomes of the MTSF

Department Goals	Department Objectives	Linkages to the NDP Proposals	Linkages to the MTSF 2014-2019 (Outcomes)	Departmental Programme Performance Indicators
<p>Security of supply - To ensure that energy supply is secure &amp; demand is well managed</p>	<p>SO 2.1 Improved Energy Security</p> <p>SO 2.2 Improved Liquid Fuels Energy Security by Development &amp; Implementation of the Liquid Fuels 20-Year Infrastructure Plan</p> <p>SO 2.11 Ensure Security of Supply through Additional Power Generation Capacity</p>	<p>Enable exploratory drilling to identify economically recoverable coal seam &amp; shale gas reserves, while environmental investigations will continue to ascertain whether sustainable exploitation of these resources is possible. If gas reserves are proven &amp; environmental concerns are alleviated, then development of these resources &amp; gas-to-power projects will be fast-tracked</p> <p>Invest in a new heavy-haul rail corridor to the Waterberg Coalfield, upgrade the central basin coal network &amp; expand export capacity in the line to Richards Bay</p> <p>Ensure domestic security of coal supply for existing power stations through industry compact, more comprehensive coalfield planning &amp; opening up the Waterberg Coalfield for coal mining</p> <p>Fast track the development of off-shore West Coast gas coupled with incremental power generation units</p> <p>Develop infrastructure for the import of liquefied natural gas, mainly for power production</p> <p>Upgrade refineries to ensure they meet new fuel quality standards &amp; insist on strategic fuel stocks to ensure security of supply</p> <p>Continue to import refined fuels, ensuring that the growing deficit in petroleum products is met, &amp; defer the decision on a new refinery</p>	<p>Outcome 10 - Annual Energy balances provided to support the compilation of the GHG inventory</p> <p>Outcome 6 - Publication of approved IEP</p> <p>Outcome 6 - Take a decision on expanding oil refining capacity</p> <p>Outcome 6 - Develop a National Coal Policy with regulations that will include a strategy to secure coal supply &amp; that aligns with mining beneficiation</p> <p>Outcome 6 - Develop &amp; implement a Gas Infrastructure Master Plan</p> <p>Outcome 6 - Develop a funding mechanism for upgrading existing refineries to ensure they meet new fuel-quality standards</p> <p>Outcome 6 - Refine, update &amp; implement the IRP</p> <p>Outcome 6 - PSP Framework: Rands private investment &amp; market share of private ownership of baseload, renewable energy, fuels &amp; gas</p>	<p>Sub-Programme 2.1: Energy Planning</p> <ul style="list-style-type: none"> <li>- Annual energy balances provided to support compilation of the GHG inventory</li> <li>- Studies to determine the impact of Clean Fuels 2 on fuel consumption by road vehicles &amp; price elasticity of fuel demand for the IEP</li> </ul> <p>Sub-Programme 2.3: Hydrocarbon Policy</p> <ul style="list-style-type: none"> <li>- Finalised 20YRLFMP</li> <li>- Draft Position Paper on Coal for Energy Policy</li> <li>- Developed Draft GUMP &amp; its Implementation Plan</li> </ul> <p>Sub-Programme 2.1: Energy Planning</p> <ul style="list-style-type: none"> <li>- Study to determine the impact of Clean Fuels 2 on fuel consumption by road vehicles.</li> <li>- Study to determine the price elasticity of fuel demand</li> </ul> <p>Sub-Programme 2.4: Electricity, Energy Efficiency &amp; Environmental Policy</p> <ul style="list-style-type: none"> <li>- IRP</li> <li>- Additional power generation capacity as per the IRP</li> </ul>

Table 6: Alignment of APP to NDP and various outcomes of the MTSF (continued)

Department Goals	Department Objectives	Linkages to the NDP Proposals	Linkages to the MTSF 2014-2019 (Outcomes)	Departmental Programme Performance Indicators
Infrastructure - To facilitate an efficient, competitive & responsive energy infrastructure network	SO 2.4 Bulk electrical infrastructure required for the universal access to electricity	Ring-fence the electricity distribution businesses of the 12 largest municipalities, resolve maintenance & refurbishment backlogs & develop a financing plan, alongside investment in human capital	Outcome 6 - Ring-fence the electricity-distribution business of the 12 largest municipalities & resolve their maintenance & refurbishment	Sub-Programme 2.4: Electricity, Energy Efficiency & Environmental Policy <ul style="list-style-type: none"> <li>- Norms &amp; standards for municipal electricity infrastructure asset management</li> </ul>
	SO 4.2 Energy Infrastructure Development Monitored		Outcome 6 - SIP 6: Integrated Municipal Infrastructure Project; SIP 8: Green Energy in Support of the South African Economy; SIP 10: Electricity Transmission & Distribution for All; SIP 17: Regional Integration for African Cooperation over the Next Five Years in South Africa	Sub-Programme 4.4: Electricity Infrastructure/Industry Transformation <ul style="list-style-type: none"> <li>- Number of SIP quarterly reports submitted to EXCO &amp; MANCO &amp; the PICC Secretariat on all SIPs</li> </ul>
	SO 4.3 Enhance Programmes & Projects Management		Number of IECs	Sub-Programme 4.3: Community Upliftment Programmes & Projects <ul style="list-style-type: none"> <li>- Number of reports on the progress made with regard to the development of rural integrated energy centres</li> </ul>
Regulation & competition - To ensure that there is improved energy regulation & competition	SO 2.3 Policy & Regulations to Ensure Security of Supply	Move Eskom's system operator, planning, power procurement, power purchasing & power contracting functions to the independent system & market operator & accelerated procurement of IPPs	Outcome 6 - Amend the National Energy Regulator Act, 2004 (Act No. 40 of 2004) & the Electricity Regulation Act, 2006 (Act No. 4 of 2006) – Legislative amendments	Sub-Programme 2.4: Electricity, Energy Efficiency & Environmental Policy Programme <ul style="list-style-type: none"> <li>- Amend National Energy Regulator Act, 2004 (Act No. 40 of 2004)</li> </ul>
	SO 3.1 Compliance Monitoring & Enforcement in the Petroleum Sector		Outcome 6 - Independent system operator in place	<ul style="list-style-type: none"> <li>- Amend Electricity Regulator Act, 2006 (Act No. 4 of 2006)</li> <li>- Electricity Industry Structure Bill</li> </ul>
	SO 3.2 Promote Petroleum Licensing			

Table 6: Alignment of APP to NDP and various outcomes of the MTSF (continued)

Department Goals	Department Objectives	Linkages to the NDP Proposals	Linkages to the MTSF 2014-2019 (Outcomes)	Departmental Programme Performance Indicators
Universal access & transformation - To ensure that there is an efficient & diverse energy mix for universal access within a transformed Energy Sector	<p>SO 2.4 Bulk Electrical Infrastructure Required for the Universal Access to Electricity</p> <p>SO 2.5 Establish Mechanisms to Refund Capital &amp; Create a Smooth Price Path over the Long-term</p> <p>SO 4.1 Ensure Access to Electricity by Households</p>	<p>Revise the National Electrification Plan &amp; ensure 90% coverage</p> <p><i>"...more than 90% of the population should enjoy access to grid-connected or off-grid electricity within 20 years" (Energy Vision, published 2012) &amp; NDP Energy Proposals "Revise national electrification plan &amp; ensure 90% access to grid-connected or off-grid electricity."</i></p>	<p>Outcome 6 - Reviewed Electricity Pricing Policy issued</p> <p>Outcome 7 - Number of rural households linked to grid or micro scheme (electricity); number of rural households connected with off-grid technology</p> <p>Outcome 9 - 1.4 million additional households connected to the grid by 2019 &amp; 105 000 additional households connected on non-grid by 2019</p>	<p>Sub-Programme 2.4: Electricity, Energy Efficiency &amp; Environmental Policy</p> <ul style="list-style-type: none"> <li>- Electricity Pricing Policy</li> </ul> <p>Sub-Programme 4.1: Integrated National Electrification Programme</p> <ul style="list-style-type: none"> <li>- Number of quarterly reports on the allocation of funding &amp; monitoring of the progress on the number of additional households electrified with grid electrification of households projects per year in comparison to the Electrification Plan</li> <li>- Number of quarterly reports on the allocation of funding &amp; monitoring of the progress on the number of additional households electrified with non-grid electrification of households projects per year in comparison to the Electrification Plan</li> </ul>
Environmental assets - To ensure that environmental assets & natural resources are protected & continually enhanced by cleaner energy technologies	<p>SO 6.2 Renewable Energy</p> <p>SO 6.1 Implementation of the EEDSM Measures Across all Sectors Coordinated &amp; Monitored</p>	<p>Move to less carbon-intensive electricity production through procuring up to 20 000 MW of renewable energy increased hydro imports from the region &amp; increased demand-side measures, including SWH</p>	<p>Outcome 10 - Percentage of new build that is renewable power generation (429 or 17 800 MW) by 2030 for renewable energy developed</p> <p>Outcome 6 - Measure demand savings in MW in line with the National Energy Efficiency Strategy &amp; Action Plan</p>	<p>Sub-Programme 4.3: Community Upliftment Programmes &amp; Projects</p> <ul style="list-style-type: none"> <li>- Number of SWH units installed in residential &amp; commercial sectors per year</li> </ul>
Climate change - To implement policies that adapt to & mitigate the effects of climate change	<p>SO 5.3 Improve Nuclear Security</p> <p>SO 6.1 Implementation of the EEDSM Measures Across all Sectors Coordinated &amp; Monitored</p>	<p>Investigating the implications of the greater use of nuclear energy, including its potential costs, safety, environmental benefits, localisation &amp; employment opportunities, uranium enrichment, fuel fabrication &amp; the dangers of weapons proliferation</p>	<p>Outcome 4 - Review alternative generation options, including Coal 3 &amp; nuclear, to evaluate financing &amp; construction risks &amp; submit realistic options to Cabinet</p> <p>Outcome 10 - Percentage of new build that is renewable power generation to incorporate off-grid energy with a target of 42% (or 17 800 MW) by 2030 for renewable energy developed</p> <p>6% (or 2 600 MW) by 2030 for import of hydropower developed</p>	<p>Sub-Programme 5.1 Nuclear &amp; Technology</p> <ul style="list-style-type: none"> <li>- Number of quarterly monitoring reports on the localisation &amp; industrialisation strategy implemented</li> </ul> <p>Sub-Programme 4.1: Integrated National Electrification Programme</p> <ul style="list-style-type: none"> <li>- Number of quarterly reports on the allocation of funding &amp; monitoring the progress of the number of additional households electrified with non-grid electrification of households projects per year in comparison to the Electrification Plan</li> </ul>

### 3 OVERVIEW OF THE 2016/17 BUDGET AND MEDIUM-TERM EXPENDITURE FRAMEWORK

#### 3.1 Expenditure Estimates

Table 7: Expenditure estimates

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Programmes</b>	<b>Rand Thousand</b>							
Administration	216 776	232 558	257 168	242 598	246 598	240 137	250 518	259 198
Energy Policy & Planning	1 545 323	47 756	41 749	45 096	44 096	46 748	46 281	50 098
Petroleum & Petroleum Products Regulation	44 389	25 836	64 548	74 378	73 378	77 871	77 029	80 374
Electrification & Energy Programme & Project Management	3 115 950	3 958 525	4 180 973	5 778 297	5 813 822	5 699 907	6 216 106	6 466 148
Nuclear Energy	643 228	722 501	845 418	654 398	653 898	863 575	764 460	807 498
Clean Energy	1 093 318	1 489 887	830 257	687 327	435 827	616 933	774 586	823 084
<b>Total</b>	<b>6 658 984</b>	<b>6 477 063</b>	<b>6 220 113</b>	<b>7 482 094</b>	<b>7 267 619</b>	<b>7 545 171</b>	<b>8 128 980</b>	<b>8 486 400</b>

<b>Economic Classification</b>								
<b>Rand Thousand</b>								
<b>Current payments</b>	<b>371 693</b>	<b>414 785</b>	<b>473 607</b>	<b>492 595</b>	<b>508 769</b>	<b>738 963</b>	<b>566 211</b>	<b>595 838</b>
<b>Compensation of employees</b>	<b>201 485</b>	<b>228 545</b>	<b>264 266</b>	<b>289 479</b>	<b>289 479</b>	<b>310 797</b>	<b>314 102</b>	<b>327 522</b>
Salaries & wages	177 273	201 791	234 156	258 844	259 040	266 644	269 490	281 016
Social contributions	24 212	26 754	30 110	30 635	30 439	44 153	44 612	46 506
<b>Goods &amp; services</b>	<b>170 208</b>	<b>186 240</b>	<b>209 341</b>	<b>203 116</b>	<b>219 290</b>	<b>428 166</b>	<b>252 109</b>	<b>268 316</b>
Administrative fees	2 267	4 023	4 453	3 861	3 971	3 471	3 686	3 820
Advertising	3 481	15 970	8 652	12 327	9 561	7 612	7 874	8 062
Minor assets	125	389	367	4 140	3 241	3 194	4 117	4 309
Audit costs: External	4 781	4 460	3 578	3 572	3 552	3 872	4 761	4 209
Bursaries: Employees	793	696	761	853	853	755	785	821
Catering: Departmental activities	1 477	2 641	1 032	2 547	2 153	2 082	2 212	2 350
Communication (G&S)	6 539	6 853	7 846	7 195	6 677	6 018	6 077	6 351
Computer services	7 428	7 975	10 264	7 105	10 469	6 345	6 648	6 952

Table 7: Expenditure estimates (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
Economic Classification								
Rand Thousand								
Consultants: Business & advisory services	15 358	25 387	43 780	46 833	58 477	283 486	99 728	109 502
Legal services (G&S)	4 374	504	846	450	450	448	458	490
Contractors	3 720	2 041	1 743	1 423	3 012	1 368	1 451	1 547
Agency & support/outsourced services	357	995	270	780	5 170	7 866	9 909	10 348
Entertainment	57	69	22	612	139	177	197	231
Fleet services (including Government motor transport)	162	304	1 130	694	648	656	689	724
Inventory: Clothing material & accessories	-	-	-	281	-	-	-	-
Inventory: Fuel, oil & gas	21	-	-	4	-	-	-	-
Inventory: Learner & teacher support material	2	-	-	-	-	-	-	-
Inventory: Materials & supplies	232	-	-	32	-	-	-	-
Inventory: Medicine	1	-	-	-	-	-	-	-
Inventory: Other supplies	491	-	-	81	81	-	-	-
Consumable supplies	-	795	1 582	2 120	2 041	2 295	2 666	2 879
Consumables: Stationery, printing & office supplies	2 476	3 911	4 119	4 638	5 878	4 016	4 128	4 305
Operating leases	28 575	26 709	27 145	36 137	29 058	32 782	34 080	36 097
Rental & hiring	10	28	15	417	217	378	395	412
Property payments	20 151	6 181	3 849	29	5 129	800	779	815
Transport provided: Departmental activity	-	345	1	3 131	2 505	-	-	-
Travel & subsistence	37 009	58 034	56 344	45 110	43 154	42 669	42 890	44 373
Training & development	2 095	4 003	5 665	4 283	4 406	3 933	4 049	4 216
Operating payments	23 989	2 817	6 171	5 393	6 593	5 151	5 462	5 737
Venues & facilities	4 237	11 110	19 706	9 068	11 855	8 792	9 068	9 766
<b>Transfers &amp; subsidies</b>	<b>6 276 700</b>	<b>6 050 595</b>	<b>5 742 710</b>	<b>6 985 492</b>	<b>6 754 843</b>	<b>6 802 113</b>	<b>7 558 442</b>	<b>7 885 984</b>
Municipalities	1 351 443	1 815 490	1 241 563	2 158 239	2 158 239	2 131 871	2 290 284	2 419 501

Table 7: Expenditure estimates (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>								
Rand Thousand								
Departmental agencies & accounts	99 022	202 504	197 194	87 270	87 140	38 246	99 394	105 159
Foreign governments & international organisations	-	38 903	21 275	16 612	19 612	17 375	17 907	18 946
Public corporations	3 946 947	2 733 209	3 708 715	4 193 601	4 193 601	4 125 672	4 547 526	4 705 342
Private enterprises	878 957	1 260 220	570 000	529 382	295 863	486 750	600 919	636 582
Households	331	269	3 963	388	388	2 199	2 412	454
<b>Payments for capital assets</b>	<b>10 555</b>	<b>11 683</b>	<b>3 763</b>	<b>4 007</b>	<b>4 007</b>	<b>4 095</b>	<b>4 327</b>	<b>4 578</b>
Transport equipment	350	-	-	-	-	-	-	-
Other machinery & equipment	9 590	11 335	3 763	4 007	4 007	4 095	4 327	4 578
Software & other intangible assets	615	348	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>36</b>	<b>-</b>	<b>33</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>6 658 984</b>	<b>6 477 063</b>	<b>6 220 113</b>	<b>7 482 094</b>	<b>7 267 619</b>	<b>7 545 171</b>	<b>8 128 980</b>	<b>8 486 400</b>
<b>Division of Revenue</b>								
Rand Thousand								
National	5 307 541	4 661 573	4 978 550	5 323 855	5 109 380	5 413 300	5 838 696	6 066 899
Local government conditional grants (direct)	1 351 443	1 815 490	1 241 563	2 158 239	2 158 239	2 131 871	2 290 284	2 419 501
<b>Total</b>	<b>6 658 984</b>	<b>6 477 063</b>	<b>6 220 113</b>	<b>7 482 094</b>	<b>7 267 619</b>	<b>7 545 171</b>	<b>8 128 980</b>	<b>8 486 400</b>


## 3.2 Relating Expenditure Trends to Strategic Outcomes-Orientated Goals

The NDP envisages that by 2030 South Africa will have an adequate supply of electricity and liquid fuels to ensure economic well-being and that economic activity is not disrupted. The NDP also envisages economic growth, development and social equity through expanded access to energy services that are environmentally sustainable. In addition, the plan envisages that more than 90% of the population should enjoy access to electricity by 2030. Over the medium term, the DoE will focus on the security of energy resources and energy supply, including through increasing household access to electricity, increasing energy efficiency, diversifying the energy generation mix, and improving the quality and security of petroleum fuels.

### 3.2.1 Increasing household access to electricity

The DoE's spending over the medium term focuses largely on household electrification. For this purpose, approximately 75.3% of the DoE's budget is transferred to implementing municipalities, non-grid service providers and the state-owned company, Eskom. A total of 755 000 grid connections to households are expected to be made over the medium term, funded by earmarked allocations for the INEP. The programme electrifies households through grid and non-grid connections, and builds and upgrades substations and electricity networks. The DoE funds the programme through transfers to Eskom and municipalities in the Electrification and Energy Programme and Project Management Programme. Transfers to municipalities are expected to increase from R 1.9 billion in 2016/17 to R 2.2 billion in 2018/19, and transfers to Eskom from R 3.5 billion in 2016/17 to R 4 billion in 2018/19. The cost of electrification connections is expected to increase over the medium term as the INEP shifts to deep rural areas, requiring more expensive

hardware and covering larger geographic areas. Spending on electrification infrastructure, budgeted for in the Electrification and Energy Programme and Project Management Programme, a sub-programme of the INEP, is expected to increase to R 6.4 billion by 2018/19. Non-grid electrification projects, mainly solar energy, will be extended countrywide. The projects will be implemented in any areas where extending the grid would not be cost-effective, and not only, as previously done, in concessionary areas (low density and low consumption households where non-grid service providers have been given concessions to provide solar home systems). A total of 70 000 non-grid connections to households are expected to be made over the medium term, with spending on non-grid electrification projects expected to increase from R 166.4 million in 2016/17 to R 201.6 million in 2018/19 in the INEP sub-programme. Increased funding of R 10.9 million over the medium term in the INEP sub-programme is for the oversight, monitoring and evaluation of non-grid electrification.



The programme electrifies households through grid and non-grid connections, and builds and upgrades substations and electricity networks.

### 3.2.2 Increasing energy efficiency

Targets for installing solar water heaters (SWH) had not been met due to delays in finalising the implementing contract with Eskom as well as in finalising the local content verification outcomes projected by the South African Bureau of Standards. The Solar Water Heaters Programme will now be managed by the DoE. Spending of R 1.2 billion over the medium term on 131 146 SWH is projected. The

budget for SWH service providers is included in the Clean Energy Programme, a sub-programme of the Energy Efficiency Programme, and is expected to grow at an average annual rate of 49.8% over the medium term. The high growth rate can be attributed to the low base in 2015/16, due to slow spending at the inception of the project. Spending on agency and support services in the Clean Energy Programme is expected to grow at an average annual rate of 46.9% over the medium term to pay for services such as the transportation and warehousing of solar water heating systems. The DoE's energy efficiency and demand side management (EEDSM) conditional grant provides subsidies to municipalities to reduce energy consumption and increase energy efficiency through efficient public lighting and the retrofitting of energy-efficient technologies in municipal buildings. Subsidies totalling R 603.9 million over the medium term will be transferred to municipalities. Energy savings of approximately 0.5 TWh per year are projected.

### 3.2.3 Diversifying the energy generation mix

In line with the 2010-2030 Integrated Resource Plan (IRP), the DoE will pursue a balanced energy mix that includes clean and renewable resources, thus meeting the needs of South Africa's growing economy without compromising Government's commitment to sustainable development. The DoE aims to expand both traditional and green energy, including safe and environmentally-sustainable nuclear energy. The DoE is developing a Gas Utilisation Master Plan (GUMP), which will take a 30-year view of the gas industry from a regulatory, economic and social perspective. The IRP targets new gas-fired power generation capacity, plus the supply of gas for converting gas to liquid petroleum products at the plant of the state-owned company, the Mossel Bay Petroleum Oil and Gas Corporation of South Africa. The DoE has designed a programme to procure 3 126 MW of electricity produced from gas

from selected providers, and a request for information for gas to electricity is expected to be released by the end of April 2016.

The DoE, National Treasury (NT) and the Development Bank of Southern Africa established the Independent Power Producer Procurement Programme at the end of 2010 to secure electrical energy generated from renewable and non-renewable sources from the private sector. The programme is designed to be self-funding through revenue derived from development fees paid by bidders and investors. As at 31 December 2015, the DoE has procured 6 377 MW of renewable energy through the programme and connected 44 projects with a capacity of 2 021 MW to the national grid. The energy contribution of independent power producers (IPP) is expected to grow to approximately 7 000 MW, with the first 47 renewable energy IPPs fully operational by mid-2016. Private investment in the programme currently exceeds R 194 billion. The programme also seeks to procure energy from small-scale IPPs, with projects that generate between 1 MW and 5 MW of energy from solar, wind, biomass and landfill gas projects.

Additional funding of R 200 million in the Nuclear Energy Programme is made available in 2016/17 for transactional advisors and consulting services for the Nuclear New Build Programme. The advisors will assist with the call for proposals for procuring nuclear energy and provide transactional advice to the DoE as a procuring agent for the Nuclear New Build Programme.

#### 3.2.4 *Improving the quality and security of petroleum fuels*

The DoE plans to undertake 4 500 inspections of petroleum retail sites to ensure that petroleum fuel meets regulated quality standards. The estimated spending on inspections is projected at R 235.3 million over the medium term in the Petroleum and Petroleum Products Regulation Programme. The DoE is currently reviewing the proposed biofuels subsidy models and addressing related concerns concerning food security.



In line with the 2010-2030 Integrated Resource Plan, the Department of Energy will pursue a balanced energy mix that includes clean and renewable resources.



# PART C

## PROGRAMME & SUB-PROGRAMME PLANS

### 1 PROGRAMME 1: ADMINISTRATION

#### 1.1 Purpose

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

#### 1.2 Six Budget Sub-Programmes

- Ministry
- Departmental Management
- Finance Administration
- Audit Services
- Corporate Services
- Office Accommodation



The purpose of Programme 1 is to provide strategic leadership, management and support services to the DoE.



### 13 Cross-Cutting Programme 1: Sub-Programmes

Table 8: Programme 1 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.1 Sound Corporate Governance Practices	Average MPAT score of at least 3.75 achieved for moderated assessment of 2019/20	N/A	Average MPAT score of 2.5 achieved for self-assessment of 2012/13:	Average MPAT score of at least 3.1 achieved for moderated assessment of 2013/14, with at least the following sub-scores:	Average MPAT score of at least 3.5 achieved for moderated assessment of 2014/15, with at least the following sub-scores:	Average MPAT score of at least 2.6 achieved for moderated assessment of 2015/16	Average MPAT score of at least 2.8 achieved for moderated assessment of 2016/17	Average MPAT score of at least 3.0 achieved for moderated assessment of 2017/18
SO 1.2 Sound Financial Resource Management		- KPA 1–3.0 - KPA 2–2.8 - KPA 3–2.4 - KPA 4–2.0	- KPA 1–3.3 - KPA 2–3.2 - KPA 3–3.1 - KPA 4–2.9	- KPA 1–3.5 - KPA 2–3.5 - KPA 3–3.5 - KPA 4–3.5				
SO 1.3 Sound Corporate Resource Management								
	Unqualified audit outcome for the DoE	Unqualified audit report by the AG achieved for 2011/12	Unqualified audit report by the AG achieved for 2012/13	Unqualified audit report by the AG achieved for 2013/14	Unqualified audit report by the AG achieved for 2014/15	Unqualified audit report by the AG achieved for 2015/16	Unqualified audit report by the AG achieved for 2016/17	Unqualified audit report by the AG achieved for 2017/18

Table 9: Programme 1 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.1 Sound Corporate Governance Practices	MPAT scores	N/A	Average MPAT score of 2.5 achieved for self-assessment of 2012/13:	Average MPAT score of at least 3.1 achieved for moderated assessment of 2013/14, with at least the following sub-scores:	Average MPAT score of at least 3.5 achieved for moderated assessment of 2014/15, with at least the following sub-scores:	Average MPAT score of at least 2.6 achieved for moderated assessment of 2015/16	Average MPAT score of at least 2.8 achieved for moderated assessment of 2016/17	Average MPAT score of at least 3.0 achieved for moderated assessment of 2017/18
SO 1.2 Sound Financial Resource Management			- KPA 1–3.0 - KPA 2–2.8 - KPA 3–2.4 - KPA 4–2.0	- KPA 1–3.3 - KPA 2–3.2 - KPA 3–3.1 - KPA 4–2.9	- KPA 1–3.5 - KPA 2–3.5 - KPA 3–3.5 - KPA 4–3.5			
SO 1.3 Corporate Resource Management	Results of the annual report	Unqualified audit report by the AG achieved for 2011/12	Unqualified audit report by the AG achieved for 2012/13	Unqualified audit report by the AG achieved for 2013/14	Unqualified audit report by the AG achieved for 2014/15	Unqualified audit report by the AG achieved for 2015/16	Unqualified audit report by the AG achieved for 2016/17	Unqualified audit report by the AG achieved for 2017/18

Table 10: Programme 1 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 1.1 Sound Corporate Governance Practices	MPAT scores	Annually (end of the 3rd quarter)	Department to score at least 2.6 for the moderated assessment of 2015/16	N/A	N/A	Average MPAT score of at least 2.6 achieved for moderated assessment of 2015/16	N/A
SO 1.2 Sound Financial Resource Management	Results of the annual report	Annually (end of the 2nd quarter)	Unqualified audit report by the AG achieved for 2015/16	N/A	Unqualified audit report by the AG achieved for 2015/16	N/A	N/A
SO 1.3 Corporate Resource Management							

## Sub-Programme 1.1: Ministry

This sub-programme provides executive support to the Minister and Deputy Minister (DM) and provides a parliamentary service to the Minister, DM, DoE and Energy Sector. No strategic objectives, performance indicators or targets were set for this sub-programme.

Sub-Programme 1.1 provides a parliamentary service to the Minister, Deputy Minister, Department of Energy and Energy Sector.



## Sub-Programme 1.2: Departmental Management

This sub-programme provides executive support to the Director-General (DG) and Deputy Director-Generals (DDGs) in carrying out the DoE's mandate and contributes to critical Government programmes.

Table 11: Sub-Programme 1.2 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.4 Executive Support Services to Ministry, DG & DDGs provided	20 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	N/A	N/A	N/A	4 quarterly reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister

Table 12: Sub-Programme 1.2 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.4 Executive Support Services to Ministry, DG & DDGs provided	Number of quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	N/A	N/A	N/A	4 quarterly reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister

Table 13: Sub-Programme 1.2 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 1.4 Executive Support Services to Ministry, DG & DDGs provided	Number of quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	Quarterly	4 quarterly progress reports which detail the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	1 quarterly progress report which details the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	1 quarterly progress report which details the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	1 quarterly progress report which details the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister	1 quarterly progress report which details the implementation of the 2014–2019 MTSF Outcomes 4, 6, 7, 8, 9 & 10 signed by DoE Minister

## Sub-Programme 1.3: Governance and Compliance

This sub-programme provides strategic direction and guidance on strategic planning, risk management, reporting, monitoring and evaluation, state-owned entity (SOE) oversight as well as international coordination.

Table 14: Sub-Programme 1.3 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.5 Strategic Support of Energy Security (Re-establish New Partnerships/ Bilateral Agreements)	50 bilateral intergovernmental engagements or visits hosted in the Energy Sector, with African countries (inbound & outbound), including Mozambique, Angola, Namibia, Tanzania & Algeria regarding shale gas & DRC, Zimbabwe & Zambia regarding hydropower	N/A	N/A	N/A	10 bilateral intergovernmental engagements or visits hosted in the energy sector, with African countries (inbound & outbound)	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners
	90 bilateral intergovernmental engagements or visits hosted in the Energy Sector, excluding African countries (inbound & outbound), including China, Russia, France, USA, South Korea, Japan, Canada, Brazil & Iran regarding the Nuclear Energy Programme	N/A	N/A	N/A	18 bilateral intergovernmental engagements or visits hosted in the Energy Sector, excluding African countries (inbound & outbound)	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners

Table 15: Sub-Programme 1.3 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.5 Strategic Support of Energy Security (Re-establish New Partnerships/Bilateral Agreements)	The number of foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	N/A	N/A	N/A	10 bilateral intergovernmental engagements or visits hosted in the Energy Sector, with African countries (inbound & outbound)	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners
	The number of foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	N/A	N/A	N/A	18 bilateral intergovernmental engagements or visits hosted in the Energy Sector, excluding African countries (inbound & outbound)	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners

Table 16: Sub-Programme 1.3 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 1.5 Strategic Support of Energy Security (Re-establish New Partnerships/Bilateral Agreements)	The number of foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, knowledge transfer & enhanced Energy Sector as agreed with foreign partners	Quarterly	10 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	1 foreign participant (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	1 foreign (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	4 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	4 foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners
	The number of foreign participants (advancement of the African Agenda in the Energy Sector) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	Quarterly	18 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	2 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	4 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	6 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhance the Energy Sector as agreed with foreign partners	6 foreign participants (advance Energy Agenda in the rest of the world) to promote the use of cleaner & safer energy carriers, reduce greenhouse gas emissions, promote knowledge transfer & enhanced Energy Sector as agreed with foreign partners

## Sub-Programme 1.4: Finance Administration

This sub-programme provides financial management, accounting and Supply Chain Management (SCM) services.

Table 17: Sub-Programme 1.4 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.2 Sound Financial Resource Management	100% approved invoices paid within 30 days of receipt	100% rate of compliance with payments within 30 days with valid reasons for deviations	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt

Table 18: Sub-Programme 1.4 performance indicators and annual targets for 2016 MTEF


Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.2 Sound Financial Resource Management	% of approved invoices paid within 30 days of receipt	100% rate of compliance with payments within 30 days with valid reasons for deviations	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt

Table 19: Sub-Programme 1.4 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 1.2 Sound Financial Resource Management	% of approved invoices paid within 30 days of receipt	Monthly	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt	100% approved invoices paid within 30 days of receipt

## Sub-Programme 1.5: Audit Services

This sub-programme provides an audit and support service to the DoE. No strategic objectives, performance indicators or targets were set for this sub-programme.

 Sub-Programme 1.5 provides an audit and support service to the Department of Energy.



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## Sub-Programme 1.6: Corporate Services

This sub-programme provides corporate support to the DoE and ensures good corporate governance and compliance by the DoE and SOEs.

Table 20: Sub-Programme 1.6 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance	Medium-Term Targets		
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.3 Sound Corporate Resource Management	Assess the impact & implement the HR Development Framework	Vacancy rate below 15% maintained	Vacancy rate reduced to almost 10%	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained
		Implementation of HR Plan	Approved HR Plan	Implementation of the HR Plan (Phase 2)	Implementation of the HR Plan (Phase 3)	Implementation of HR Plan (Phase 4)	Implementation of HR Plan (Phase 5) & review of the HR Plan	Implementation of reviewed HR Plan
		N/A	1.8% of people with disabilities employed	1.8% of people with disabilities employed	2% of people with disabilities employed	2% of people with disabilities employed	2% of people with disabilities employed	2% of people with disabilities employed
		N/A	42.5% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions
SO 1.4 Executive & Administration Support Services for Ministry, DG, DDGs	100 Izimbizo PPPs conducted	36 Ministerial PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted

Table 21: Sub-Programme 1.6 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 1.3 Sound Corporate Resource Management	% of vacancy rate	Vacancy rate below 15% maintained	Vacancy rate reduced to all most 10%	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained	Vacancy rate below 10% maintained
	Number of HR plans reviewed	Implementation of HR Plan	Approved HR Plan	Implementation of HR Plan (Phase 2)	Implementation of HR Plan (Phase 3)	Implementation of HR Plan (Phase 4)	Implementation HR Plan (Phase 5) & review of the HR Plan	Implementation of reviewed HR Plan
	% of people with disabilities employed	N/A	1.8% of people with disabilities employed	1.8% of people with disabilities employed	2% of people with disabilities employed	2% of people with disabilities employed	2% of people with disabilities employed	2% of people with disabilities employed
	% of women in SMS positions	N/A	42.5% of women in SMS positions.	50% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions	50% of women in SMS positions
SO 1.4 Communication Services for the Department	Number of Izimbizo PPPs conducted	36 Ministerial PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted	20 Izimbizo PPPs conducted

Table 22: Sub-Programme 1.6 quarterly targets for the 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 1.3 Sound Corporate Resource Management	% of vacancy rate	Quarterly	Vacancy rate below 10% maintained as per DPSA directive	Quarterly progress report on vacancy rate	Quarterly progress report on vacancy rate	Quarterly progress report on vacancy rate	Vacancy rate reduced to 10%
	Number of quarterly reports on the implementation the HR Plan (Phase 4)	Quarterly	Implementation of the HR Plan (Phase 4)	Quarterly progress report on HR Plan	Quarterly progress report on HR Plan	Quarterly progress report on HR Plan	Quarterly progress report on HR Plan
	% of people with disabilities employed	Quarterly	2% of people with disabilities employed as per Cabinet instruction	Quarterly progress report as per Cabinet instruction	Quarterly progress report as per Cabinet instruction	Quarterly progress report as per Cabinet instruction	2% of people with disabilities employed as per Cabinet instruction
	% of women in SMS positions	Quarterly	50% of women in SMS positions as per Cabinet instruction	Quarterly progress report as per Cabinet instruction	Quarterly progress report as per Cabinet instruction	Quarterly progress report as per Cabinet instruction	50% of women in SMS positions as per Cabinet instruction
SO 1.4 Communication Services for the Department	Number of Izimbizo PPPs conducted	Quarterly	20 Izimbizo PPPs conducted	5 Izimbizo PPPs conducted	5 Izimbizo PPPs conducted	5 Izimbizo PPPs conducted	5 Izimbizo PPPs conducted

## Sub-Programme 1.7: Office Accommodation

This sub-programme provides office accommodation and related support to the DoE. No strategic objectives, performance indicators or targets were set for this sub-programme. See the Departmental 2016/17 Operational Plan.

### 14 Resource Consideration

Table 23: Resource overview of Programme 1

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Sub-Programmes</b>	Rand Thousand							
Ministry	20 843	35 536	41 767	27 308	27 308	27 045	28 332	29 797
Departmental Management	36 483	43 271	45 787	52 092	52 092	52 273	59 268	62 995
Finance Administration	53 152	27 204	29 390	34 292	34 292	34 389	34 672	36 363
Audit Services	5 863	4 564	6 754	7 727	7 727	7 845	7 720	7 883
Corporate Services	74 818	121 983	109 053	86 678	94 678	86 524	87 215	86 917
Office Accommodation	25 617	-	24 417	34 501	30 501	32 061	33 311	35 243
<b>Total</b>	<b>216 776</b>	<b>232 558</b>	<b>257 168</b>	<b>242 598</b>	<b>246 598</b>	<b>240 137</b>	<b>250 518</b>	<b>259 198</b>

<b>Economic Classification</b>	Rand Thousand							
<b>Current payments</b>	<b>206 014</b>	<b>221 076</b>	<b>248 394</b>	<b>237 281</b>	<b>241 411</b>	<b>232 858</b>	<b>242 732</b>	<b>253 058</b>
<b>Compensation of employees</b>	<b>92 876</b>	<b>112 636</b>	<b>131 521</b>	<b>131 214</b>	<b>131 214</b>	<b>136 792</b>	<b>143 141</b>	<b>148 570</b>
Salaries & wages	82 316	99 403	116 920	117 833	118 090	117 356	122 815	127 483
Social contributions	10 560	13 233	14 601	13 381	13 124	19 436	20 326	21 087
<b>Goods &amp; services</b>	<b>113 138</b>	<b>108 440</b>	<b>116 873</b>	<b>106 067</b>	<b>110 197</b>	<b>96 066</b>	<b>99 591</b>	<b>104 488</b>
Administrative fees	1 335	1 803	2 111	1 884	1 809	1 708	1 819	1 877
Advertising	1 089	5 707	6 062	4 099	4 077	3 228	3 282	3 430
Minor assets	124	380	360	2 953	1 757	2 456	2 571	2 696
Audit costs: External	4 781	4 460	3 578	3 572	3 552	3 872	4 029	4 209
Bursaries: Employees	793	696	761	853	853	755	785	821

Table 23: Resource overview of Programme 1 (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>	<b>Rand Thousand</b>							
Catering: Departmental activities	663	610	392	621	575	572	633	698
Communication (G&S)	5 016	5 375	6 352	4 253	4 105	3 581	3 693	3 857
Computer services	7 427	7 397	10 204	6 854	10 208	5 979	6 223	6 509
Consultants: Business & advisory services	4 638	3 511	5 103	6 098	4 327	4 883	5 051	5 334
Legal services (G&S)	4 374	504	647	450	450	448	458	490
Science & technological services	-	-	-	-	-	-	-	-
Contractors	3 020	1 911	1 461	1 295	2 913	1 254	1 333	1 423
Agency & support/outsourced services	355	995	270	772	2 156	727	751	779
Entertainment	57	67	22	142	131	152	174	207
Fleet services (including Government motor transport)	162	301	951	505	459	462	489	514
Inventory: Clothing material & accessories	-	-	-	2	-	-	-	-
Inventory: Fuel, oil & gas	20	-	-	4	-	-	-	-
Inventory: Learner & teacher support material	1	-	-	-	-	-	-	-
Inventory: Materials & supplies	228	-	-	32	-	-	-	-
Inventory: Other supplies	384	-	-	-	-	-	-	-
Consumable supplies	-	597	1 219	1 711	1 378	1 627	1 922	2 100
Consumables: Stationery, printing & office supplies	2 110	3 273	3 542	3 468	4 768	2 868	2 932	3 063
Operating leases	28 575	26 297	26 737	36 083	29 004	32 782	34 080	36 097
Rental & hiring	-	28	-	345	145	314	328	342
Property payments	20 147	6 181	3 849	-	5 100	-	-	-
Transport provided: Departmental activity	-	90	1	16	-	-	-	-
Travel & subsistence	19 331	29 872	27 842	21 089	21 803	19 584	19 987	20 265

Table 23: Resource overview of Programme 1 (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>	<b>Rand Thousand</b>							
Training & development	1 396	3 077	5 636	4 269	4 399	3 784	3 925	4 086
Operating payments	5 176	1 939	2 212	1 930	3 103	2 272	2 424	2 564
Venues & facilities	1 936	3 369	7 561	2 767	3 125	2 758	2 702	3 127
<b>Transfers &amp; subsidies</b>	<b>179</b>	<b>170</b>	<b>5 007</b>	<b>1 310</b>	<b>1 180</b>	<b>3 184</b>	<b>3 459</b>	<b>1 562</b>
Departmental agencies & accounts	-	-	812	922	792	985	1 047	1 108
Foreign governments & international organisations	-	-	282	-	-	-	-	-
Households	179	170	3 913	388	388	2 199	2 412	454
<b>Payments for capital assets</b>	<b>10 548</b>	<b>11 312</b>	<b>3 763</b>	<b>4 007</b>	<b>4 007</b>	<b>4 095</b>	<b>4 327</b>	<b>4 578</b>
Transport equipment	350	-	-	-	-	-	-	-
Other machinery & equipment	9 583	11 312	3 763	4 007	4 007	4 095	4 327	4 578
Software & other intangible assets	615	-	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>35</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>216 776</b>	<b>232 558</b>	<b>257 168</b>	<b>242 598</b>	<b>246 598</b>	<b>240 137</b>	<b>250 518</b>	<b>259 198</b>
<b>Transfer Payment Beneficiary</b>	<b>Rand Thousand</b>							
Employee social benefits	175	170	3 212	333	333	351	368	389
Employee ex-gratia payments	4	-	701	55	55	58	61	65
EWSETA	-	-	812	922	792	985	1 047	1 108
IEF	-	-	282	-	-	-	-	-
Households: Bursaries (non-employees)	-	-	-	-	-	1 790	1 983	-
<b>Total</b>	<b>179</b>	<b>170</b>	<b>5 007</b>	<b>1 310</b>	<b>1 180</b>	<b>3 184</b>	<b>3 459</b>	<b>1 562</b>

## 15 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, the 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 24: Risk exposures for Programme 1*

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 1.2 Sound Financial Resource Management	To provide financial management, accounting, & supply chain & asset management services	Delays in submission of expenditure statements to branches	Availability of personnel in the Directorate	To develop & approve an SOP

## 2 PROGRAMME 2: ENERGY POLICY AND PLANNING

### 21 Purpose

To ensure evidence-based planning, policy setting and investment decisions in the Energy Sector to improve the security of energy supply, regulation and competition.

### 22 Four Budget Sub-Programmes

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



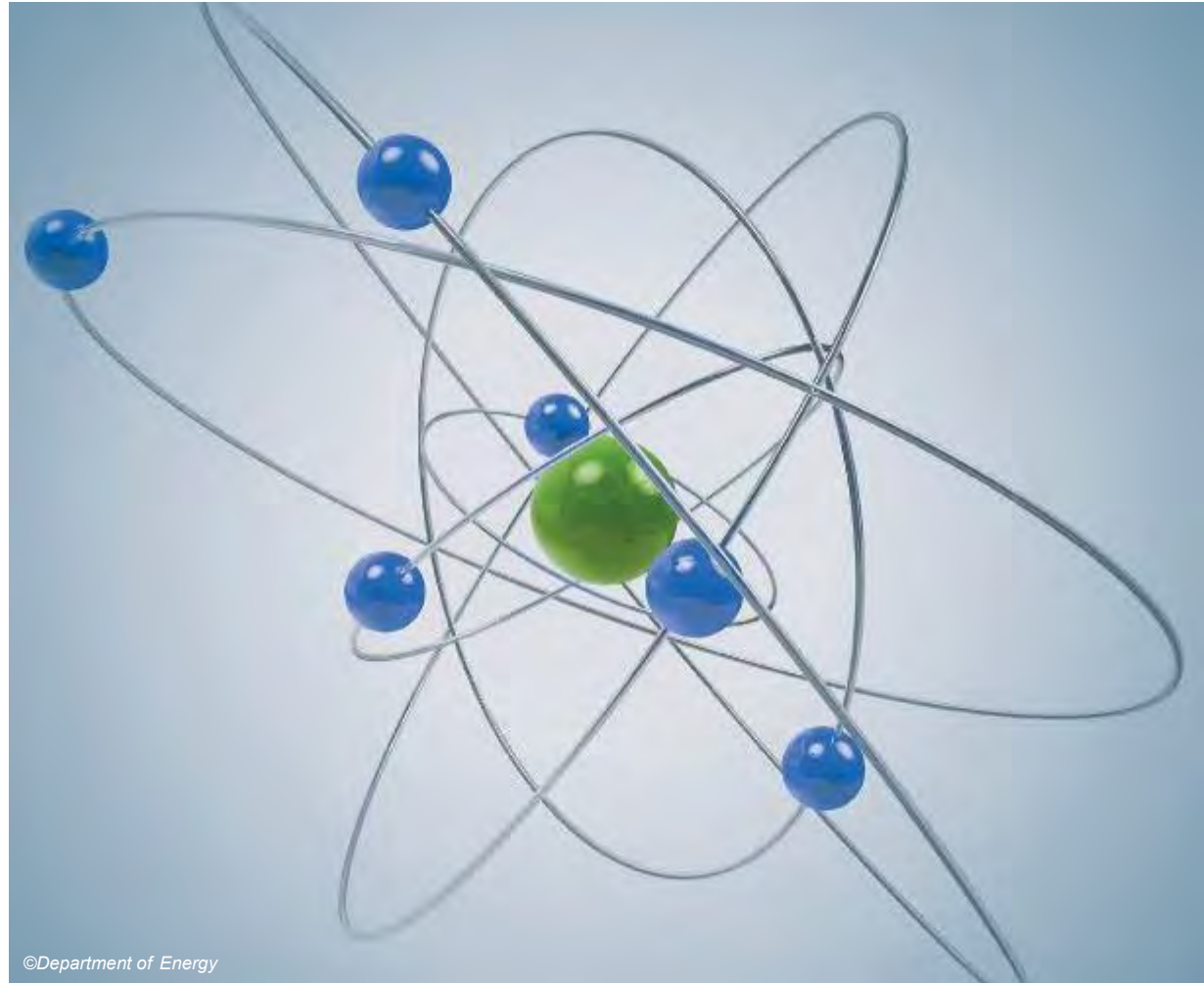
The purpose of Programme 2 is to improve the security of energy supply, regulation and competition.



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## Sub-Programme 2.1: Policy Analysis and Research

This sub-programme develops key indicators and monitors the impact of Energy Sector policies, planning and interventions; analyses all energy policies and their impact on access to energy and security of energy supply; conducts research and analyses policies in relation to other countries; and conducts research and analyses national and international trends or developments that impact on the demand and supply of energy.



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## Sub-Programme 2.2: Energy Planning

This sub-programme manages energy data and information; develops and maintains an energy modelling system to simulate energy supply and distribution; identifies energy supply and distribution constraints and addresses them through the Integrated Energy Plan (IEP); manages the overall collection, collation, validation, integrity and quality of energy data; and is responsible for managing the development of energy plans and strategic interventions for the generation, refining, distribution and transmission of energy sources for demand and supply optimisation.

Table 25: Sub-Programme 2.2 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.1 Improved Energy Security	5 Annual Energy Balances published by 2020	N/A	Annual Energy Balance (2011) published by March 2014	Annual Energy Balance (2012) published by March 2015	Annual Energy Balance (2013) published by March 2016	Annual Energy Balance (2014) published by March 2017  Review & harmonise historical energy balances	Annual Energy Balance (2015) published by March 2018	Annual Energy Balance (2016) published by March 2019
	Central Energy Information Management System deployed	N/A	N/A	First phase of Centralised Energy Database	Expansion of Centralised Energy Database, including front-end portal	Enhancement of Central Energy Information Management System	Enhancement of Central Energy Information Management System	N/A

Table 25: Sub-Programme 2.2 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.1 Improved Energy Security (continued)	Finalised IEP	Draft produced, including reports outlining model results	Draft IEP approved by Cabinet	<p>Study of the socio-economic impact of technologies in the electricity sector completed</p> <p>Study on the externality costs of different electricity technologies completed</p>	<p>Study on the macroeconomic impact of the IEP completed</p> <p>Final IEP published</p>	<p>Study to determine the macroeconomic impact of liquid fuel imports</p> <p>Study to determine the impact of clean fuels 2 on fuel consumption by road vehicles</p> <p>Study to determine the price elasticities of demand for different energy carriers</p> <p>Studies to determine the benchmark costs for fuel production technologies &amp; jobs impact</p> <p>Studies to determine gas infrastructure development costs including job creation potential</p> <p>Study on energy saving potential within heavy industry</p>	Review study on energy system externalities	Revise IEP

Table 26: Sub-Programme 2.2 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.1 Improved Energy Security	Annual Energy Balances provided to support compilation of the GHG inventory	N/A	Annual Energy Balance (2011) published by March 2014	Annual Energy Balance (2012) published by March 2015	Annual Energy Balance (2013) published by March 2016	Annual Energy Balance (2014) published by March 2017  Review & harmonise historical energy balances	Annual Energy Balance (2015) published by March 2018	Annual Energy Balance (2016) published by March 2019
	Developed Central Energy Information Management System	N/A	First phase of Centralised Energy Database	Expansion of Centralised Energy Database, including front-end portal	Central Energy Information Management System deployed	Enhancement of Central Energy Information Management System	Enhancement of Central Energy Information Management System	N/A

Table 26: Sub-Programme 2.2 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.1 Improved Energy Security (continued)	<p>Number of studies in support of the IEP to determine:</p> <ul style="list-style-type: none"> <li>- macroeconomic impact of liquid fuel imports</li> <li>- impact of Clean Fuels 2 on fuel consumption by road vehicles</li> <li>- price elasticities of demand for different energy carriers</li> <li>- benchmark costs for fuel production technologies</li> <li>- gas infrastructure development costs including job creation potential</li> <li>- energy savings potential within heavy industry</li> </ul>	Draft produced, including reports outlining model results	Draft IEP approved by Cabinet	<p>Study on the socio-economic impact of technologies in the electricity sector completed</p> <p>Study on the externality costs of different electricity technologies completed</p>	<p>Study on the macroeconomic impact of the IEP completed</p> <p>Electricity price path for the IEP calculated</p> <p>Final IEP published</p>	<p>Study to determine the macroeconomic impact of liquid fuel imports</p> <p>Study to determine the impact of Clean Fuels 2 on fuel consumption by road vehicles</p> <p>Study to determine the price elasticities of demand for different energy carriers</p> <p>Studies to determine the benchmark costs for fuel production technologies &amp; jobs impact</p> <p>Studies to determine gas infrastructure development costs including job creation potential</p> <p>Study on energy saving potential within heavy industry</p>	Review study on energy system externalities	N/A

Table 27: Sub-Programme 2.2 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 2.1 Improved Energy Security	Annual energy balances provided to support compilation of the GHG inventory	Quarterly	Annual Energy Balance (2014) published by March 2016	Draft 2014 energy commodity flows compiled	Internal review & approval of energy commodity flow	Consolidation of energy commodity flow into energy balance	Annual Energy Balance (2014) published by March 2017
	Developed Central Energy Information Management System	Quarterly	Enhancement of Central Energy Information Management System deployed	Identify & document required enhancement to system	Implement required enhancement to system	Sign-off enhancements to system	Enhancement of Central Energy Information Management System deployed
	Number of studies in support of IEP to determine: <ul style="list-style-type: none"> <li>- macroeconomic impact of liquid fuel imports</li> <li>- impact of Clean Fuels 2 on fuel consumption by road vehicles</li> <li>- price elasticities of demand for different energy carriers</li> <li>- benchmark costs for fuel production technologies</li> <li>- gas infrastructure development costs including job creation potential</li> <li>- energy savings potential within heavy industry</li> </ul>	Annual	Study to determine macroeconomic impact of liquid fuel imports  Study to determine impact of Clean Fuels 2 on fuel consumption by road vehicles  Study to determine price elasticities of demand for different energy carriers  Studies to determine benchmark costs for fuel production technologies & jobs impact  Studies to determine gas infrastructure development costs including job creation potential  Study on energy saving potential within heavy industry	Study to determine price elasticities of demand for different energy carriers	Study to determine macroeconomic impact of liquid fuel imports  Study to determine impact of Clean Fuels 2 on fuel consumption by road vehicles	Study on energy saving potential within heavy industry	Studies to determine benchmark costs for fuel production technologies & jobs impact  Studies to determine gas infrastructure development costs including job creation potential

## Sub-Programme 2.3: Hydrocarbon Policy

This sub-programme ensures a secure energy supply, well-managed demand, enhanced access to hydrocarbons and a transformed Energy Sector. It also ensures that energy regulation and competition are improved through the development, promulgation and maintenance of a statutory framework for petroleum, petroleum products, petroleum infrastructure, coal and gas.

Table 28: Sub-Programme 2.3 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.2 Improved Liquid Fuels Energy Security	Liquid fuels energy security developed & implemented the 20YRLFMP improved (Cabinet approval of proposals) by June 2016	N/A	N/A	Draft Gas Amendment Bill submitted to office of State Law Advisor for final pre-certification	Submission of draft Gas Amendment Bill for Ministerial approval for submission to Cabinet	Submission of draft Gas Amendment Bill for Ministerial approval for submission to Cabinet	Submission of report regarding Regulations Under the Amended Gas Act as part of implementation thereof for Ministerial approval	Submission of amended Regulations Under the Amended Gas Act for Ministerial approval for promulgation
	Introduce biofuels into the liquid fuels industry through mandatory blending	N/A	Refinery audits completed	Draft 20YRLFMP submitted to Cabinet for approval	Publish 20YLFIRM for external consultation	Incorporate 20YLFIRM into the IEP	Submission of IEP incorporating 20YLFIRM for Cabinet approval (by Energy Planning with HP playing a supporting role)	Submission of a monitoring report regarding implementation of Amended Gas Act (including its Regulations)  Submission of report on implementation of the Cabinet decision for Ministerial approval

Table 28: Sub-Programme 2.3 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated	Medium-Term Targets		
					Performance			
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.2 Improved Liquid Fuels Energy Security (continued)	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	N/A	N/A	South African Biofuels Regulatory Framework finalised	Biofuels Regulatory Framework implemented	Submission of draft Biofuels Regulatory Framework for Ministerial approval	Implementation report based on Minister's decision regarding Biofuels Regulatory Framework	Implementation report based on Minister's decision regarding Biofuels Regulatory Framework
		N/A	N/A	N/A	Draft Petroleum Products Bill submitted for Ministerial approval internal consultation	Draft Petroleum Products Bill submitted for Ministerial approval for Cabinet submission	Stakeholder consultation & submission of draft bill for final pre-certification by State Law Advisor & resubmission to Cabinet	Implementation of amended / new PPA
		N/A	N/A	N/A	Submission of concept document for amendment of Petroleum Pipelines Act, 2003 (Act No. 60 of 2003) for Ministerial approval	Submission of concept document for amendment of Petroleum Pipelines Act, 2003 (Act No. 60 of 2003) for Ministerial approval	Draft Petroleum Pipelines Bill submitted for Ministerial approval for Cabinet submission	Stakeholder consultation & submission of draft bill for final pre-certification by State Law Advisor & resubmission to Cabinet

Table 29: Sub-Programme 2.3 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.2 Improved Liquid Fuels Energy Security	Developed Draft Gas Amendment Bill	N/A	N/A	Draft Gas Amendment Bill submitted to office of State Law Advisor for final precertification	Submission of draft Gas Amendment Bill for Ministerial approval for submission to Cabinet	Submission of draft Gas Amendment Bill for Ministerial approval for submission to Cabinet	Submission of a report regarding the review of regulations under the Amended Gas Act, 2001 (Act No. 48 of 2001) as part of implementation thereof, for Ministerial approval	Submission of the amended Regulations under the Amended Gas Act, 2001 (Act No. 48 of 2001) for Ministerial approval for promulgation  Submission of a monitoring report regarding the implementation of the Amended Gas Act, 2001 (Act No. 48 of 2001) (including its Regulations)
	Finalised 20YRLFMP	N/A	Refinery audits completed	Draft 20YRLFMP submitted to Cabinet for approval	Publish 20YLFIRM for external consultation	Incorporate the 20YLFIRM into the IEP	Submission of IEP incorporating the 20YLFIRM for Cabinet approval (by Energy Planning with HP playing a supporting role)	Submission of the report on the implementation of the Cabinet decision for Ministerial approval

Table 29: Sub-Programme 2.3 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance	Medium-Term Targets		
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.2 Improved Liquid Fuels Energy Security (continued)	Number of monitoring reports on implementation of Biofuels Regulatory Framework	N/A	N/A	South African Biofuels Regulatory Framework finalised	Biofuels Regulatory Framework implemented	Submission of draft Biofuels Regulatory Framework for Ministerial approval	Implementation report based on Minister's decision regarding Biofuels Regulatory Framework	Implementation report based on Minister's decision regarding Biofuels Regulatory Framework
	Draft Petroleum Products Bill	N/A	N/A	N/A	Draft Petroleum Products Bill submitted for Ministerial approval	Draft Petroleum Products Bill submitted for Ministerial approval for Cabinet submission	Stakeholder consultation & submission of draft bill for final pre-certification by State Law Advisor & resubmission to Cabinet	Implementation of amended/new PPA
	Concept document for the amendment of the Petroleum Pipelines Act, 2003 (Act No. 34 of 2003)	N/A	N/A	N/A	Submission of the concept document for the amendment of the Petroleum Pipelines Act, 2003 (Act No. 34 of 2003) for Ministerial approval	Submission of the Concept Document for the amendment of the Petroleum Pipelines Act, 2003 (Act No. 34 of 2003) for Ministerial approval	Draft Petroleum Pipelines Bill submitted for Ministerial approval for Cabinet submission	Stakeholder consultation & submission of draft bill for final pre-certification by State Law Advisor & resubmission to Cabinet

Table 30: Sub-Programme 2.3 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 2.2 Improved Liquid Fuels Energy Security	Developed draft Gas Amendment Bill	Quarterly	Submission of draft Gas Amendment Bill for Ministerial approval for submission to Cabinet	Draft Gas Amendment Bill submitted for approval to SMC	SEIAS Final Impact Assessment Report on GAB	Revised draft GAB completed incorporating Gas to Power & related aspects	Submission of the draft GAB for Ministerial approval for submission to Cabinet
	Finalised 20YRLFMP	Quarterly	Incorporate the 20YLFIRM into the published IEP	Draft a scenario analysis report on 20YLFIRM	Submit draft 20YLFIRM for Ministerial approval for external consultation with Organs of State	Incorporate 20YLFIRM into published IEP	N/A
	Number of monitoring reports on implementation of Biofuels Regulatory Framework	Quarterly	Submission of Draft Biofuels Regulatory Framework for Ministerial approval	Issue a Ministerial submission reviewing halting of development of Draft Biofuels Regulatory Framework	Issue a report regarding development of Biofuels Regulatory Framework & other biofuel initiatives	Revised Draft Biofuels Framework completed	Submission of revised draft Biofuels Regulatory Framework for Ministerial approval
	Draft Petroleum Products Bill	Quarterly	Draft Petroleum Products Bill submitted for Ministerial approval for Cabinet submission	Consultation on concept document for amendment of the PPA	Revise concept document & draft amendments to the PPA	Internal consultation on draft Amendment Act	Draft Amendment Act submitted for Ministerial approval for external consultation
	Concept document for amendment of Draft Petroleum Pipelines Act, 2003 (Act No. 34 of 2003)	Quarterly	Submission of concept document for review of the Petroleum Pipelines Act, 2003 (Act No. 34 of 2003) for Ministerial approval	SEIAS phase 1 process completed on Petroleum Pipelines Act, 2003 (Act No. 34 of 2003) review	Draft concept document regarding outcomes of SEIAS process on review of Petroleum Pipelines Act, 2003 (Act No. 34 of 2003)	Report on internal consultation on draft concept document	Submission of concept document for review of Petroleum Pipelines Act, 2003 (Act No. 34 of 2003) for Ministerial approval

## Sub-Programme 2.4: Electricity, Energy Efficiency and Environmental Policy

This sub-programme ensures secure energy supply; well-managed demand and a transformed Energy Sector; and energy regulation and competition that is improved through the development, promulgation and maintenance of a statutory framework for electricity over the medium term. This includes reforming the electricity supply industry to introduce independent power producers (IPP) in support of electricity security.

Table 31: Sub-Programme 2.4 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance (Baseline)			Estimated	Medium-Term Targets		
		2012/13	2013/14	2014/15	Performance 2015/16	2016/17	2017/18	2018/19
SO 2.3 Policy & Regulations to Ensure Security of Supply	The National Energy Regulator Amendment Bill introduced for consideration & support its promulgation if approved by Cabinet	N/A	Review & amend the Act	Continue with stakeholder engagement on the proposed amendments	Introduce National Energy Regulator Bill for consideration & support by Cabinet & Parliament	Approval of regulations emanating from Act	Implement & review regulations from Act	Implement & review regulations from Act
SO 2.4 Bulk Electrical Infrastructure Required for the Universal Access to Electricity		N/A	Revise ADAM Report	Finalise ADAM Report update	Table the revised ADAM Report, including the ring-fencing of the largest municipalities, to Cabinet  Develop norms & standards for municipal electricity infrastructure asset management in concurrence with the regulator	Develop norms & standards for municipal electricity infrastructure asset management in concurrence with the regulator	Policy review & development of norms & standards for municipal electricity infrastructure asset management	Support the implementation of policy, norms & standards
SO 2.5 Mechanisms to Prefund Capital & Create a Smooth Price Path Over the Long-term		N/A	N/A	N/A	Develop the electricity price path in line with the IRP, ADAM & Transmission Development Plan	Table the electricity price path to Cabinet & Parliament for consideration	Support NERSA to implement the Electricity Pricing Policy	Support NERSA to implement the Electricity Pricing Policy

Table 31: Sub-Programme 2.4 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance (Baseline)			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.6 Security of Supply through Additional Power Generation Capacity	The National Energy Regulator Amendment Bill introduced for consideration & support its promulgation if approved by Cabinet	N/A	Update IRP & the ADAM Report	Review & analyse input from stakeholder & public engagements	Introduce the updated IRP for consideration & support by Cabinet & Parliament	Introduce the updated IRP for consideration by Cabinet	Implement the updated IRP	Implement the updated IRP
		N/A	N/A	Introduce bidding rounds for renewable energy, cogeneration, coal & gas programmes in line with IRP determinations made by Minister	Introduce bidding rounds for renewable energy, cogeneration, coal & gas programmes in line with IRP	Conclude contracts for coal, cogeneration & gas IPPs	Conclude contracts for new generation	Conclude contracts for new generation
		N/A	N/A	Bilateral Energy Agreement signed with government of the DRC	Negotiate PPA & resolve transmission solution associated with power delivery from Inga	Conclude offtake agreement	Implement project agreements	Implement project agreements

Table 32: Sub-Programme 2.4 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicator	Audited/Actual Performance (Baseline)			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 2.3 Policy & Regulations to Ensure Security of Supply Reviewed	Amend National Energy Regulator Act, 2004 (Act No. 40 of 2004)	N/A	Review & amend National Energy Regulator Act, 2004 (Act No. 40 of 2004)	Continue with stakeholder engagement on proposed amendments	Introduce National Energy Regulator Bill for consideration & support by Cabinet & Parliament	Approval of regulations emanating from National Energy Regulator Act, 2004 (Act No. 40 of 2004)	Implemented & reviewed regulations from National Energy Regulator Act, 2004 (Act No. 40 of 2004)	Implemented & reviewed regulations from National Energy Regulator Act, 2004 (Act No. 40 of 2004)

Table 32: Sub-Programme 2.4 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance Indicator	Audited/Actual Performance (Baseline)			Estimated Performance		Medium-Term Targets		
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
SO 2.4 Bulk Electrical Infrastructure Required for the Universal Access to Electricity Reviewed	Norms & standards for municipal electricity infrastructure asset management	N/A	Revise ADAM Report	Finalise ADAM Report update	Table the revised ADAM Report, including the ring-fencing of the largest municipalities, to Cabinet  Develop norms & standards for municipal electricity infrastructure asset management in concurrence with the regulator	Develop norms & standards for municipal electricity infrastructure asset management in concurrence with the regulator	Policy review & development of norms & standards for municipal electricity infrastructure asset management	Support implementation of policy, norms & standards	
SO 2.5 Mechanisms to Prefund Capital & Create a Smooth Price Path Over the Long-term Established	Electricity Pricing Policy	N/A	N/A	N/A	Develop the electricity price path in line with the IRP ADAM & Transmission Development Plan	Table the electricity price path to Cabinet for consideration	Support NERSA to implement Electricity Pricing Policy	Support NERSA to implement Electricity Pricing Policy	
SO 2.6 Security of Supply through Additional Power Generation Capacity	IRP	N/A	Update IRP & ADAM Report	Review & analyse input from stakeholder & public engagements	Introduce the updated IRP for consideration & support by Cabinet & Parliament	Introduce the updated IRP for consideration by Cabinet	Implement the updated IRP	Implement the updated IRP	
	Additional power generation capacity as per the IRP	N/A	N/A	Introduce bidding rounds for renewable energy, cogeneration, coal & gas programmes in line with IRP determinations made by the Minister	Introduce bidding rounds for renewable energy, cogeneration, coal & gas programmes in line with IRP	Conclude contracts for coal, cogeneration & gas IPPs for additional power capacity as per IRP	Conclude contracts for new generation	Conclude contracts for new generation	
	Offtake agreement	N/A	N/A	Bilateral Energy Agreement signed with government of DRC	Negotiate PPA & resolve transmission solution associated with power delivery from Inga	Conclude offtake agreement	Implement project agreements	Implement project agreements	

Table 33: Sub-Programme 2.4 quarterly targets for 2016/17

Strategic Objectives	Performance Indicator	Annual Targets 2016/17	Quarterly Targets			
			Q1	Q2	Q3	Q4
SO 2.3 Policy & Regulations to Ensure Security of Supply Reviewed	Amend National Energy Regulator Act, 2004 (Act No. 47 of 2004)	Approval of regulations emanating from National Energy Regulator Act, 2004 (Act No. 47 of 2004)	N/A	N/A	Stakeholder consultation on regulation emanating from National Energy Regulator Act, 2004 (Act No. 47 of 2004)	Approval of regulations emanating from the National Energy Regulator Act, 2004 (Act No. 47 of 2004)
SO 2.4 Bulk Electrical Infrastructure Required for the Universal Access to Electricity Reviewed	Norms & standards for municipal asset management applied in all metropolitan municipalities	Develop norms & standards for municipal electricity infrastructure asset management in concurrence with the regulator	N/A	Draft norms & standards	Internal stakeholder consultation on the draft norms & standards for asset management	Inter-government consultation on norms & standards  Develop norms & standards for municipal electricity infrastructure asset management in concurrence with the regulator
SO 2.5 Mechanisms to Prefund Capital & Create a Smooth Price Path Over the Long-term Established	Electricity Pricing Policy	Table the electricity price path to Cabinet for consideration	Develop price path	Price path tabled to Cabinet	Public consultation	Table the electricity price path to Cabinet for consideration
SO 2.6 Security of Supply through Additional Power Generation Capacity	IRP	Updated IRP for consideration by Cabinet	Finalise IRP	IRP to cabinet for consideration	Public consultation	Updated IRP for consideration by Cabinet
	Additional power generation capacity as per the IRP	Conclude contracts for coal, cogeneration & gas IPPs for additional power capacity as per the IRP	N/A	N/A	N/A	Conclude contracts for coal, cogeneration & gas IPPs for additional power capacity as per the IRP
	Offtake agreement	Conclude the offtake agreement	N/A	N/A	N/A	Conclude the offtake agreement

## 23 Resource Consideration

Table 34: Resource overview of Programme 2

	Baseline					MTEF		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
	Audited Outcome	Audited Outcome	Audited Outcome	Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline	Revised Indicative Baseline	Revised Indicative Baseline
<b>Sub-Programmes</b>	<b>Rand Thousand</b>							
Policy Analysis & Research	11 779	2 337	475	1 450	1 450	2 421	2 409	2 460
Energy Planning	15 286	18 380	23 134	23 004	22 004	24 095	23 992	26 206
Hydrocarbon Policy	1 513 077	15 402	11 695	12 860	12 860	12 361	12 116	13 079
Electricity, EE & Environmental Policy	5 181	11 637	6 445	7 782	7 782	7 871	7 764	8 353
<b>Total</b>	<b>1 545 323</b>	<b>47 756</b>	<b>41 749</b>	<b>45 096</b>	<b>44 096</b>	<b>46 748</b>	<b>46 281</b>	<b>50 098</b>
<b>Economic Classification</b>	<b>Rand Thousand</b>							
<b>Current payments</b>	<b>45 284</b>	<b>47 748</b>	<b>41 708</b>	<b>45 096</b>	<b>44 096</b>	<b>46 748</b>	<b>46 281</b>	<b>50 098</b>
<b>Employee compensation</b>	<b>32 901</b>	<b>28 348</b>	<b>28 754</b>	<b>31 735</b>	<b>31 735</b>	<b>34 769</b>	<b>33 806</b>	<b>37 065</b>
Salaries & wages	29 018	25 153	25 523	28 243	28 228	29 831	29 003	31 801
Social contributions	3 883	3 195	3 231	3 492	3 507	4 938	4 803	5 264
<b>Goods &amp; services</b>	<b>12 383</b>	<b>19 400</b>	<b>12 954</b>	<b>13 361</b>	<b>12 361</b>	<b>11 979</b>	<b>12 475</b>	<b>13 033</b>
Administrative fees	252	368	233	453	503	424	469	489
Advertising	299	1 012	111	303	248	218	227	236
Minor assets	1	-	-	27	27	30	30	30
Catering: Departmental activities	36	51	30	186	186	171	181	192
Communication (G&S)	432	441	408	626	578	511	537	563
Computer services	-	439	-	26	26	47	63	65
Consultants: Business & advisory services	5 928	9 643	8 144	5 998	4 992	4 668	4 887	5 112
Contractors	172	59	15	106	71	93	97	102
Inventory: Learner & teacher support material	1	-	-	-	-	-	-	-

Table 34: Resource overview of Programme 2 (continued)

	Baseline					MTEF		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
	Audited Outcome	Audited Outcome	Audited Outcome	Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline	Revised Indicative Baseline	Revised Indicative Baseline
<b>Economic Classification</b>								
Rand Thousand								
Consumable supplies	-	8	19	21	100	28	29	30
Consumables: Stationery, printing & office supplies	58	334	8	342	313	336	304	317
Operating leases	-	10	-	-	-	-	-	-
Property payments	-	-	-	-	-	91	41	43
Travel & subsistence	4 278	4 993	2 941	4 428	4 160	3 856	4 098	4 274
Training & development	136	151	-	14	7	149	124	130
Operating payments	211	381	833	480	305	207	236	246
Venues & facilities	579	1 510	212	351	845	1 150	1 152	1 204
<b>Transfers &amp; subsidies</b>	<b>1 500 031</b>	<b>8</b>	<b>41</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Public corporations	1 500 000	-	-	-	-	-	-	-
Households	31	8	41	-	-	-	-	-
<b>Payments for capital assets</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Transport equipment	-	-	-	-	-	-	-	-
Other machinery & equipment	7	-	-	-	-	-	-	-
Software & other intangible assets	-	-	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>1 545 323</b>	<b>47 756</b>	<b>41 749</b>	<b>45 096</b>	<b>44 096</b>	<b>46 748</b>	<b>46 281</b>	<b>50 098</b>
<b>Transfer Payment Beneficiary</b>								
Rand Thousand								
Transnet	1 500 000	-	-	-	-	-	-	-
Employee social benefits	31	8	41	-	-	-	-	-
<b>Total</b>	<b>1 500 031</b>	<b>8</b>	<b>41</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

## 24 Risk Management

Table 35: Risk exposures for Programme 2

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 2.1 Improved Energy Security	<p>Improve energy security by:</p> <ul style="list-style-type: none"> <li>- regulating demand &amp; introducing a diversified mix of energy generation technologies on an ongoing basis</li> <li>- improving efficiency through the introduction of regulations for liquefied petroleum gas supply &amp; distribution in order to reduce prices by March 2016</li> <li>- developing key indicators to effectively monitor Energy Sector policies on an ongoing basis</li> <li>- planning interventions to expand energy infrastructure through development of a policy framework for IEP, IRP, Liquid Fuels Infrastructure Roadmap, Transmission Development Plan &amp; Major Distribution Infrastructure Plan over medium term</li> <li>- publishing an annual energy statistics report to facilitate information-based decision making</li> </ul>	Pricing/unreliability of electricity supply causing migration of demand to other carriers	<p>Migration of demand from the grid supply to alternatives such as rooftop solar, gas, etc.</p> <p>Stranded assets / infrastructure</p>	<p>Development of price path as part of the updating of the IRP</p> <p>Development of Licencing Regulations which will enable NERSA's small scale embedded generation rules to be implemented</p>



### 3 PROGRAMME 3: PETROLEUM AND PETROLEUM PRODUCTS REGULATION

#### 3.1 Purpose

To regulate the petroleum and petroleum products industry to ensure the optimal and orderly functioning of the petroleum industry to achieve Government's developmental goals.

#### 3.2 Four Budget Sub-Programmes

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



Programme 3 aims to regulate the petroleum and petroleum products industry to ensure the optimal and orderly functioning of the petroleum industry.



### Sub-Programme 3.1: Petroleum, Compliance, Monitoring and Enforcement

This sub-programme monitors compliance with the Liquid Fuels Charter and technical, legal and commercial licensing conditions. This includes compliance with import and export conditions as well as the enforcement of the submission of data by the industry. The sub-programme also processes arbitration requests as well as promotion of access to information requests on behalf of the Controller of Petroleum Products.

Table 36: Sub-Programme 3.1 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 3.1 Compliance Monitoring & Enforcement in the Petroleum Sector	6 000 retail site compliance inspections conducted	N/A	Enforcement notices issued in 80% of cases where non-compliance was identified during routine compliance inspections	Enforcement notices issued in 85% of cases where non-compliance was identified during routine compliance inspections (baseline 2 000 retail site compliance inspections conducted)	Enforcement notices issued in 90% of cases where non-compliance was identified during routine compliance inspections (baseline 1 500 retail site compliance inspections conducted)	1 500 retail site compliance inspections conducted	1 500 retail site compliance inspections conducted	1 500 retail site compliance inspections conducted
	7 568 fuel samples tested	N/A	Enforcement notices issued in 95% of cases where non-compliance was identified during routine fuel sample testing	Enforcement notices issued in 95% of cases where non-compliance was identified during routine fuel sample testing (baseline 1 080 fuel samples tested)	Enforcement notices issued in 95% of cases where non-compliance was identified during routine fuel sample testing (baseline 1 892 fuel samples tested)	1 892 fuel samples tested	1 892 fuel samples tested	1 892 fuel samples tested

Table 37: Sub-Programme 3.1 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 3.1 Compliance Monitoring & Enforcement in the Petroleum Sector	Number of petroleum retail site inspections per year	N/A	Enforcement notices issued in 80% of cases where non-compliance was identified during routine compliance inspections	Enforcement notices issued in 85% of cases where non-compliance was identified during routine compliance inspections (baseline 2 000 retail site compliance inspections conducted)	Enforcement notices issued in 90% of cases where non-compliance was identified during routine compliance inspections (baseline 1 500 retail site compliance inspections conducted)	1 500 retail site compliance inspections conducted	1 500 retail site compliance inspections conducted	1 500 retail site compliance inspections conducted
	Number of fuel samples tested	N/A	Enforcement notices issued in 95% of cases where non-compliance was identified during routine fuel sample testing	Enforcement notices issued in 95% of cases where non-compliance was identified during routine fuel sample testing (baseline 1 080 fuel samples tested)	Enforcement notices issued in 95% of cases where non-compliance was identified during routine fuel sample testing (baseline 1 892 fuel samples tested)	1 892 fuel samples tested	1 892 fuel samples tested	1 892 fuel samples tested

Table 38: Sub-Programme 3.1 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 3.1 Compliance Monitoring & Enforcement in the Petroleum Sector	Number of petroleum retail site inspections per year	Quarterly	1 500 retail site compliance inspections conducted	300 retail site compliance inspections conducted	800 retail site compliance inspections conducted (cumulative target)	1 100 retail site compliance inspections conducted (cumulative target)	1 500 retail site compliance inspections conducted (cumulative target)
	Number of fuel samples tested	Quarterly	1 892 fuel samples tested	473 fuel samples tested	946 fuel samples tested	1 419 fuel samples tested	1 892 fuel samples tested

## Sub-Programme 3.2: Petroleum Licensing and Fuel Supply

This sub-programme manages the adjudication of petroleum licence applications, regulates the permitting of the export and import of petroleum products, monitors fuel stock levels, and coordinates corrective actions to avoid fuel shortages. This entails conducting licence analyses and ensuring permit and charter compliance and hydrocarbon supply. This entails adjudication on different licence types in accordance with the Petroleum Products Act, 1977 (Act No. 120 of 1977) as amended.

Table 39: Sub-Programme 3.2 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 3.2 Promote Petroleum Licensing	50% of licence applications approved have 50% BEE ownership	N/A	N/A	30% of licence applications approved have 50% BEE ownership	40% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership

Table 40: Programme 3.2 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 3.2 Promote Petroleum Licensing	% of licence applications approved where BEE ownership is at least 50%	N/A	N/A	30% of licence applications approved have 50% BEE ownership	40% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership

Table 41: Sub-Programme 3.2 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 3.2 Promote Petroleum Licensing	% of licence applications approved where BEE ownership is at least 50%	Quarterly	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership	50% of licence applications approved have 50% BEE ownership

### Sub-Programme 3.3: Fuel Pricing Regulation

This sub-programme regulates the pricing of petroleum products in accordance with the legislative framework. This entails the determination, review, update and maintenance of fuel levies and margins and the process of paying fuel levies. Fuel price administration includes developing, evaluating and monitoring price models, updating elements of the Basic Fuel Price (BFP), and ensuring secure audit services for the auditing of fuel prices to ensure internationally competitive pricing of petroleum products, thereby enabling investment in the sector.

Table 42: Sub-Programme 3.3 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 3.3 Petroleum Products Market Analysis Report	10 reports on the fuel prices & margin adjustments using RAS model	N/A	N/A	N/A	N/A	2 publications of the fuel prices & margin adjustment using RAS model	2 publications of the fuel prices & margin adjustment using RAS model	2 publications of the fuel prices & margin adjustment using RAS model
SO 3.4 Verification of Fuel Price Adjustments (External Auditors)	48 audit findings reports on the fuels prices	N/A	N/A	N/A	N/A	12 audit findings reports on the fuels prices (external auditors)	12 audit findings reports on the fuels prices (external auditors)	12 audit findings reports on the fuels prices (external auditors)

Table 43: Programme 3.3 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 3.3 Petroleum Products Market Analysis Report	Number of copies of the publication of Petroleum Products Market Analysis Report	N/A	N/A	N/A	N/A	2 publications of the fuel prices & margin adjustment using RAS model	2 publications of the fuel prices & margin adjustment using RAS model	2 publications of the fuel prices & margin adjustment using RAS model
SO 3.4 Verification of Fuel Price Adjustments (External Auditors)	Number of audit findings reports	N/A	N/A	N/A	N/A	12 audit findings reports on the fuels prices (external auditors)	12 audit findings reports on the fuels prices (external auditors)	12 audit findings reports on the fuels prices (external auditors)

Table 44: Sub-Programme 3.3 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 3.3 Petroleum Products Market Analysis Report	Number of copies of the publication of Petroleum Products Market Analysis Report	Biannual	2 publications of the fuel prices & margin adjustment using RAS model	N/A	1 publication of the fuel prices & margin adjustment using RAS model	N/A	1 publication of the fuel prices & margin adjustment using RAS model
SO 3.4 Verification of Fuel Price Adjustments (External Auditors)	Number of the audit findings report	Monthly	12 audit findings reports on the fuels prices	3 audit finding reports on the fuels prices	3 audit findings reports on the fuels prices	3 audit findings reports on the fuels prices	3 audit reports on the fuels prices



Sub-Programme 3.3 regulates the pricing of petroleum products in accordance with the legislative framework.



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## Sub-Programme 3.4: Regional Petroleum Regulation Offices

This sub-programme provides advice on integrated energy services, develops appropriate interventions to enhance and promote universal access to energy, and ensures economic and technical compliance with relevant legislation. In addition, all annual information submitted by licence holders is captured and analysed.

### 33 Resource Consideration

Table 45: Resource overview of Programme 3

	Baseline					MTEF		
	Audited outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Sub-Programmes</b>	<b>Rand Thousand</b>							
Petroleum Compliance, Monitoring & Enforcement	5 119	6 797	13 541	15 143	15 143	13 707	13 906	14 354
Petroleum Licensing & Fuel Supply	12 386	15 473	19 400	20 291	20 291	24 059	23 860	25 410
Fuel Pricing	12 423	3 566	9 158	8 631	8 631	7 547	7 583	7 790
Regional Petroleum Regulation Offices	14 461	-	22 449	30 313	29 313	32 558	31 680	32 820
<b>Total</b>	<b>44 389</b>	<b>25 836</b>	<b>64 548</b>	<b>74 378</b>	<b>73 378</b>	<b>77 871</b>	<b>77 029</b>	<b>80 374</b>
<b>Economic Classification</b>	<b>Rand Thousand</b>							
<b>Current payments</b>	<b>44 379</b>	<b>25 783</b>	<b>62 236</b>	<b>74 378</b>	<b>73 378</b>	<b>77 871</b>	<b>77 029</b>	<b>80 374</b>
<b>Compensation of employees</b>	<b>35 594</b>	<b>19 084</b>	<b>41 927</b>	<b>50 926</b>	<b>50 926</b>	<b>56 792</b>	<b>55 106</b>	<b>57 470</b>
Salaries & wages	30 459	16 592	36 605	45 329	45 314	48 725	47 279	49 306
Social contributions	5 135	2 492	5 322	5 597	5 612	8 067	7 827	8 164
<b>Goods &amp; services</b>	<b>8 785</b>	<b>6 699</b>	<b>20 309</b>	<b>23 452</b>	<b>22 452</b>	<b>21 079</b>	<b>21 923</b>	<b>22 904</b>
Administrative fees	216	128	479	375	393	332	346	363
Advertising	378	3 175	468	1 080	837	957	995	1 040
Minor Assets	-	2	-	194	232	172	177	185
Catering: Departmental activities	327	217	85	432	441	423	440	460
Communication (G&S)	366	302	286	695	657	586	610	637
Computer services	-	-	60	194	194	173	180	188

Table 45: Resource overview of Programme 3 (continued)

	Baseline					MTEF		
	Audited outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>	<b>Rand Thousand</b>							
Consultants: Business & advisory services	1 743	396	9 056	9 673	10 252	9 329	10 046	10 493
Legal services (G&S)	-	-	199	-	-	-	-	-
Contractors	5	-	41	22	25	21	21	22
Agency & support/outsourced services	2	-	-	8	8	7	6	6
Entertainment	-	-	-	6	6	5	4	4
Fleet services (including Government motor transport)	-	-	22	188	188	167	174	182
Inventory: Materials & supplies	1	-	-	-	-	-	-	-
Inventory: Other supplies	6	-	-	81	81	-	-	-
Consumable supplies	-	6	151	307	309	344	358	374
Consumables: Stationery, printing & office supplies	176	47	98	90	64	81	83	87
Operating leases	-	9	221	-	-	-	-	-
Rental & hiring	10	-	15	72	72	64	67	70
Property payments	4	-	-	29	29	26	27	28
Transport provided: Departmental activity	-	-	-	46	46	-	-	-
Travel & subsistence	4 601	1 649	5 714	5 652	4 517	4 567	4 419	4 616
Training & development	537	608	11	-	-	-	-	-
Operating payments	86	108	3 036	2 804	2 822	2 494	2 585	2 701
Venues & facilities	327	52	367	1 504	1 279	1 331	1 385	1 448
<b>Transfers &amp; subsidies</b>	<b>10</b>	<b>53</b>	<b>2 312</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Foreign governments & international organisations	-	-	2 312	-	-	-	-	-
Households	10	53	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Transport equipment	-	-	-	-	-	-	-	-

Table 45: Resource overview of Programme 3 (continued)

	Baseline					MTEF		
	Audited outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>								
Rand Thousand								
<b>Payments for capital assets</b>	-	-	-	-	-	-	-	-
Other machinery & equipment	-	-	-	-	-	-	-	-
Software & other intangible assets	-	-	-	-	-	-	-	-
<b>Payments for financial assets</b>	-	-	-	-	-	-	-	-
<b>Total</b>	44 389	25 836	64 548	74 378	73 378	77 871	77 029	80 374

<b>Transfer Payment Beneficiary</b>								
Rand Thousand								
Employee Social Benefits	10	53	-	-	-	-	-	-
African Petroleum Producer Association	-	-	2 312	-	-	-	-	-
<b>Total</b>	10	53	2 312	-	-	-	-	-

### 34 Risk Management

Table 46: Risk exposures for Programme 3

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 3.1 Compliance Monitoring & Enforcement in the Petroleum Sector	Ensure the development & transformation of the liquid fuels industry & the security of the supply of petroleum products in the South African economy by monitoring & enforcing technical & economic compliance to legislation, specifications, standards & licence conditions on an annual basis	Inability to enforce the Petroleum Products Act, 1977 (Act No. 120 of 1977) & its regulations	<ul style="list-style-type: none"> <li>Non-compliance by industry players</li> <li>Lack of confidence on the regulatory</li> <li>Unfair practices &amp; conduct by petroleum operators</li> <li>Failure to address socio-economic objectives</li> <li>Failure to transform the industry</li> <li>Persistent market monopoly</li> </ul>	Review the Petroleum Products Act, 1977 (Act No. 120 of 1977) & its regulations




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

### 4.1 Purpose

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

### 4.2 Five Budget Sub-Programmes

- Integrated National Electrification Programme
- Energy Regional Offices
- Community Upliftment Programmes and Projects
- Programmes and Project Management Office
- Electricity Infrastructure/Industry Transformation

 The Integrated National Electrification Programme is responsible for planning, funding, and project management for new grid and non-grid household connections.



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## Sub-Programme 4.1: Integrated National Electrification Programme

The Integrated National Electrification Programme (INEP) is responsible for planning, funding, and project management for new grid and non-grid household connections and bulk infrastructure (e.g., medium voltage [MV] lines and substations). The programme is implemented by transferring funds to implementing agencies (Eskom, local municipalities and non-grid service providers) with the aim of achieving universal access to energy by 2025.

Table 47: Sub-Programme 4.1 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic	Audited/Actual Performance			Estimated Performance	Medium-Term Targets		
	Plan Target	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.1 Access to Electricity by Households	A total grid connection of 1 250 000 households by March 2019 of which 937 500 (75%) are in rural areas	166 130 additional households electrified	1 annual report on allocation of funding & monitoring of progress on number of additional households electrified with grid electrification toward the 2012/13 target of 180 000 in the National Electrification Plan	Number of additional households to be electrified with grid electrification toward the 2013/14 target of 265 000 in the National Electrification Plan	4 quarterly reports of additional households to be electrified with grid electrification toward the 2015/16 target of 260 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2016/17 target of 235 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2017/18 target of 245 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2018/19 target of 250 000 in the National Electrification Plan

Table 47: Sub-Programme 4.1 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.1 Access to Electricity by Households (continued)	<p>16 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2019/20 target of:</p> <ul style="list-style-type: none"> <li>- 17 new bulk substations built</li> <li>- 24 additional substations upgraded</li> <li>- 545 km new MV power lines constructed</li> <li>- 450 km of existing MV power lines upgraded</li> </ul> <p>A total non-grid connection of 115 000 households by March 2019 of which 86 250 (75%) are in the rural areas</p> <p>5 documents of NIEP</p>	<ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 5 additional substations upgraded</li> <li>- 275 km new MV power lines constructed</li> <li>- 200 km of existing MV power lines</li> </ul>	<p>1 annual report on the allocation of funding &amp; monitoring of progress on the building/upgrading of electrification infrastructure projects toward the 2012/13 target of:</p> <ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 5 additional substations upgraded</li> <li>- 275 km new MV power lines constructed</li> <li>- 200 km of existing MV power lines upgraded</li> </ul>	<p>Building/upgrading of electrification infrastructure projects toward the 2014/15 target of:</p> <ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 7 additional substations upgraded/strengthened</li> <li>- 150 km new MV power lines constructed</li> <li>- 80 km of existing MV power lines upgraded/strengthened</li> </ul>	<p>4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2015/16 target of:</p> <ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 6 additional substations upgraded</li> <li>- 110 km new MV power lines constructed</li> <li>- 95 km of existing MV power lines upgraded</li> </ul>	<p>4 quarterly reports on electrification infrastructure projects planned/built toward the 2016/17 target of:</p> <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>	<p>4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2017/18 target of:</p> <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 4 additional substations upgraded</li> <li>- 95 km new MV power lines constructed</li> <li>- 95 km of existing MV power lines upgraded</li> </ul>	<p>4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2018/19 target of:</p> <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 4 additional substations upgraded</li> <li>- 100 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>
		9 343 non-grid connections	1 annual report on allocation of funding & monitoring of progress on number of additional households electrified with non-grid electrification toward the 2012/13 target of 10 000 in the National Electrification Plan	Number of additional households electrified with non-grid electrification toward the 2014/15 target of 15 000 in the National Electrification Plan	Number of additional households electrified with non-grid electrification toward the 2015/16 target of 20 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional household electrified with non-grid electrification toward the 2016/17 target of 20 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2017/18 target of 20 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on the additional households electrified with non-grid electrification toward the 2018/19 target of 20 000 in the National Electrification Plan
		N/A	NIEP	First NIEP draft for electrification planning in 2014/15	National EMP for 2015/16 developed	NIEP for 2016/17 developed	NIEP for 2017/18 developed	NIEP for 2018/19 developed

Table 48: Sub-Programme 4.1 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.1 Access to Electricity by Households	Number of quarterly reports of additional households to be electrified with grid electrification toward the 2015/16 target of 260 000 in the National Electrification Plan	166 130 additional households electrified	1 annual report on allocation of funding & monitoring of progress on number of additional households electrified with grid electrification toward the 2012/13 target of 180 000 in the National Electrification Plan	Number of additional households to be electrified with grid electrification toward the 2014/15 target of 265 000 in the National Electrification Plan	4 quarterly reports of additional households to be electrified with grid electrification toward the 2015/16 target of 260 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2016/17 target of 235 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2017/18 target of 245 000 in the National Electrification Plan	4 quarterly reports on allocation of funding & monitoring of progress on the additional households to be electrified with grid electrification toward the 2018/19 target of 250 000 in the National Electrification Plan
	Number of quarterly reports on allocation of funding & monitoring of progress on building/upgrading of electrification infrastructure projects per year	<ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 5 additional substations upgraded</li> <li>- 275 km new MV power lines constructed</li> <li>- 200 km of existing MV power lines upgraded</li> </ul>	1 annual report on allocation of funding & monitoring of progress on building/upgrading of electrification infrastructure projects toward the 2012/13 target of: <ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 5 additional substations upgraded</li> <li>- 275 km new MV power lines constructed</li> <li>- 200 km of existing MV power lines upgraded</li> </ul>	Building/upgrading of electrification infrastructure projects toward the 2014/15 target of: <ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 7 additional substations upgraded/strengthened</li> <li>- 150 km new MV power lines constructed</li> <li>- 80 km of existing MV power lines upgraded/strengthened</li> </ul>	4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2015/16 target of: <ul style="list-style-type: none"> <li>- 4 new bulk substations built</li> <li>- 6 additional substations upgraded</li> <li>- 110 km new MV power lines constructed</li> <li>- 95 km of existing MV power lines upgraded</li> </ul>	4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2016/17 target of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>	4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2017/18 target of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 4 additional substations upgraded</li> <li>- 95 km new MV power lines constructed</li> <li>- 95 km of existing MV power lines upgraded</li> </ul>	4 quarterly reports on building/upgrading of electrification infrastructure projects toward the 2018/19 target of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 4 additional substations upgraded</li> <li>- 100 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>

Table 48: Sub-Programme 4.1 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.1 Access to Electricity by Households (continued)	Number of quarterly reports on additional households electrified with non-grid electrification toward the 2016/17 target of 20 000 in the National Electrification Plan	9 343 non-grid connections	1 annual report on the allocation of funding & monitoring of progress on number of additional households electrified with non-grid electrification toward the 2012/13 target of 10 000 in the National Electrification Plan	Number of additional households electrified with non-grid electrification toward the 2014/15 target of 15 000 in the National Electrification Plan	Number of additional households electrified with non-grid electrification toward the 2015/16 target of 20 000 in the National Electrification Plan	4 quarterly reports on additional households electrified with non-grid electrification toward the 2016/17 target of 20 000 in the National Electrification Plan	4 quarterly reports on additional households electrified with non-grid electrification toward the 2017/18 target of 20 000 in the National Electrification Plan	4 quarterly reports on additional households electrified with non-grid electrification toward the 2018/19 target of 20 000 in the National Electrification Plan
	Approved National EMP for 2016/17	N/A	N/A	First National NIEP draft for electrification planning in 2015/16	National EMP for 2016/17 developed	National EMP for 2017/18 developed	National EMP for 2018/19 developed	National EMP for 2019/20 developed

Table 49: Sub-Programme 4.1 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 4.1 Access to Electricity by Households	Number of quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2016/17 target of 260 000 in the National Electrification Plan	Quarterly	4 quarterly reports on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2016/17 target of 235 000 in the National Electrification Plan	1 quarterly report on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2016/17 1 <sup>st</sup> quarter target of 25 000	1 quarterly report on allocation of funding & monitoring of progress on additional households to be electrified with grid electrification toward the 2016/17 2 <sup>nd</sup> quarter target of 45 000	1 quarterly report on allocation of funding & monitoring of the progress on the additional households to be electrified with grid electrification toward the 2016/17 3 <sup>rd</sup> quarter target of 70 000	1 quarterly report on allocation of funding & monitoring of the progress on the additional households to be electrified with grid electrification toward the 2016/17 4 <sup>th</sup> quarter target of 95 000

Table 49: Sub-Programme 4.1 quarterly targets for 2016/17 (continued)

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 4.1 Access to Electricity by Households (continued)	Number of quarterly reports on allocation of funding & monitoring of progress on the building/upgrading of electrification infrastructure projects per year	Quarterly	4 quarterly reports on electrification infrastructure projects planned/built toward the 2016/17 target of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>	1 quarterly report on allocation of funding & monitoring of progress on building/upgrading of electrification infrastructure projects towards the 2016/17 targets of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>	1 quarterly report on allocation of funding & monitoring of progress on building/upgrading of electrification infrastructure projects towards the 2016/17 targets of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>	1 quarterly report on allocation of funding & monitoring of progress on the building/upgrading of electrification infrastructure projects towards the 2016/17 targets of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>	1 quarterly report on the allocation of funding & monitoring of progress on the building/upgrading of electrification infrastructure projects towards the 2016/17 targets of: <ul style="list-style-type: none"> <li>- 3 new bulk substations built</li> <li>- 3 additional substations upgraded</li> <li>- 90 km new MV power lines constructed</li> <li>- 90 km of existing MV power lines upgraded</li> </ul>
	Number of quarterly reports on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2016/17 target of 20 000 in the National Electrification Plan	Quarterly	4 quarterly reports on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2016/17 target of 20 000 in the National Electrification Plan	1 quarterly report on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2016/17 1 <sup>st</sup> quarter target of 3 500	1 quarterly report on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2016/17 2 <sup>nd</sup> quarter target of 4 500	1 quarterly report on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2016/17 3 <sup>rd</sup> quarter target of 5 500	1 quarterly report on allocation of funding & monitoring of progress on additional households electrified with non-grid electrification toward the 2016/17 4 <sup>th</sup> quarter target of 6 500
	Approved National EMP for 2016/17	Quarterly	NIEP for 2016/17 developed	Refine & update master plan with data collected from municipalities & Eskom	Refine & update master plan with data collected from municipalities & Eskom	Consolidation & confirmation of data with stakeholders (municipalities & Eskom)	NIEP for 2016/17 developed

## Sub-Programme 4.2: Energy Regional Offices

This sub-programme provides advice on integrated energy services, develops appropriate interventions to enhance and promote universal access to energy, manages and coordinates regional electrification planning, and ensures economic and technical compliance with relevant legislation.



Sub-Programme 4.2 develops appropriate interventions to enhance and promote universal access to energy.



### Sub-Programme 4.3: Community Upliftment Programmes and Projects

To plan, organise, implement, monitor and review specific energy programmes and projects. This sub-programme also focuses on special projects that fulfil Government's priorities for broad transformation which include gender, disability, youth and children in the Energy Sector in line with the national policies and strategies of the country.

Table 50: Sub-Programme 4.3 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.2 Energy Infrastructure Development Monitored	Coherent project management business process	N/A	N/A	Draft project management business process	Project management business process approved & implemented	Implement project management business process	Review project management business process	Implement project management business process
	16 quarterly progress reports & 4 annual reports on energy infrastructure development, covering INEP (challenges, mitigation plans & interventions)	N/A	N/A	N/A	System & user requirements	System development & deployment of phase 1 of the EDMS	System development & deployment of phase 1 of the EDMS	System development & deployment of phase 1 of the EDMS
	Development of rural IECs	N/A	N/A	Develop 20 dashboards for each project (internal/external)	Implement 12 dashboards for each project (internal/external)	4 project dashboards per year	4 project dashboards for each project (internal/external)	4 project dashboards for each project (internal/external)
	Signed municipality contracts for INEP-funded projects	N/A	N/A	1 monthly report covering INEP	1 monthly report covering INEP	4 quarterly reports on energy infrastructure development, covering INEP (challenges, mitigation plans & interventions)	1 monthly report covering INEP	1 monthly report covering INEP
SO 4.3 Enhanced Programmes & Projects Management	36 provincial reports on performance of municipalities for 2019/20	2 IECs established	4 quarterly reports on progress made in 2012/13 with regard to the establishment of 2 IECs	4 quarterly reports on progress made in 2013/14 with regard to the establishment of 2 IECs	Annual report on progress made in 2014/15 with regard to IECs	Annual report(s) on development of rural IECs	Monthly, quarterly & annual reports with regards to development of rural IECs	Monthly, quarterly & annual reports with regards to development of rural IECs

Table 50: Sub-Programme 4.3 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.3 Enhanced Programmes & Projects Management (continued)		N/A	N/A	N/A	IEC strategy drafted & consultation initiated	Approved IEC strategy	Approved implementation plan of the IEC strategy	Implementation of approved IEC strategy
		Signed municipality contracts for funded 2012/13 INEP	Signed municipality contracts for funded 2013/14 INEP	Signed municipality contracts for funded 2014/15 INEP	Report of municipality contracts concluded through DoRA for funding in 2015/16	Report of municipality contracts concluded through DoRA for funding in 2016/17	Report of municipality contracts concluded through DoRA for funding in 2017/18	Report of municipality contracts concluded through DoRA for funding in 2018/19
		Provincial reports on performance of municipalities for 2012/13 INEP	Provincial reports on performance of municipalities for 2013/14 INEP	Provincial reports on performance of municipalities for 2014/15 INEP	27 quarterly regional reports on performance of municipalities in implementation INEP project	27 quarterly regional reports on performance of municipalities in implementation INEP project	27 quarterly regional reports on performance of municipalities in implementation INEP project	27 quarterly regional reports on performance of municipalities in implementation INEP project
		N/A	N/A	4 quarterly reports on conducted site & technical audits during INEP project implementations & monitoring of projects for 2013/14	4 quarterly reports on conducted site & technical audits during INEP project implementations & monitoring of projects for 2014/15	4 quarterly reports on site & technical audits during INEP projects	4 quarterly reports on site & technical audits during INEP projects	4 quarterly reports on site & technical audits during INEP projects

Table 51: Sub-Programme 4.3 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.2 Energy Infrastructure Development Monitored	Develop implementation of a project management business process	N/A	N/A	Draft project management business process	Project management business process approved & implemented	Implement project management business process	Review project management business process	Implement project management business process
	Electronic Document Management System	N/A	N/A	N/A	System & user requirements	System development & deployment of phase 1 of the EDMS	System development & deployment of phase 1 of the EDMS	System development & deployment of phase 1 of the EDMS
	Number of project dashboards per year	N/A	N/A	Develop 20 dashboards for each project (internal/ external)	Implement 12 dashboards for each project (internal/ external)	4 dashboards per year	4 dashboards per year	4 dashboards per year
	Number of quarterly reports on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)	N/A	N/A	1 monthly report covering INEP	1 monthly report covering INEP	4 quarterly reports on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)	1 monthly report covering INEP	1 monthly report covering INEP
SO 4.3 Enhanced Programmes & Projects Management	Number of quarterly reports on progress made with regard to development of rural IECs	2 IECs established	4 quarterly reports on progress made in 2012/13 with regard to establishment of 2 IECs submitted to community upliftment	4 quarterly reports on the progress made in 2013/14 with regard to the establishment of 2 IECs	Annual report on progress made in 2014/15 with regard to the IECs	Monthly, quarterly & annual reports with regard to development of IECs	Monthly, quarterly & annual reports with regard to development of IECs	Monthly, quarterly & annual reports with regard to development of IECs
	Draft IEC strategy	N/A	N/A	N/A	IEC strategy drafted & consultation initiated	Approved IEC strategy	Approved implementation plan of IEC strategy	Implementation of approved IEC strategy
	Number of reports on municipality contracts concluded through DoRA for funding in 2016/17	Signed municipality contracts for funding in 2012/13 INEP	Signed municipality contracts for funding in 2013/14 INEP	Signed municipality contracts for funding in 2014/15 INEP	Report of municipality contracts concluded through DoRA for funding in 2015/16	Report of municipality contracts concluded through DoRA for funding in 2016/17	Report of municipality contracts concluded through DoRA for funding in 2017/18	Report of municipality contracts concluded through DoRA for funding in 2018/19

Table 51: Sub-Programme 4.3 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.3 Enhanced Programmes & Projects Management (continued)	Number of quarterly regional reports on performance of municipalities in implementation INEP project	Provincial reports on performance of municipalities for 2012/13 INEP	Provincial reports on performance of municipalities for 2013/14 INEP	Provincial reports on performance of municipalities for 2014/15 INEP	27 quarterly regional reports on performance of municipalities in implementation of INEP project	27 quarterly regional reports on performance of municipalities in implementation of INEP project	27 quarterly regional reports on performance of municipalities in implementation of INEP project	27 quarterly regional reports on performance of municipalities in implementation of INEP project
	Number of quarterly conducting site & technical audit visits during INEP project implementation & monitoring of INEP projects	N/A	N/A	4 quarterly reports on conducted site & technical audits during INEP project implementations & monitoring of projects for 2013/14	4 quarterly reports on conducted site & technical audits during INEP project implementations & monitoring of projects for 2014/15	4 quarterly reports on conducted site & technical audits during INEP project implementations & monitoring of projects	4 quarterly reports on conducted site & technical audits during INEP projects implementations & monitoring of projects	4 quarterly reports on conducted site & technical audits during INEP projects implementations & the monitoring of projects

Table 52: Sub-Programme 4.3 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 4.2 Energy Infrastructure Development Monitored	Develop implementation of a project management business process	Annually	Implement project management business process	Stakeholder engagement	N/A	Submit draft business process system for approval	Implementation of project management business process
	Electronic Document Management System	Quarterly	System development & deployment of phase 1 of EDMS	Pilot phase 1 of EDMS	User training & change management	User training & change management	System development & deployment of phase 1 of EDMS
	Number of project dashboards	Quarterly	4 project dashboards per year	1 project dashboard per year	1 project dashboard per year	1 project dashboard per year	1 project dashboard per year
	Number of quarterly report(s) on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)	Quarterly	4 quarterly reports & 1 annual report on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)	1 quarterly report on energy infrastructure development, covering INEP (challenges, mitigation plans & interventions)	1 quarterly report on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)	1 quarterly report on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)	1 quarterly report & 1 annual report on energy infrastructure development covering INEP (challenges, mitigation plans & interventions)

Table 52: Sub-Programme 4.3 quarterly targets for 2016/17 (continued)

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 4.3 Enhanced Programmes & Projects Management	Number of reports with regard to development of rural IECs	Quarterly	4 quarterly reports & 1 annual report with regard to development of rural IECs	1 quarterly report with regard to development of rural IECs	1 quarterly report on IECs with regard to development of rural IECs	1 quarterly report with regard to development of rural IECs	1 quarterly report & 1 annual report with regard to development of rural IECs
	Draft IEC strategy	Quarterly	Approved IEC strategy	Stakeholder consultation on IEC strategy	Review of draft IEC strategy	Review of draft IEC strategy	Approval of IEC strategy
	Draft gender, disability & youth & children policies	Quarterly	Approved gender, disability & youth & children policies	Stakeholder consultation on gender, disability & youth & children policies	Review gender, disability & youth & children policies	Review gender, disability & youth & children policies	Approval of gender, disability & youth & children policies
	Draft gender, disability & youth & children strategies	Quarterly	Approved gender, disability & youth & children strategies	Stakeholder consultation on gender, disability & youth & children strategies	Review gender, disability & youth & children strategies	Review gender, disability & youth & children strategies	Approval of gender, disability & youth & children strategies
	Number of reports on municipality contracts concluded through DoRA for funding in 2016/17	Annually	Report of municipality contracts concluded through DoRA for funding in 2016/17	Receive application from municipalities	Verify & finalise allocation	Report to NT	Report of municipality contracts concluded through DoRA for funding in 2016/17
	Number of provincial reports on performance of Municipality Programme	Quarterly	27 quarterly regional reports on performance of municipalities in implementation of INEP project	N/A	9 quarterly regional reports on performance of municipalities in implementation of INEP project	9 quarterly regional reports on performance of municipalities in implementation of INEP project	9 quarterly regional reports on performance of municipalities in implementation of INEP project
	Number of quarterly conducting site & technical audit visits during INEP project implementation & monitoring of projects	Quarterly	4 quarterly reports on conducted site & technical audits during INEP project implementations & monitoring of projects for 2016/17	1 quarterly report on conducted site & technical audits during INEP project implementations & monitoring of projects for 2016/17	1 quarterly report on conducted site & technical audits during INEP project implementations & monitoring of projects	1 quarterly report on conducted site & technical audits during INEP projects implementations & monitoring of projects	1 quarterly report on conducted site & technical audits during INEP project implementations & monitoring of projects

## Sub-Programme 4.4: Electricity Infrastructure/Industry Transformation

This sub-programme facilitates the orderly development of energy infrastructure through monitoring projects development in line with contractual obligations.

Table 53: Sub-Programme 4.4 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.2 Energy Infrastructure Development Monitored	4 annual reports on IPP Programme & a close-out report on Bid Window 2,3,4 & 5 of REIPPP	N/A	1 annual report on progress made in 2013/14 with regard to construction & operation phases of the IPP projects	Updated report highlighting achievements of implementation of IPP Programme	4 quarterly reports on progress made with regard to construction & operation phases of IPP projects	4 quarterly reports on progress made with regards to construction & operation phases of IPP projects	4 quarterly reports on progress made with regards to construction & operation phases of IPP projects	4 quarterly reports on progress made with regards to construction & operation phases of IPP projects
	5 annual reports on non-REIPP	N/A	N/A	Updated report highlighting achievements of implementation of IPP Programme	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations
		N/A	Provide energy inputs to all SIPs where energy is the major component	Provide energy inputs to all SIPs where energy is the major component	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9

Table 54: Sub-Programme 4.4 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 4.2 Energy Infrastructure Development Monitored	Number of quarterly report on progress made with regard to construction & operation phases of IPP projects	N/A	1 annual report on progress made in 2013/14 with regard to construction & operation phases of IPP projects	An updated report highlighting achievements of implementation of IPP projects	4 quarterly reports on progress made with regard to construction & operation phases of IPP projects	4 quarterly reports on progress made with regard to construction & operation phases of IPP projects	4 quarterly reports on progress made with regard to construction & operation phases of IPP projects	4 quarterly reports on progress made with regard to construction & operation phases of IPP projects
	Number of annual reports & quarterly reports on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	N/A	N/A	An updated report highlighting achievements on implementation of IPP Programme	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations
	Number of SIP reports submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	N/A	Provide energy inputs to all SIPs, where energy is the major component	Provide energy inputs to all SIPs, where energy is the major component	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9

Table 55: Sub-Programme 4.4 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 4.2 Energy Infrastructure Development Monitored	Number of quarterly reports on progress made with regard to construction & operation phases of IPP projects	Quarterly	4 quarterly reports on progress made with regard to construction & operation phases of IPP projects	1 quarterly report on progress made with regard to construction & operation phases of IPP projects	1 quarterly report on progress made with regard to construction & operation phases of IPP projects	1 quarterly report on progress made with regard to construction & operation phases of IPP projects	1 quarterly report on progress made with regard to construction & operation phases of IPP projects
	Number of annual reports & quarterly reports on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	Biannually	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	N/A	N/A	1 annual report on infrastructure monitoring & compliance with implementation of non-REIPPP Generation Programme – peaker stations	N/A
	Number of SIP reports submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	Annually	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	N/A	N/A	1 SIP report submitted to EXCO, MANCO & PICC Secretariat on SIP 8 & 9	N/A

### 4.3 Resource Consideration

Table 56: Resource overview of Programme 4

	Baseline				MTEF			
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Sub-Programmes</b>	<b>Rand Thousand</b>							
INEP	3 106 371	3 907 895	4 142 550	5 741 708	5 777 233	5 657 039	6 173 242	6 421 574
Energy Regional Offices	5 127	33 204	17 581	11 950	11 950	15 687	15 261	16 425
Programme & Project Management Office	-	5 926	7 245	9 640	9 640	11 532	11 554	11 850
Electricity Infrastructure/Industry Transformation	814	4 262	6 575	9 420	9 420	9 727	10 189	10 328
Community Upliftment Programmes & Projects	3 638	7 238	7 022	5 579	5 579	5 922	5 860	5 971
<b>Total</b>	<b>3 115 950</b>	<b>3 958 525</b>	<b>4 180 973</b>	<b>5 778 297</b>	<b>5 813 822</b>	<b>5 699 907</b>	<b>6 216 106</b>	<b>6 466 148</b>

Table 56: Resource overview of Programme 4 (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
Economic Classification								
Rand Thousand								
<b>Current payments</b>	<b>26 744</b>	<b>72 011</b>	<b>58 240</b>	<b>53 647</b>	<b>53 647</b>	<b>60 903</b>	<b>63 076</b>	<b>64 991</b>
<b>Compensation of employees</b>	<b>19 685</b>	<b>46 050</b>	<b>36 224</b>	<b>38 864</b>	<b>38 864</b>	<b>45 749</b>	<b>45 131</b>	<b>46 574</b>
Salaries & wages	17 328	40 759	31 993	34 627	34 610	39 250	38 719	39 958
Social contributions	2 357	5 291	4 231	4 237	4 254	6 499	6 412	6 616
<b>Goods &amp; services</b>	<b>7 059</b>	<b>25 961</b>	<b>22 016</b>	<b>14 783</b>	<b>14 783</b>	<b>15 154</b>	<b>17 945</b>	<b>18 417</b>
Administrative fees	242	1 152	991	906	909	811	833	863
Advertising	231	1 544	976	139	99	104	93	98
Minor Assets	-	4	7	595	588	536	564	589
Audit costs: External	-	-	-	-	-	-	732	-
Catering: Departmental activities	337	1 096	261	696	613	656	669	698
Communication (G&S)	299	485	537	792	768	692	714	748
Computer services	1	2	-	31	31	21	53	56
Consultants: Business & advisory services	2	1	25	-	-	1 975	3 515	4 111
Contractors	51	68	14	-	3	-	-	-
Entertainment	-	2	-	-	-	-	-	-
Fleet services (including Government motor transport)	-	3	153	1	1	27	26	28
Inventory: Fuel, oil & gas	1	-	-	-	-	-	-	-
Inventory: Learner & teacher support material	-	-	-	-	-	-	-	-
Inventory: Materials & supplies	2	-	-	-	-	-	-	-
Inventory: Other supplies	101	-	-	-	-	-	-	-
Consumable supplies	-	136	75	81	101	101	125	133
Consumables: Stationery, printing & office supplies	13	21	1	263	227	147	168	170
Operating leases	-	390	183	-	-	-	-	-

Table 56: Resource overview of Programme 4 (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>								
Rand Thousand								
Transport provided: Departmental activity	-	233	-	29	29	-	-	-
Travel & subsistence	4 192	15 271	14 254	9 333	8 551	8 344	8 584	8 976
Training & development	-	133	18	-	-	-	-	-
Operating payments	632	232	74	142	278	147	181	188
Venues & facilities	955	5 188	4 447	1 775	2 585	1 593	1 688	1 759
<b>Transfers &amp; subsidies</b>	<b>3 089 206</b>	<b>3 886 157</b>	<b>4 122 704</b>	<b>5 724 650</b>	<b>5 760 175</b>	<b>5 639 004</b>	<b>6 153 030</b>	<b>6 401 157</b>
Municipalities	1 151 443	1 634 772	1 104 658	1 980 340	1 980 340	1 946 246	2 087 048	2 204 477
Public corporations	1 879 368	2 141 027	2 948 037	3 613 243	3 613 243	3 526 334	3 876 154	3 995 031
Private enterprises	58 328	110 320	70 000	131 067	166 592	166 424	189 828	201 649
Households	67	38	9	-	-	-	-	-
<b>Payments for capital assets</b>	<b>-</b>	<b>357</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Transport equipment	-	-	-	-	-	-	-	-
Other machinery & equipment	-	9	-	-	-	-	-	-
Software & other intangible assets	-	348	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>-</b>	<b>-</b>	<b>29</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>3 115 950</b>	<b>3 958 525</b>	<b>4 180 973</b>	<b>5 778 297</b>	<b>5 813 822</b>	<b>5 699 907</b>	<b>6 216 106</b>	<b>6 466 148</b>
<b>Transfer Payment Beneficiary</b>								
Rand Thousand								
Employee social benefits	67	38	-	-	-	-	-	-
Employee ex-gratia payments	-	-	9	-	-	-	-	-
Non-grid: INEP	58 328	110 320	70 000	131 067	166 592	166 424	189 828	201 649
Eskom: INEP	1 879 368	2 141 027	2 948 037	3 613 243	3 613 243	3 526 334	3 876 154	3 995 031
INEP grant	1 151 443	1 314 772	1 104 658	1 980 340	1 980 340	1 946 246	2 087 048	2 204 477
INEP: Approach to distribution asset management	-	320 000	-	-	-	-	-	-
<b>Total</b>	<b>3 089 206</b>	<b>3 886 157</b>	<b>4 122 704</b>	<b>5 724 650</b>	<b>5 760 175</b>	<b>5 639 004</b>	<b>6 153 030</b>	<b>6 401 157</b>

## 44 Risk Management

Table 57: Risk exposures for Programme 4

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 4.1 Access to Electricity by Households	Increase access to electricity by managing funding & monitoring implementation of INEP on an ongoing basis	Inability to reach universal access by 2030	People deprived of modern forms of energy Poverty	Once approved, INEP will be rolled-out according to the Master Plan

Programme 4 manages, coordinates and monitors programmes and projects focused on access to energy.



## 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 peaceful use of nuclear energy.

### 5.2 Three Budget Sub-Programmes

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



Sub-Programme 5.1 manages and implements all matters related to nuclear safety and technology.



## Sub-Programme 5.1: Nuclear Safety and Technology

This sub-programme manages and implements all matters related to nuclear safety and technology as required by legislation and international agreements; implements the Nuclear Energy Policy in line with requirements of the Integrated Resource Plan (IRP); and administers all matters related to nuclear safety, liability and emergency management with the aim of improving the governance of the nuclear sector, specifically in relation to nuclear safety and nuclear technology. This sub-programme also makes transfers to the South African Nuclear Energy Corporation SOC Limited (NECSA) and the National Nuclear Regulator (NNR).

Table 58: Sub-Programme 5.1 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.1 Improved Security of Energy Supply	Monitor & implement approved National Disaster Management Plan	N/A	N/A	Action plan based on emergency preparedness review mission developed	Updated draft National Nuclear Disaster Management Plan completed	Consultation with impacted stakeholders on draft National Nuclear Disaster Management Plan completed	Approved updated National Nuclear Disaster Management Plan	Monitor implementation of approved National Disaster Management Plan
	Develop Nuclear New Build Programme Roadmap	N/A	N/A	Approved NNEECC/ESC procurement framework of October 2013	Procurement of nuclear power reactor as per procurement process launched	Procurement of nuclear power reactor as per procurement process completed	Monitor preconstruction activities of 1 nuclear power station	Monitor construction activities of 1 nuclear power station
	Monitor progress on implementation of the Nuclear New Build Programme	N/A	N/A	N/A	Programme plan completed & implementation commence	4 progress reports on implementation of programme plan (Roadmap)	Monitor progress on implementation of the programme plan (Roadmap)	Monitor progress on implementation of the programme plan (Roadmap)
	Transactional advisor appointed to provide necessary advice on Nuclear New Build Programme	N/A	N/A	N/A	Transactional Advisors motivation completed	Transactional Advisors utilised to advise Government on procurement & contract negotiations & all contract signed off	N/A	N/A

Table 58: Sub-Programme 5.1 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.1 Improved Security of Energy Supply (continued)	Establish Nuclear PMO to expedite rollout of the Nuclear New Build Programme	N/A	N/A	N/A	PMO established & operational	PMO established & operationalised to expedite rollout of Nuclear New Build Programme	Exercise oversight on PMO & report on activities	Exercise oversight on PMO & report on activities
	Launch of procurement of NFC facilities as per implementation plan	N/A	N/A	Implementation plan for NFC strategy submitted to NNEECC/ESC for approval	Procurement of NFC facilities as per implementation plan launched	Plan for implementation of procurement process for NFC facilities	Monitoring & oversight of implementation plan on implementation process	Monitoring & oversight of implementation plan on implementation process
	Complete Industrialisation Programme to ensure localisation & industrialisation goals are realised	N/A	N/A	Nuclear localisation & industrialisation strategy submitted to NNEECC/ESC for approval	Implementation of nuclear localisation & industrialisation strategy (if approved)	Monitoring of implementation of nuclear localisation & industrialisation strategy (if approved & procurement started) through PMO	Monitoring of implementation of nuclear localisation & industrialisation strategy (if approved & procurement started) through PMO	Monitoring of implementation of nuclear localisation & industrialisation strategy (if approved & procurement started) through PMO

Table 59: Sub-Programme 5.1 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.1 Improved Security of Energy Supply	Updated National Nuclear Disaster Management Plan	N/A	N/A	Action plan based on emergency preparedness review mission developed	Updated draft National Nuclear Disaster Management Plan completed	Consultation with impacted stakeholders on draft National Nuclear Disaster Management Plan completed	Approved updated National Nuclear Disaster Management Plan	Monitor implementation of approved National Disaster Management Plan
	Monitoring reports on procurement of nuclear power reactor as per procurement process launched	N/A	N/A	Approved NNEECC/ESC procurement framework of October 2013	Procurement of nuclear power reactor as per procurement process launched	Procurement of nuclear power reactor as per procurement process completed	Monitor preconstruction activities of 1 nuclear power station	Monitor construction activities of 1 nuclear power station

Table 59: Sub-Programme 5.1 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.1 Improved Security of Energy Supply (continued)	Number of progress reports on implementation of programme plan	N/A	N/A	N/A	Programme plan completed & implementation commence	4 progress reports on implementation of programme plan (Roadmap)	Monitor progress on implementation of programme plan (Roadmap)	Monitor progress on implementation of programme plan (Roadmap)
	Appointed Transactional Advisor to provide necessary advice on the Nuclear New Build Programme	N/A	N/A	N/A	Transactional Advisors motivation completed	Transactional Advisors utilised to advise Government on procurement & contract negotiations & all contract signed off	N/A	N/A
	Established PMO to expedite rollout of Nuclear New Build Programme	N/A	N/A	N/A	PMO established & operational	PMO established & operationalised to expedite rollout of Nuclear New Build Programme	Exercise oversight & report on PMO activities	Exercise oversight on PMO & report on activities
	Developed implementation plan for procurement process for NFC facilities	N/A	N/A	Implementation plan for NFC strategy submitted to NEECC/ESC for approval	Procurement of the NFC facilities as per implementation plan launched	Implementation plan for procurement process for NFC facilities	Implementation & monitoring of NFC procurement process	Implementation & monitoring of NFC procurement process
	Number of quarterly monitoring reports on localisation & industrialisation strategy implemented	N/A	N/A	Nuclear localisation & industrialisation strategy submitted to NEECC/ESC for approval	Implementation of nuclear localisation & industrialisation strategy (if approved)	Monitoring of implementation of nuclear localisation & industrialisation through PMO	Monitoring of implementation of nuclear localisation & industrialisation strategy through PMO	Monitoring of implementation of nuclear localisation & industrialisation strategy through PMO

Table 60: Sub-Programme 5.1 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 5.1 Improved Security of Energy Supply	Updated National Nuclear Disaster Management Plan	Quarterly	Consultation with impacted stakeholders on draft National Nuclear Disaster Management Plan completed	Relevant work collected to be collated for purposes of amending plan	Workshop conducted towards amendment of plan	Consolidated inputs from workshop	Consultation with stakeholders on draft National Nuclear Disaster Management Plan completed
	Monitoring reports on procurement of nuclear power reactor as per procurement process launched	Quarterly	Procurement of the Nuclear Build Programme as per procurement process completed	Close-out report based on negotiations with strategic partner & commencing second-tier procurement for lead term items	Monitor report for compliance of procurement with NNEECC strategy recommendations – site preparation & development	Monitor report for compliance of procurement with NNEECC strategy recommendations – site preparation & development	Close-out report based on negotiations with strategic partner & commencing second tier procurement for lead term items.  Procurement of nuclear power reactor as per procurement process completed
	Number of progress reports on implementation of programme plan	Quarterly	4 progress reports on implementation of programme plan (Roadmap)	1 progress report on implementation of programme plan (Roadmap)	1 progress report on implementation of programme plan (Roadmap)	1 progress report on implementation of programme plan (Roadmap)	1 progress report on implementation of programme plan (Roadmap)
	Appointed Transactional Advisor to provide necessary advice on Nuclear New Build Programme	Quarterly	Transactional Advisors utilised to advise Government on procurement & contract negotiations completed & all contract signed off	Issue Request for Proposals	Commence evaluation of proposals	Commence negotiations on contracts	All contracts signed off Transactional Advisors utilised to advise Government on contract negotiations
	Established PMO to expedite rollout of Nuclear New Build Programme	Quarterly	PMO established & operationalised to expedite rollout of Nuclear New Build Programme	Commence with capacitation of PMO with secondments, representatives & consultants	Finalise agreements with HR of PMO office	Completion of physical infrastructure arrangements for PMO	PMO established & operationalised to expedite rollout of Nuclear New Build Programme
	Developed implementation plan for procurement process for NFC facilities	Quarterly	Implementation plan for procurement process for NFC facilities	Drafting of implementation plan for procurement process for NFC facilities	Submission of recommended plan for Cabinet approval	Implementation of comments from Cabinet (if any)	Implementation plan of procurement process for NFC facilities
	Number of quarterly monitoring reports on localisation & industrialisation strategy implemented	Quarterly	Monitoring of implementation of nuclear localisation & industrialisation strategy through PMO	1 monitoring report on nuclear localisation & industrialisation strategy through PMO	1 monitoring report on nuclear localisation & industrialisation strategy through PMO	1 monitoring report on nuclear localisation & industrialisation strategy through PMO	1 monitoring report on nuclear localisation & industrialisation strategy through PMO

## Sub-Programme 5.2: Nuclear Non-Proliferation and Radiation Security

This sub-programme manages and implements all matters related to nuclear non-proliferation and radiation security as required by legislation and international agreements. This includes standardising security measures at ports of entry and installing portal radiation monitors at main ports of entry.

Table 61: Sub-Programme 5.2 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance	Medium-Term Targets		
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.2 Strengthen the Control of Nuclear Material & Equipment	100% of authorisation applications processed within 8-week time period	100% of applications for nuclear materials & related equipment concluded within 8-week time period	100% of authorisation applications processed within 8-week time period	100% of authorisation applications processed within 8-week time period	70% of authorisation applications processed within 8-week time period	75% of authorisation applications processed within 8-week time period	80% of authorisation applications processed within 8-week time period	85% of authorisation applications processed within 8-week time period
	166 Nuclear Safeguard Inspection Compliance Reports submitted to DG	4 Nuclear Safeguard Inspection Compliance Reports submitted to DG	4 Nuclear Safeguard Inspection Compliance Reports submitted to DG	8 Nuclear Safeguard Inspection Compliance Reports submitted to DG	8 Nuclear Safeguard Inspection Compliance Reports submitted to DG	20 Nuclear Safeguard Inspection Compliance Reports submitted to DG	30 Nuclear Safeguard Inspections Compliance Reports submitted to DG	40 Nuclear Safeguard Inspections Compliance Reports submitted to DG
	20 Nuclear Safeguard Compliance Audit Reports submitted to DG	N/A	1 Nuclear Safeguard Compliance Audit Report submitted to DG	4 Nuclear Safeguard Compliance Audit reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG
	20 Nuclear Security Compliance Reports submitted to DG	N/A	N/A	2 Nuclear Security Compliance Reports submitted to DG	4 Nuclear Security Compliance Reports submitted to DG	4 Nuclear Security Compliance Reports submitted to DG	4 Nuclear Security Compliance Reports submitted to DG	4 Nuclear Security Compliance Reports submitted to DG

Table 62: Sub-Programme 5.2 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.2 Strengthen the Control of Nuclear Material & Equipment	Percentage of authorisation applications processed within 8-week time period	100% of applications for nuclear materials & related equipment concluded within 8-week time period	100% of authorisation applications processed within 8-week time period	100% of authorisation applications processed within 8-week time period	70% of authorisation applications processed within 8-week time period	75% of authorisation applications processed within 8-week time period	80% of authorisation applications processed within 8-week time period	85% of authorisation applications processed within 8-week time period
	Number of Nuclear Safeguard Inspection Compliance Reports submitted to DG	4 Nuclear Safeguard Inspection Compliance Reports submitted to DG	4 Nuclear Safeguard Inspection Compliance Reports submitted to DG	8 Nuclear Safeguard Inspection Compliance Reports submitted to DG	8 Nuclear Safeguard Inspection Compliance Reports submitted to DG	20 Nuclear Safeguard Inspection Compliance Reports submitted to DG	30 Nuclear Safeguard Inspection Compliance Reports submitted to DG	40 Nuclear Safeguard Inspection Compliance Reports submitted to DG
	Number of Nuclear Safeguard Compliance Audit Reports submitted to DG	N/A	1 Nuclear Safeguard Compliance Audit Report submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	4 Nuclear Safeguard Compliance Audit Reports submitted to DG
	Number of Nuclear Security Compliance Reports submitted to DG	N/A	N/A	2 Nuclear Security Compliance Reports submitted to the DG	4 Nuclear Security Compliance Reports submitted to the DG	4 Nuclear Security Compliance Reports submitted to the DG	4 Nuclear Security Compliance Reports submitted to the DG	4 Nuclear Security Compliance Reports submitted to the DG

Table 63: Sub-Programme 5.2 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 5.2 Strengthen the Control of Nuclear Material & Equipment	Accounting & control of possession, acquisition, transportation, importation & exportation of nuclear material through consideration of 100% authorisation applications within 8 weeks	Quarterly	75% of authorisation applications processed within 8-week time period	75% of authorisation applications processed within 8-week time period	75% of authorisation applications processed within 8-week time period	75% of authorisation applications processed within 8-week time period	75% of authorisation applications processed within 8-week time period
	Number of Nuclear Safeguard Compliance Reports submitted to DG	Quarterly	20 Nuclear Safeguard Compliance Reports submitted to DG	5 Nuclear Safeguard Compliance Reports submitted to DG	5 Nuclear Safeguard Compliance Reports submitted to DG	5 Nuclear Safeguard Compliance Reports submitted to DG	5 Nuclear Safeguard Compliance Reports submitted to DG
	Number of Nuclear Safeguard Compliance Audit Reports submitted to DG	Quarterly	4 Nuclear Safeguard Compliance Audit Reports submitted to DG	1 Nuclear Safeguard Compliance Audit Report submitted to DG	1 Nuclear Safeguard Compliance Audit Report submitted to DG	1 Nuclear Safeguard Compliance Audit Report submitted to DG	1 Nuclear Safeguard Compliance Audit Report submitted to DG
	Number of Nuclear Security Compliance Reports submitted to DG	Quarterly	4 Nuclear Security Compliance Reports submitted to DG	1 Nuclear Security Compliance Report submitted to DG	1 Nuclear Security Compliance Report submitted to DG	1 Nuclear Security Compliance Report submitted to DG	1 Nuclear Security Compliance Report submitted to DG

### Sub-Programme 5.3: Nuclear Policy

This sub-programme develops and reviews policies as required by the Nuclear Sector's international agreements and governance principles in South Africa; undertakes research and development; and reviews and monitors nuclear safety, nuclear technology, nuclear non-proliferation and nuclear radiation security policies and provides advice accordingly.



Sub-Programme 5.3 develops and reviews policies as required by the Nuclear Sector's international agreements.



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Table 64: Sub-Programme 5.3 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance	Medium-Term Targets		
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.3 Improved Nuclear Security	Promulgated National Nuclear Regulator Amendment Act	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) amendment proposal submitted to Cabinet	Submission to Chief State Law Advisor	Consultation with & presentation to FOSAD Cluster	Submission to Cabinet for public consultation	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised, taking stakeholder comments into consideration	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill tabled in Parliament	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill tabled in Parliament
	Promulgated Nuclear Energy Amendment Act							
	Funding provisions legislated for Radioactive Waste Management							
		Rescheduled to 2013/14	Rescheduled to 2014/15	Consultation with & presentation to FOSAD Cluster	Submission to Chief State Law Advisor	Submission to the Chief State Law Advisor	Consultation with & presentation to the FOSAD Cluster	Public consultation process concluded & the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised, taking stakeholder comments into consideration
		Rescheduled to 2013/14	Rescheduled to 2014/15	Consultation with FOSAD Cluster & presentation of Radioactive Waste Management Fund Bill	Radioactive Waste Management Fund Bill sent to Chief State Law Advisor & submitted to Cabinet for public comment	Workshops with impacted stakeholders on Radioactive Waste Management Fund Bill	Submission to Chief State Law Advisor	Consultation with & presentation to FOSAD Cluster

Table 64: Sub-Programme 5.3 strategic objectives and annual targets for 2016/17 (continued)

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.4 Increased Nuclear Awareness (Nuclear Legislation Framework) (continued)	Demystifying nuclear energy through number of public awareness campaigns & 68 community outreach events per annum	3 community outreach events & 1 media campaign held	4 public awareness campaigns & community outreach events held	5 public awareness campaigns & community outreach events held	5 public awareness campaigns & community outreach events held	6 public awareness campaigns & community outreach events held  Manage the marketing agency (with support from communications unit) which is responsible for implementing Nuclear Communications Strategy	8 public awareness campaigns & community outreach events held	10 public awareness campaigns & community outreach events held

Table 65: Sub-Programme 5.3 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 5.3 Improved Nuclear Security	Promulgated National Nuclear Regulator Amendment Act	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment proposal submitted to Cabinet	Submission to Chief State Law Advisor	Consultation with & presentation to FOSAD Cluster	Submission to Cabinet for public consultation	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised, taking Stakeholder comments into consideration	National Nuclear Regulation Act, 1999 (Act No. 47 of 1999) Amendment Bill tabled in Parliament	National Nuclear Regulation Act, 1999 (Act No. 47 of 1999) Amendment Bill tabled in Parliament
	Promulgated Nuclear Energy Amendment Act	Rescheduled to 2013/14	Rescheduled to 2014/15	Consultation with & presentation to FOSAD Cluster	Submission to Chief State Law Advisor	Nuclear Energy Act, 1999 (Act No. 46 of 1999) Amendment Bill revised taking Stakeholder comments into consideration	Consultation with & presentation to FOSAD Cluster	Public consultation process concluded & National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised, taking stakeholder comments into consideration
	Funding provisions legislated for Radioactive Waste Management	Rescheduled to 2013/14	Rescheduled to 2014/15	Consultation with FOSAD Cluster & presentation of Radioactive Waste Management Fund Bill	Radioactive Waste Management Fund Bill sent to Chief State Law Advisor & submitted to Cabinet for public comment	Workshops with the impacted stakeholders on Radioactive Waste Management Fund Bill	Submission to the Chief State Law Advisor	Consultation with & presentation to FOSAD Cluster
SO 5.4 Increased Nuclear Awareness (Nuclear Legislation Framework)	Number of public awareness campaigns & community outreach events held	3 community outreach events & 1 media campaign held	4 public awareness campaigns & community outreach events held	5 public awareness campaigns & community outreach events held	5 public awareness campaigns & community outreach events held	6 public awareness campaigns & community outreach events held	8 public awareness campaigns & community outreach events held	10 public awareness campaigns & community outreach events held

Table 66: Sub-Programme 5.3 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 5.3 Improved Nuclear Safety & Security  SO 5.4 Increased Nuclear Awareness (Nuclear Legislation Framework)	Promulgated National Nuclear Regulator Amendment Act	Quarterly	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised, taking stakeholder comments into consideration	Workshops on the proposed amendment to the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) SEAIS table for submission to DPME	Consolidation of inputs in a bill format  Submission to the Chief State Law Advisor	Presentation to FOSAD Cluster	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised, taking stakeholder comments into consideration
	Promulgated Nuclear Energy Amendment Act	Annually	National Nuclear Regulator Act, 1999 (Act No. 47 of 1999) Amendment Bill revised taking stakeholder comments into consideration	Workshops on proposed amendment to the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999)	Consolidation of inputs in a bill format  Submission of SEAIS table to DPME	Submission to Chief State Law Advisor	Nuclear Energy Act, 1999 (Act No. 46 of 1999) Amendment Bill revised taking Stakeholder comments into consideration
	Funding provisions legislated for Radioactive Waste Management	Annually	Workshops with impacted stakeholders on National Radioactive Waste Management Fund Bill	Progress on workshops on National Radioactive Waste Management Fund Bill	Progress on workshops on National Radioactive Waste Management Fund Bill	Progress on workshops on National Radioactive Waste Management Fund Bill	Workshops with impacted stakeholders on National Radioactive Waste Management Fund Bill
	Number of public awareness campaigns & community outreach events held	Quarterly	6 public awareness campaigns & community outreach events held	2 community outreach event held	2 public awareness campaign held	2 community outreach event held	2 public awareness campaigns held

### 5.3 Resource Consideration

Table 67: Resource overview of Programme 5

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Sub-Programmes</b>	<b>Rand Thousand</b>							
Nuclear Safety & Technology	638 698	712 386	832 274	638 784	638 534	651 669	746 460	789 155
Nuclear Non-proliferation & Radiation Security	3 846	5 461	6 156	7 385	7 385	8 314	8 164	8 460
Nuclear Policy	684	4 654	6 988	8 229	7 979	203 592	9 836	9 883
<b>Total</b>	<b>643 228</b>	<b>722 501</b>	<b>845 418</b>	<b>654 398</b>	<b>653 898</b>	<b>863 575</b>	<b>764 460</b>	<b>807 498</b>

<b>Economic Classification</b>	<b>Rand Thousand</b>							
<b>Current payments</b>	<b>32 732</b>	<b>23 249</b>	<b>34 040</b>	<b>35 941</b>	<b>32 441</b>	<b>230 226</b>	<b>36 608</b>	<b>37 431</b>
<b>Compensation of employees</b>	<b>8 686</b>	<b>10 058</b>	<b>13 446</b>	<b>18 479</b>	<b>18 479</b>	<b>19 429</b>	<b>20 125</b>	<b>20 331</b>
Salaries & wages	7 726	8 859	12 085	16 492	16 483	16 669	17 266	17 443
Social contributions	960	1 199	1 361	1 987	1 996	2 760	2 859	2 888
<b>Goods &amp; services</b>	<b>24 046</b>	<b>13 191</b>	<b>20 594</b>	<b>17 462</b>	<b>13 962</b>	<b>210 797</b>	<b>16 483</b>	<b>17 100</b>
Administrative fees	170	410	447	120	184	84	92	96
Advertising	1 327	4 129	476	2 880	1 932	2 280	2 350	2 291
Minor Assets	-	3	-	-	6	-	-	-
Catering: Departmental activities	88	594	155	134	137	154	169	178
Communication (G&S)	151	166	146	254	189	221	244	255
Computer services	-	6	-	-	-	-	-	-
Consultants: Business & advisory services	2 738	3 252	11 847	11 052	7 302	205 250	10 660	11 016
Contractors	305	3	212	-	-	-	-	-
Agency & support/outsourced services	-	-	-	-	-	31	32	34
Fleet services (including Government motor transport)	-	-	2	-	-	-	-	-
Inventory: Materials & supplies	1	-	-	-	-	-	-	-

Table 67: Resource overview of Programme 5 (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>	<b>Rand Thousand</b>							
Consumable supplies	-	3	16	-	18	-	-	-
Consumables: Stationery, printing & office supplies	59	236	468	402	391	419	465	484
Operating leases	-	3	2	-	-	-	-	-
Transport provided: Departmental activity	-	22	-	267	217	-	-	-
Travel & subsistence	1 750	3 485	3 386	1 676	2 064	1 749	1 783	2 029
Training & development	26	34	-	-	-	-	-	-
Operating payments	17 065	71	-	4	4	-	-	-
Venues & facilities	366	774	3 437	673	1 518	609	688	717
<b>Transfers &amp; subsidies</b>	<b>610 496</b>	<b>699 252</b>	<b>811 378</b>	<b>618 457</b>	<b>621 457</b>	<b>633 349</b>	<b>727 852</b>	<b>770 067</b>
Departmental agencies & accounts	42 912	68 160	33 697	21 487	21 487	16 636	38 573	40 810
Foreign governments & international organisations	-	38 910	17 003	16 612	19 612	17 375	17 907	18 946
Public corporations	567 579	592 182	760 678	580 358	580 358	599 338	671 372	710 311
Households	5	-	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Transport equipment	-	-	-	-	-	-	-	-
Other machinery & equipment	-	-	-	-	-	-	-	-
Software & other intangible assets	-	-	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>643 228</b>	<b>722 501</b>	<b>845 418</b>	<b>654 398</b>	<b>653 898</b>	<b>863 575</b>	<b>764 460</b>	<b>807 498</b>
<b>Transfers &amp; subsidies</b>	<b>Rand Thousand</b>							
NECSA	567 579	592 182	760 678	580 358	580 358	599 338	671 372	710 311
NNR	42 912	48 360	33 697	21 487	21 487	16 636	38 573	40 810

Table 67: Resource overview of Programme 5 (continued)

	Baseline					MTEF		
	Audited Outcome			Voted (Adjusted Appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
Rand Thousand								
Transfers & subsidies								
IAEA	-	38 910	17 003	16 012	19 012	16 715	17 207	18 205
NRWDI	-	19 800	-	-	-	-	-	-
Generation IV International Forum	-	-	-	600	600	660	700	741
Employee social benefits	5	-	-	-	-	-	-	-
<b>Total</b>	<b>610 496</b>	<b>699 252</b>	<b>811 378</b>	<b>618 457</b>	<b>621 457</b>	<b>633 349</b>	<b>727 852</b>	<b>770 067</b>

## 5.4 Risk Management

Table 68: Risk exposures for Programme 5

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 5.1 Improved Security of Energy Supply	Regulate the security of nuclear material, related equipment & facilities by developing & publishing appropriate regulations on an ongoing basis	Delays in implementation of Nuclear New Build Programme in line with the IRP 2010-2030 timelines	Not meeting commitments made regarding climate change  Compromised security of electricity supply	Find innovative funding mechanisms  Ring-fencing of financial resources for implementation of Nuclear New Build Programme  Approval & implementation of programme strategies  Finalise appointment of resources  Expedite issuing of RFP

## PROGRAMME 6: CLEAN ENERGY

### 6.1 Purpose

To manage and facilitate the development and implementation of clean and renewable energy initiatives as well as Energy Efficiency and Demand-Side Management (EEDSM) initiatives.

### 6.2 Three Budget Sub-Programmes

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



Sub-Programme 6.1 advances energy efficiency in South Africa by planning and coordinating initiatives.



## Sub-Programme 6.1: Energy Efficiency

This sub-programme advances energy efficiency in South Africa by planning and coordinating initiatives and interventions that are focused on developing and improving the energy efficiency market which ensures the integration and coordination of energy efficiency initiatives and interventions with relevant associated institutions.

Table 69: Sub-Programme 6.1 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.1 Implementation of the EEDSM Measures Across all Sectors Coordinated & Monitored	Verified energy savings from EEDSM initiatives	1.2 TWh of energy savings realised & verified from EEDSM projects	1.2 TWh of energy savings realised & verified from EEDSM projects	Planning & developing projects to achieve 0.5 TWh of energy savings per annum	0.5 TWh of energy savings realised & verified from EEDSM projects	Verified energy savings from EEDSM initiatives	Verified energy savings from EEDSM initiatives	Verified energy savings from EEDSM initiatives
	Energy consumption baselines for an additional 100 municipalities	Strategies & plans for various Energy Efficiency interventions	Developed energy consumption baselines for an additional 10 municipalities	Developed energy consumption baselines for an additional 15 municipalities	20 additional municipalities for which energy consumption baselines have been developed annually	15 additional municipalities for which energy consumption baselines have been developed annually	20 additional municipalities for which energy consumption baselines have been developed annually	20 additional municipalities for which energy consumption baselines have been developed annually
	Implementation of the post-2015 energy efficiency targets & strategy	Public consultation process on National Energy Efficiency Strategy & Plan Document completed	National Energy Efficiency Strategy & Plan Document promulgated	Promulgation of National Energy Efficiency Strategy & Plan Document (if approved by Cabinet)	N/A	Post-2015 National Energy Efficiency Strategy drafted & submitted for approval	Post-2015 National Energy Efficiency Strategy implemented	Post-2015 National Energy Efficiency Strategy implemented

Table 70: Sub-Programme 6.1 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.1 Implementation of the EEDSM Measures Across all Sectors Coordinated & Monitored	Quantity of verified energy savings from EEDSM initiatives	1.2 TWh of energy savings realised & verified from EEDSM projects	1.2 TWh of energy savings realised & verified from EEDSM projects	Planning & developing projects to achieve 0.5 TWh of energy savings per annum	0.5 TWh of energy savings realised & verified from EEDSM projects	0.5 TWh of energy savings realised & verified from EEDSM projects	0.5 TWh of energy savings realised & verified from EEDSM projects	0.5 TWh of energy savings realised & verified from EEDSM projects
	Number of additional municipalities for which energy consumption baselines have been developed annually	Strategies & plans for various Energy Efficiency interventions	Developed energy consumption baselines for an additional 10 municipalities	Developed energy consumption baselines for an additional 15 municipalities	20 additional municipalities for which energy consumption baselines have been developed annually	15 additional municipalities for which energy consumption baselines have been developed annually	20 additional municipalities for which energy consumption baselines have been developed annually	20 additional municipalities for which energy consumption baselines have been developed annually
	Draft post-2015 National Energy Efficiency Strategy	Public consultation process on the National Energy Efficiency Strategy & Plan Document completed	National Energy Efficiency Strategy & Plan Document promulgated	Promulgation of National Energy Efficiency Strategy & Plan Document (if approved by Cabinet)	N/A	Post-2015 National Energy Efficiency Strategy drafted & submitted for approval	Post-2015 National Energy Efficiency Strategy drafted & submitted for approval	Post-2015 National Energy Efficiency Strategy drafted & submitted for approval

Table 71: Sub-Programme 6.1 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 6.1 Implementation of the EEDSM Measures Across all Sectors Coordinated & Monitored	Quantity of verified energy savings from EEDSM initiatives	Quarterly	0.5 TWh of energy savings realised & verified from EEDSM projects	Energy Efficiency interventions identified in residential, commercial or industrial sector	Business plans in respect of various interventions developed	Implementation of various interventions commenced	0.5 TWh of energy savings realised & verified from EEDSM projects
	Number of additional municipalities for which energy consumption baselines have been developed annually	Quarterly	15 additional municipalities for which energy consumption baselines have been developed annually	Stakeholder engagement process with an additional 20 target municipalities conducted	Piloting of baseline development approach implemented	Stakeholder consultation on the implementation of pilot held	15 additional municipalities for which energy consumption baselines have been developed annually
	Draft post-2015 National Energy Efficiency Strategy	Quarterly	Post-2015 National Energy Efficiency Strategy drafted & submitted for approval	Draft post-2015 National Energy Efficiency Strategy prepared	Stakeholder consultation workshops on post-2015 National Energy Efficiency Strategy development conducted	Revised draft post-2015 National Energy Efficiency Strategy in line with comments received	Report on post-2015 National Energy Efficiency Strategy submitted for Minister's approval

## Sub-Programme 6.2: Renewable Energy

This sub-programme ensures the integration of renewable energy into South Africa's mainstream energy supply by planning and coordinating initiatives and interventions focused on the development and improvement of the renewable energy market. It also integrates and coordinates renewable energy initiatives and interventions with the relevant associated local and international institutions. In addition, the sub-programme makes transfers to the South African National Energy Development Institute (SANEDI).

Table 72: Sub-Programme 6.2 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.2 Renewable Energy	Review & update Renewable Energy Implementation Report	N/A	N/A	N/A	Renewable Energy Implementation Report	MW or petajoules of renewable energy introduced in line with IRP	Review & update Renewable Energy Implementation Report	Review & update Renewable Energy Implementation Report
	National Biogas & Biomass Strategy	N/A	N/A	N/A	Completed draft National Biogas Strategy	Final National Biogas & Biomass Strategy completed	National Biogas & Biomass Strategy implemented	National Biogas & Biomass Strategy implemented
	Roll-out SWHs	N/A	N/A	N/A	Completed Solar Water Heating Implementation Plan	Solar Water Heating Implementation	Solar Water Heating Implementation	Solar Water Heating Implementation

Table 73: Sub-Programme 6.2 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.2 Renewable Energy	Incremental amount of renewable energy projects	N/A	N/A	N/A	Renewable Energy Implementation Report	MW or petajoules of renewable energy introduced in line with IRP	Review & update Renewable Energy Implementation Report	Review & update Renewable Energy Implementation Report
	Draft National Biogas & Biomass Strategy	N/A	N/A	N/A	Completed Draft National Biogas Strategy	Final National Biogas & Biomass Strategy implementation	National Biogas & Biomass Strategy implementation	National Biogas & Biomass Strategy implementation
	Developed Solar Water Heating Programme Implementation Plan	N/A	N/A	N/A	Solar Water Heating Programme Implementation Plan	Solar Water Heating Programme Implementation Plan	Solar Water Heating Programme Implementation Plan	Solar Water Heating Programme Implementation Plan

Table 74: Sub-Programme 6.2 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 6.2 Renewable Energy	Incremental amount of renewable energy projects	Quarterly	MW or petajoules of renewable energy introduced in line with IRP	Data collection for Renewable Energy Status Report  Design questionnaires  Conduct stakeholder mapping  Recruit & select data collection specialists	Collect data	Collect data	MW or petajoules of renewable energy introduced in line with IRP
	Draft National Biogas Strategy	Quarterly	Final National Biogas & Biomass Strategy implementation	Draft National Biogas Strategy presented to Cabinet for approval for stakeholder consultation	Stakeholder consultation & review	Stakeholder consultation & review	Incorporate stakeholder comments & finalise National Biogas & Biomass Strategy implementation
	Developed Solar Water Heating implementation	Quarterly	Solar Water Heating Programme Implementation Plan	Solar Water Heating Programme Management Structure set up  SWH Monitoring Plan finalised	Solar Water Heating training & business model for local plumbers & SMMEs developed  Solar Water Heating Programme implementation systems & processes developed  Solar Water Heating programme monitoring & performance system completed	Solar Water Heating Programme implementation	Solar Water Heating Programme implementation

### Sub-Programme 6.3: Climate Change and Designated National Authority

This sub-programme ensures that the Energy Sector's climate change and environment response measures, in terms of mitigation and adaptation, are implemented within the Energy Sector. It also ensures the fulfilment of international energy commitments and obligations under the United Nations Framework Convention on Climate Change pertaining to the Kyoto Protocol.

Table 75: Sub-Programme 6.3 strategic objectives and annual targets for 2016/17

Strategic Objectives	5-Year Strategic Plan Target	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.3 Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance Coordinated & Monitored	Developed implementation plan for Energy & Climate Change Strategy in public buildings	N/A	N/A	N/A	Energy & Climate Change Strategy for public building sector approved	Developed implementation plan for Energy & Climate Change Strategy in public buildings	Developed implementation plan for Energy & Climate Change Strategy in public buildings	Developed implementation plan for Energy & Climate Change Strategy in public buildings
	12% by 2015 (Energy Efficiency target for 2019 to be finalised by 2015 as outlined by the National Energy Efficiency Action Plan & to be tabled for Cabinet consideration	N/A	N/A	N/A	N/A	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition
	SO 6.4 Measurement, Reporting & Verification System of Climate Change Parameters	N/A	N/A	N/A	N/A	Carbon Offset Administrative System established to support implementation of Carbon Tax Policy	Carbon Offset Administrative System to support Carbon Tax Policy implemented	Carbon Offset Administrative System to support Carbon Tax Policy implemented

Table 76: Sub-Programme 6.3 performance indicators and annual targets for 2016 MTEF

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance		Medium-Term Targets	
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.3 Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance Coordinated & Monitored	Implementation plan for Energy & Climate Change Strategy	N/A	N/A	N/A	Energy & Climate Change Strategy for public building sector approved	Developed implementation plan for Energy & Climate Change Strategy in public buildings	Developed implementation plan for Energy & Climate Change Strategy in public buildings	Developed implementation plan for Energy & Climate Change Strategy in public buildings

Table 76: Sub-Programme 6.3 performance indicators and annual targets for 2016 MTEF (continued)

Strategic Objectives	Performance Indicators	Audited/Actual Performance			Estimated Performance	Medium-Term Targets		
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
SO 6.3 Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance Coordinated & Monitored (continued)	Developed Implementation Plan for the 3rd Environmental Management Edition	N/A	N/A	N/A	N/A	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition
SO 6.4 Measurement, Reporting & Verification System of Climate Change Parameters	Established Carbon Offset Administrative System to support implementation of Carbon Tax Policy	N/A	N/A	N/A	N/A	Carbon Offset Administrative System established to support implementation of Carbon Tax Policy	Carbon Offset Administrative System to support Carbon Tax Policy implemented	Carbon Offset Administrative System to support Carbon Tax Policy implemented

Table 77: Sub-Programme 6.3 quarterly targets for 2016/17

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 6.3 Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance Coordinated & Monitored	Implementation plan for Energy & Climate Change Strategy	Quarterly	Developed implementation plan for Energy & Climate Change Strategy in public buildings	Draft implementation plan developed	Stakeholder consultation on the draft implementation action plan	Stakeholder comments consolidated	Developed implementation plan for Energy & Climate Change Strategy in public buildings
	Developed implementation plan for the 3rd Environmental Management Edition		Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition	Stakeholder consultation workshops conducted	Commence collection of data & information	Draft Annual Compliance Report	Approved Annual Compliance Report on the 3rd Environmental Management Plan Edition

Table 77: Sub-Programme 6.3 quarterly targets for 2016/17 (continued)

Strategic Objectives	Performance Indicators	Reporting Period	Annual Target 2016/17	Quarterly Targets			
				Q1	Q2	Q3	Q4
SO 6.4 Measurement, Reporting & Verification System of Climate Change Parameters	Established Carbon Offset Administrative System to support implementation of Carbon Tax Policy	Quarterly	Carbon Offset Administrative System established to support implementation of Carbon Tax Policy	Standard operating procedure for Carbon Offset Administrative System developed	Carbon Offset Administration System information technology system developed  Carbon Offset Administration System implementation plan developed	Capacity building within Designated National Authority in preparation of implementation of Carbon Offset System undertaken	Awareness-raising campaigns in preparation of carbon offset implementation conducted  Carbon Offset Administrative System established to support implementation of Carbon Tax Policy

### 6.3 Resource Consideration

Table 78: Resource overview of Programme 6

	Baseline					MTEF		
	Audited outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Sub-Programmes</b>	<b>Rand Thousand</b>							
Energy Efficiency	1 026 953	1 347 547	658 657	608 429	357 112	581 964	700 673	744 907
Renewable Energy	62 763	137 538	167 419	71 416	71 233	27 144	66 241	69 841
Climate Change & Designated National Authority	3 602	4 802	4 181	7 482	7 482	7 825	7 672	8 336
<b>Total</b>	<b>1 093 318</b>	<b>1 489 887</b>	<b>830 257</b>	<b>687 327</b>	<b>435 827</b>	<b>616 933</b>	<b>774 586</b>	<b>823 084</b>

<b>Economic Classification</b>	<b>Rand Thousand</b>							
<b>Current payments</b>	<b>16 540</b>	<b>24 918</b>	<b>28 989</b>	<b>46 252</b>	<b>63 796</b>	<b>90 357</b>	<b>100 485</b>	<b>109 886</b>
<b>Compensation of employees</b>	<b>11 743</b>	<b>12 369</b>	<b>12 394</b>	<b>18 261</b>	<b>18 261</b>	<b>17 266</b>	<b>16 793</b>	<b>17 512</b>
Salaries & wages	10 426	11 025	11 030	16 320	16 315	14 813	14 408	15 025
Social contributions	1 317	1 344	1 364	1 941	1 946	2 453	2 385	2 487
<b>Goods &amp; services</b>	<b>4 797</b>	<b>12 549</b>	<b>16 595</b>	<b>27 991</b>	<b>45 535</b>	<b>73 091</b>	<b>83 692</b>	<b>92 374</b>
Administrative fees	52	162	192	123	173	112	127	132

Table 78: Resource overview of Programme 6 (continued)

Economic Classification	Baseline					MTEF		
	Audited outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
	Rand Thousand							
Advertising	157	403	559	3 826	2 368	825	927	967
Minor Assets	-	-	-	371	631	-	775	809
Catering: Departmental activities	26	73	109	478	201	106	120	124
Communication (G&S)	275	84	117	575	380	427	279	291
Computer services	-	131	-	-	10	125	129	134
Consultants: Business & advisory services	309	8 584	9 605	14 012	31 604	57 381	65 569	73 436
Contractors	167	-	-	-	-	-	-	-
Agency & support/outsourced services	-	-	-	-	3 006	7 101	9 120	9 529
Entertainment	-	-	-	464	2	20	19	20
Fleet services (including Government motor transport)	-	-	2	-	-	-	-	-
Inventory: Clothing material & accessories	-	-	-	279	-	-	-	-
Inventory: Medicine	1	-	-	-	-	-	-	-
Consumable supplies	-	45	102	-	135	195	232	242
Consumables: Stationery, printing & office supplies	60	-	2	73	115	165	176	184
Operating leases	-	-	2	54	54	-	-	-
Rental & hiring	-	-	-	-	-	-	-	-
Property payments	-	-	-	-	-	683	711	744
Transport provided: Departmental activity	-	-	-	2 773	2 213	-	-	-
Travel & subsistence	2 857	2 764	2 207	2 932	2 059	4 569	4 019	4 213
Training & development	-	-	-	-	-	-	-	-
Operating payments	819	86	16	33	81	31	36	38
Venues & facilities	74	217	3 682	1 998	2 503	1 351	1 453	1 511
<b>Transfers &amp; subsidies</b>	<b>1 076 778</b>	<b>1 464 955</b>	<b>801 268</b>	<b>641 075</b>	<b>372 031</b>	<b>526 576</b>	<b>674 101</b>	<b>713 198</b>
Municipalities	200 000	180 718	136 905	177 899	177 899	185 625	203 236	215 024

Table 78: Resource overview of Programme 6 (continued)

	Baseline					MTEF		
	Audited outcome			Voted (Adjusted appropriation)	Adjusted Appropriation	Revised Indicative Baseline		
	2012/13	2013/14	2014/15	2015/16		2016/17	2017/18	2018/19
<b>Economic Classification</b>	<b>Rand Thousand</b>							
Departmental agencies & accounts	56 110	134 344	162 685	64 861	64 861	20 625	59 774	63 241
Foreign governments & international organisations	-	-7	1 678	-	-	-	-	-
Private enterprises	820 629	1 149 900	500 000	398 315	129 271	320 326	411 091	434 933
Households	39	-	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>-</b>	<b>14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Transport equipment	-	-	-	-	-	-	-	-
Other machinery & equipment	-	14	-	-	-	-	-	-
Software & other intangible assets	-	-	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>1 093 318</b>	<b>1 489 887</b>	<b>830 257</b>	<b>687 327</b>	<b>435 827</b>	<b>616 933</b>	<b>774 586</b>	<b>823 084</b>

<b>Transfer Payment Beneficiaries</b>								
<b>Rand Thousand</b>								
SANEDI	56 110	134 344	162 685	64 861	64 861	20 625	59 774	63 241
Various institutions: Solar Water Heating Project	820 629	1 149 900	500 000	398 315	129 271	320 326	411 091	434 933
Employee social benefits	39	-	-	-	-	-	-	-
IAEA	-	-7	1 678	-	-	-	-	-
EEDSM municipal grant	200 000	180 718	136 905	177 899	177 899	185 625	203 236	215 024
<b>Total</b>	<b>1 076 778</b>	<b>1 464 955</b>	<b>801 268</b>	<b>641 075</b>	<b>372 031</b>	<b>526 576</b>	<b>674 101</b>	<b>713 198</b>

## 6.4 Risk Management

Table 79: Risk exposures for Programme 6

Strategic Objective	Objective Statement	Strategic Risk	Risk Consequence	Mitigation Strategy
SO 6.3 Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance Coordinated & Monitored	To manage climate change & environmental matters by: <ul style="list-style-type: none"> <li>- developing &amp; implementing climate change policies</li> <li>- developing green economy &amp; mitigating risk of adverse environmental impact on an ongoing basis</li> <li>- publishing climate change strategies &amp; plans</li> </ul>	Inability to respond to national climate change response measures	Inability to contribute to GHG emission reductions	Develop Energy Sector Climate Change Strategy  Develop mitigation & adaptation plans for Energy Sector  Allocation of additional funding
		Limited Clean Development Mechanism project uptake & uncertainty of form of Kyoto Protocol's second commitments	Minimum contribution to GHG through the Clean Development Mechanism	Lobby for bilateral trading with Japan & other EU members
		South Africa not gaining maximum benefit from Kyoto Protocol	Clean Development Mechanism collapse	Lobby for bilateral trading with Japan & other EU members



# PART D

## LINKS TO OTHER PLANS

### 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 coordination and reporting purposes.

Table 80: Expenditure on long-term infrastructure and other capital plans

Programme/ Project Name	Type of Infrastructure	Project Description	Current/Capital Transfer	Current Project Stage	SCOA Item	SIP Category	Total Project Cost	Adjusted Appropriation		
								2014/15	2015/16	2016/17
<b>Mega projects (total project cost of at least R 1 billion over the project life cycle)</b>							<b>R 4 500 000</b>	<b>R 4 052 695</b>	<b>R 5 736 133</b>	<b>R 6 040 148</b>
INEP: Eskom	Electrification backlog of permanently occupied residential dwellings	Provision of capital subsidies to Eskom to address electrification backlogs for permanently occupied residential dwellings, install bulk infrastructure & rehabilitate electrification infrastructure	Capital	Various	Public corporations & private enterprises	SIP 10: Electricity Transmission & Distribution for All	-	R 2 948 037	R 3 680 043	R 3 875 085

Table 80: Expenditure on long-term infrastructure and other capital plans (continued)

Programme/ Project Name	Type of Infrastructure	Project Description	Current/Capital Transfer	Current Project Stage	SCOA Item	SIP Category	Total Project Cost	Adjusted Appropriation		
								2014/15	2015/16	2016/17
INEP: Municipalities	Electrification backlog of permanently occupied residential dwellings	Provision of capital subsidies to municipalities to address electrification backlogs for permanently occupied residential dwellings, install bulk infrastructure & rehabilitate electrification infrastructure	Capital	Various	Provinces & municipalities	SIP 6: Integrated Municipal Infrastructure Project	-	R 1 104 658	R 2 056 090	R 2 165 063
Petronet: Transnet Pipelines	Petroleum pipeline, branch lines & storage facilities	Construction of petroleum pipeline, branch lines & storage facilities	Capital	Various	Public corporations & private enterprises	SIP 7: Integrated Urban Space & Public Transport Programme	R 4 500 000	-	-	-

## 2 CONDITIONAL GRANTS

The DoE administers conditional grants with regard to the National Electrification Programme, the Energy Efficiency and 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 81: Conditional grants*

Conditional Grant 1: National Electrification Programme (Equitable Share)	
Department or municipality to whom the grant has been transferred	Several municipalities
Purpose of the grant	Electricity connections
Expected outputs of the grant	N/A
Actual outputs achieved	N/A
Amount per amended DoRA (rand thousand)	1 104 658
Amount transferred (rand thousand)	1 104 658
Reasons if amount as per DoRA not transferred	N/A
Amount spent by the department or municipality (rand thousand)	1 104 658
Reasons for the funds unspent by the entity	N/A
Monitoring mechanism by the transferring department	Technical audits & monthly reports
Conditional Grant 2: National Electrification Programme (Eskom)	
Department or municipality to whom the grant has been transferred	Eskom
Purpose of the grant	Electricity connections
Expected outputs of the grant	N/A
Actual outputs achieved	N/A
Amount per amended DoRA (rand thousand)	2 948 037
Amount transferred (rand thousand)	2 948 037
Reasons if amount as per DoRA not transferred	N/A
Amount spent by the department or municipality (rand thousand)	N/A
Reasons for the funds unspent by the entity	N/A
Monitoring mechanism by the transferring department	Eskom

Table 81: Conditional grants (continued)

Conditional Grant 3: EEDSM Programme (Equitable Share)	
Department or municipality to whom the grant has been transferred	Several municipalities
Purpose of the grant	Implementation of energy-efficiency technologies
Expected outputs of the grant	N/A
Actual outputs achieved	N/A
Amount per amended DoRA (rand thousand)	136 905
Amount transferred (rand thousand)	136 905
Reasons if amount as per DoRA not transferred	N/A
Amount spent by the department or municipality (rand thousand)	N/A
Reasons for the funds unspent by the entity	Municipal financial 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 to whom the grant has been transferred	Eskom
Purpose of the grant	Implementation of the NSWHP
Expected outputs of the grant	N/A
Actual outputs achieved	N/A
Amount per amended DoRA (rand thousand)	1 636 400
Amount transferred (rand thousand)	500 000
Reasons if amount as per DoRA not transferred	The programme faced a number of challenges in 2014/15 as Eskom's (the implementing agent) attention was directed at accelerating its other critical deliverables, i.e. the current New Build Programme. The DoE re-engineered the programme & its implementation resulting in the termination of the DoE-Eskom MoA (by mutual agreement) in November 2014. The DoE could thus not utilise these funds prior to Cabinet approving the programme's Revised Contracting Model. The process of obtaining Cabinet's approval has commenced
Amount spent by the department or municipality (rand thousand)	N/A
Reasons for the funds unspent by the entity	N/A
Monitoring mechanism by the transferring department	N/A

### 3 PUBLIC ENTITIES

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

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

The enabling legislation requires that the Minister of a department appoints 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 mandates and implementation is undertaken by management.



The Minister of Energy is responsible for overseeing five state-owned entities and their subsidiaries.



Table 82: Public entities' mandate, outputs, annual budget and next evaluation date of the SOEs

Name of Public Entity	Mandate	Outputs	Current Annual Budget 2016/17	Date of Next Evaluation
NNR	<p>The NNR is established in terms of the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999)</p> <p>The act establishes the regulator as a competent authority for nuclear regulation in South Africa</p> <p>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 &amp; the environment against nuclear damage through the establishment of safety standards &amp; regulatory practices</p>	Refer to the NNR's 2016/17 APP for details regarding the specific outputs planned by the NNR for the period 2014/15 to 2016/17	<p>R 177 688 million</p> <p>The NNR total budgeted revenue comes from:</p> <ul style="list-style-type: none"> <li>- fiscal grant allocation R 16 636 million</li> <li>- authorisation fees R 161 052 million</li> </ul>	As needed
CEF	To finance & promote the acquisition of, research into & exploitation of oil, gas & renewable/clean energy-related products & technology	Refer to the CEF's 2016/17 APP for details regarding the specific outputs planned by the CEF for the period 2014/15 to 2016/17	<p>R 23 996 billion</p> <p>The following companies contribute toward the total revenue for the CEF Group:</p> <ul style="list-style-type: none"> <li>- CEF (SOC) Ltd</li> <li>- African Exploration</li> <li>- PetroSA</li> <li>- SFF</li> </ul>	As needed
NECSA	<p>NECSA is established in terms of Section 3(1) of the Nuclear Energy Act, 1999 (Act No. 46 of 1999)</p> <p>The act provides for the commercialisation of nuclear &amp; related products &amp; services, &amp; delegates specific responsibilities to the corporation, including the implementation &amp; execution of national safeguards &amp; other international obligations</p> <p>The Nuclear Energy Policy of 2008 reinforced NECSA's mandate relating to R&amp;D &amp; NFC responsibilities</p>	Refer to the NECSA's 2016/17 APP for details regarding the specific outputs planned by NECSA for the period 2014/15 to 2016/17	<p>R 2 450 billion</p> <p>NECSA's total budgeted revenue comes from:</p> <ul style="list-style-type: none"> <li>- fiscal grant allocation R 599 338 million</li> <li>- budgeted sales revenue R 1 711 billion</li> <li>- other income R 140 034 million</li> </ul>	As needed
NRWDI	<p>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)</p> <p>The act provides for the establishment of an NRWDI in order to manage radioactive waste disposal on a national basis &amp; to provide for its functions &amp; for how it is to be managed</p>	N/A	N/A	As needed

Table 82: Public entities' mandate, outputs, annual budget and next evaluation date of the SOEs (continued)

Name of Public Entity	Mandate	Outputs	Current Annual Budget 2016/17	Date of Next Evaluation
NERSA	<p>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)</p> <p>NERSA's mandate is to regulate the electricity, piped-gas &amp; petroleum pipeline 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) &amp; the Petroleum Pipelines Act, 2003 (Act No. 60 of 2003)</p>	Refer to NERSA's 2016/17 APP for details regarding the specific outputs planned by NERSA for the period 2014/15 to 2016/17	<p>R 296 497 million</p> <p>NERSA's total budgeted revenue comes from:</p> <ul style="list-style-type: none"> <li>- levies of 3 regulated industries R 288 937 million</li> <li>- interest received from investments &amp; other income R 7 560 million</li> </ul>	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 2016/17 APP for details regarding the specific outputs planned by SANEDI for the period 2014/15 to 2016/17	<p>R 25 625 million</p> <p>SANEDI's total budgeted revenue is:</p> <ul style="list-style-type: none"> <li>- grant allocation R 20 625 million</li> <li>- operations &amp; other income R 5 million</li> </ul>	As needed

#### 4 PUBLIC-PRIVATE PARTNERSHIPS

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



### 1 TECHNICAL INDICATOR DESCRIPTIONS

Refer to Departmental Technical Indicator Descriptions.

### 2 LIST OF AMENDMENTS

Existing	Amended
<b>Programme 1: Administration</b>	
SO 1.1 To Promote Sound Corporate Governance Practices within the DoE	SO 1.1 Sound Corporate Governance Practices
SO 1.2 To Ensure Effective & Sound Financial Resource Management	SO 1.2 Sound Financial Resource Management
SO 1.3 To Provide Corporate Resource Management	SO 1.3 Corporate Resource Management
SO 1.4 To Provide Executive Support Services to Ministry, DG & DDGs	SO 1.4 Executive Support Services to Ministry, DG & DDGs provided
SO 1.5 To Provide Strategic Support of Energy Security	SO 1.5 Strategic Support of Energy Security (Re-establish New Partnerships/Bilateral Agreements)
<b>Programme 2: Energy Policy &amp; Planning</b>	
SO 2.1 To Improve Energy Security	SO 2.1 Improved Energy Security
SO 2.2 To improve Liquid Fuels Energy Security & Implement the Liquid Fuels 20-Year Infrastructure Plan	SO 2.2 Improved Liquid Fuels Energy Security
SO 2.3 Review policy & Regulations to Ensure Security of Supply	SO 2.3 Policy & Regulations to Ensure Security of Supply Reviewed
SO 2.4 Review the Bulk Electrical Infrastructure Required for the Universal Access to Electricity.	SO 2.4 Bulk Electrical Infrastructure Required for the Universal Access to Electricity Reviewed
SO 2.5 Establish Mechanisms to Prefund Capital & Create Smooth Price Path Over Long Term	SO 2.5 Mechanisms to Prefund Capital & Create Smooth Price Path Over the Long-term Established
SO 2.6 Ensure Security of Supply Through Additional Power Generation Capacity	SO 2.6 Security of Supply through Additional Power Generation Capacity

Existing	Amended
<b>Programme 3: Petroleum &amp; Petroleum Products Regulation</b>	
	SO 3.1 Compliance Monitoring & Enforcement in the Petroleum Sector
SO 3.2 To Promote the Transformation of The South African Petroleum & Liquid Fuels Industry Through Issuing of Licences Promoted	SO 3.2 Promote Petroleum Licensing
	SO 3.3 Petroleum Products Market Analysis Report
	SO 3.4 Verification of Fuel Price Adjustments (External Auditors)
<b>Programme 4: Electrification &amp; Energy Programme &amp; Project Management</b>	
SO 4.1 To Ensure Access to Electricity by Households	SO 4.1 Access to Electricity by Households
SO 4.2 To Monitor Energy Infrastructure Development	SO 4.2 Energy Infrastructure Development Monitored
SO 4.3 To Enhance Programmes & Projects Management	SO 4.3 Enhanced Programmes & Projects Management
<b>Programme 5: Nuclear Energy</b>	
SO 5.1 To Improved Security of Energy Supply	SO 5.1 To Improved Security of Energy Supply
SO 5.2 To Strengthen the Control of Nuclear Material & Equipment	SO 5.2 Strengthen the Control of Nuclear Material & Equipment
SO 5.3 To Improve Nuclear Security	SO 5.3 Improved Nuclear Security
SO 5.4 To Increase Nuclear Awareness (Nuclear Legislation Framework)	SO 5.4 Increased Nuclear Awareness (Nuclear Legislation Framework)
<b>Programme 6: Clean Energy</b>	
SO 6.1 To Coordinate & Monitor the Implementation of the EEDSM Measures Across all Sectors	SO 6.1 Implementation of the EEDSM Measures Across all Sectors Coordinated & Monitored
SO 6.2 Effective Renewable Energy	SO 6.2 Renewable Energy
SO 6.1 To Coordinate & Monitor the Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance	SO 6.3 Implementation of Energy-Related Climate Change Response Measures & Environmental Compliance Coordinated & Monitored
	SO 6.4 Measurement, Reporting & Verification System of Climate Change Parameters

### 3 LIST OF REFERENCES

- AfDB. 2013. *Development of Wind Energy in Africa*. [Online] Available from: [www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Working%20Paper%20170%20-%20Development%20of%20Wind%20Energy%20in%20Africa.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Working%20Paper%20170%20-%20Development%20of%20Wind%20Energy%20in%20Africa.pdf) [Accessed: 12 March 2016].
- AfDB. [no date]. *Programme for Infrastructure Development in Africa*. [Online] Available from: [www.afdb.org/en/topics-and-sectors/initiatives-partnerships/programme-for-infrastructure-development-in-africa-pida/](http://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/programme-for-infrastructure-development-in-africa-pida/)
- Statistics South Africa. 2013. GHS Series Volume V, Energy 2002-2012. [Online] Available from: [www.statssa.gov.za/publications/Report-03-18-04/Report-03-18-042012.pdf](http://www.statssa.gov.za/publications/Report-03-18-04/Report-03-18-042012.pdf) [Accessed 12 March 2016].
- African Economic Outlook. 2014. *African Economic Outlook 2014, Global Value Chains and Africa's Industrialisation*. [Online] Available from: [www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2014/PDF/E-Book\\_African\\_Economic\\_Outlook\\_2014.pdf](http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2014/PDF/E-Book_African_Economic_Outlook_2014.pdf) [Accessed 12 March 2016].
- AllAfrica. 2014. Mozambique: US \$530 million Invested in Rural Electrification. [Online] Available from: <http://allafrica.com/stories/201404240243.html> [Accessed: 21 July 2014].
- Barnes, D.F, Singh, B. & Shi, X. 2010. *Modernizing Energy Services for the Poor: A World Bank Investment Review – Fiscal 2000-08*. [Online] Available from: <http://siteresources.worldbank.org/EXTENERGY2/Resources/EnergyForThePoor.pdf> [Accessed: 12 March 2016].
- Briceño-Garmendia, C. & Shkaratan, M. 2011. Power Tariffs: Caught between Cost Recovery and Affordability. *World Bank Policy Research Working Paper*. 5904:1-64. [Online] Available from: <https://openknowledge.worldbank.org/bitstream/handle/10986/3671/WPS5904.pdf?sequence=1> [Accessed 12 March 2016].
- OECD. 2012. *African Economic Outlook 2012, Promoting Youth Employment*. [Online] Available from: [www.oecd.org/site/devyewa/Pocket%20Edition%20AEO2012-EN.pdf](http://www.oecd.org/site/devyewa/Pocket%20Edition%20AEO2012-EN.pdf) [Accessed 12 March 2016].
- Statistics South Africa. 2012. *Income and Expenditure of Households 2010/2011*. [Online] Available from: [www.statssa.gov.za/publications/P0100/P01002011.pdf](http://www.statssa.gov.za/publications/P0100/P01002011.pdf) [Accessed: 12 March 2016].
- UNDP. 2013. *Human Development Report 2013, the Rise of the South: Human Progress in a Diverse World*. [Online] Available from: [http://hdr.undp.org/sites/default/files/reports/14/hdr2013\\_en\\_complete.pdf](http://hdr.undp.org/sites/default/files/reports/14/hdr2013_en_complete.pdf) [Accessed 12 March 2016].
- WACEE. 2013. *National Energy Policy*. [Online] Available from: [http://wacee.net/getattachment/21cca4e4-ef1b-4c59-8501-98b3e8624b88/National\\_Energy\\_Policy\\_Nigeria.pdf.aspx](http://wacee.net/getattachment/21cca4e4-ef1b-4c59-8501-98b3e8624b88/National_Energy_Policy_Nigeria.pdf.aspx) [Accessed 12 March 2016].
- World Bank. 2012. Section II: Fuel Price Subsidies in Sub-Saharan Africa. *Africa's Pulse*. (5):13-18. [Online] Available from: [http://siteresources.worldbank.org/INTAFRICA/Resources/Africas-Pulse-brochure\\_Vol5.pdf](http://siteresources.worldbank.org/INTAFRICA/Resources/Africas-Pulse-brochure_Vol5.pdf) [Accessed 12 March 2016].

#### 4 LIST OF ACRONYMS

Acronym	Description
20YLFIRM	20-Year Liquid Fuels Infrastructure Roadmap
20YRLFMP	20-Year Liquid Fuels Master Plan
AfDB	African Development Bank
Amb.	Ambassador
APP	Annual Performance Plan
ADAM	Approach to Distribution Management
AG	Attorney General
BFP	Basic Fuel Price
bcm	Billion cubic metres
BEE	Black Economic Empowerment
CEF	Central Energy Fund
CHIETA	Chemical Industries Education and Training Authority
CSP	Concentrated Solar Power
DRC	Democratic Republic of Congo
DoE	Department of Energy
DPME	Department of Monitoring and Evaluation
DPSA	Department of Public Service and Administration
DDG	Deputy Director-General
DM	Deputy Minister
DG	Director-General
DoRA	Division of Revenue Act of South Africa
Eskom	Electricity Supply Commission
EMP	Electrification Master Plan
EWSETA	Energy and Water Sector Education and Training Authority
EE	Energy Efficiency
EEDSM	Energy Efficiency and Demand-Side Management
ESC	Energy Sciences Coalition
EU	European Union
EUEI PDF	European Union Energy Initiative – Partnership Dialogue Facility

Acronym	Description
EXCO	Executive Committee
FDI	Foreign Direct Investment
FOSAD	Forum of South African Directors
FBAE	Free Basic Alternative Energy
FBE	Free Basic Electricity
GUMP	Gas Utilisation Master Plan
GTL	Gas-to-liquid
GAB	Geoscience Amendment Bill
GWh	Gigawatt hours
G&S	Goods and Services
GHG	Greenhouse gas
GDP	Gross Domestic Product
Hon.	Honourable
HR	Human Resource
IPP	Independent Power Producer
IPAP	Industrial Policy Action Plan
IHDI	Inequality-Adjusted Human Development Index
IDP	Integrated Development Plan
IEC	Integrated Energy Centre
IEP	Integrated Energy Plan
INEP	Integrated National Electrification Programme
IRP	Integrated Resource Plan
IAEA	International Atomic Energy Agency
IEF	International Energy Forum
JRC	Joint Research Centre
KPA	Key Performance Area
km	Kilometre
kWh	Kilowatt hour
kWh/m <sup>2</sup>	Kilowatt hour per square metre

Acronym	Description
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MANCO	Management Committee
MPAT	Management Performance Assessment Tool
MRGP	Maximum Refinery Gate Price
MV line	Medium voltage line
MTEF	Medium-Term Expenditure Framework
MTSF	Medium-Term Strategic Framework
MV	Mega volt
MW	Megawatt
MP	Member of Parliament
MoA	Memorandum of Agreement
NDP	National Development Plan
NECSA	South African Nuclear Energy Corporation SOC Limited
NER	National Energy Regulator
NERSA	National Energy Regulator of South Africa
NGP	National Growth Path
NIP	National Infrastructure Plan
NIEP	National Integrated Electrification Programme
NNEECC	National Nuclear Energy Executive Coordination Committee
NNR	National Nuclear Regulator
NRWDI	National Radioactive Waste Disposal Institute
NSWHP	National Solar Water Heater Programme
NT	National Treasury
NFC	Nuclear Fuel Cycle
OECD	Organisation for Economic Co-operation and Development
PetroSA	Petroleum Oil and Gas Corporation of South Africa SOC Limited
PPA	Petroleum Products Act
PV	Photovoltaic
PICC	Presidential Infrastructure Coordinating Commission

Acronym	Description
PMO	Project Management Office
PFMA	Public Finance Management Act
PPP	Public Participation Programme
RAS	Regulatory Accounting System
REIPPP	Renewable Energy Independent Power Producer Programme
RFP	Request for Proposal
SMS	Senior Management Service
SMME	Small, medium and micro enterprise
SEIAS	Socio-Economic Impact Assessment
SWH	Solar Water Heater
SANEDI	South African National Energy Development Institute
SAPP	South African Power Pool
SCOA	Standard Chart of Accounts
SoNA	State of the Nation Address
SOE	State-owned entity
SFF	Strategic Fuel Fund
SIP	Strategic Integrated Project
SMC	Strategic Management Committee
SO	Strategic Objective
SCM	Supply chain management
TJ/t	Terajoule per tonne
TWh	Terawatt hour
UNDP	United Nations Development Programme
USA	United States of America
WSP	Workplace Skills Plan

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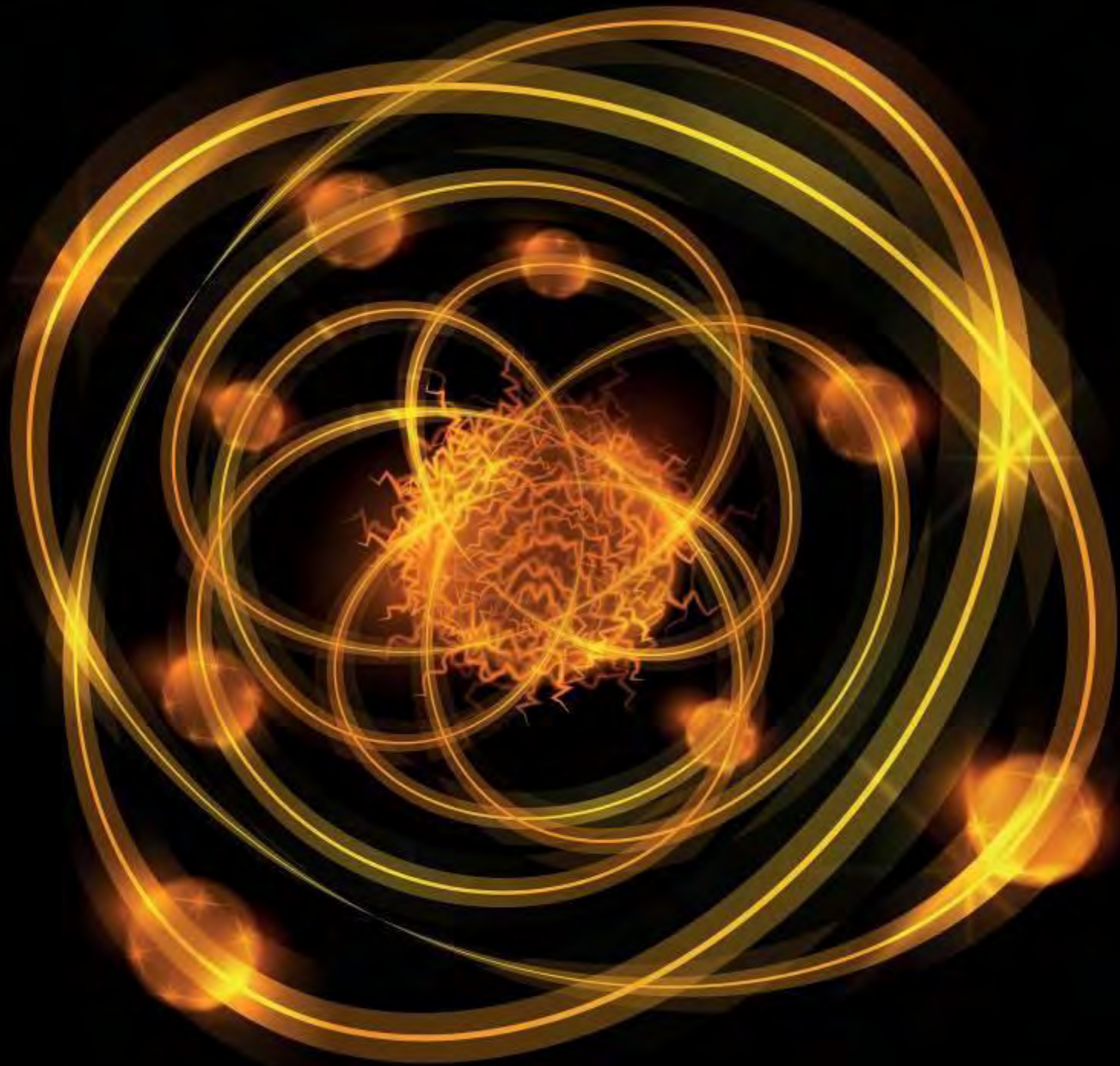
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