



**Shift performance, grow sustainably**

Integrated Report  
for the year ended 31 March 2012



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	Securing future resource requirements, mandate and the required enabling environment		3rd building block: Become a high-performance utility
	Reasonable assurance provided by the independent assurance provider		

Imported	2012	2011
	<b>13 038</b>	13 613

Imported includes wheeling

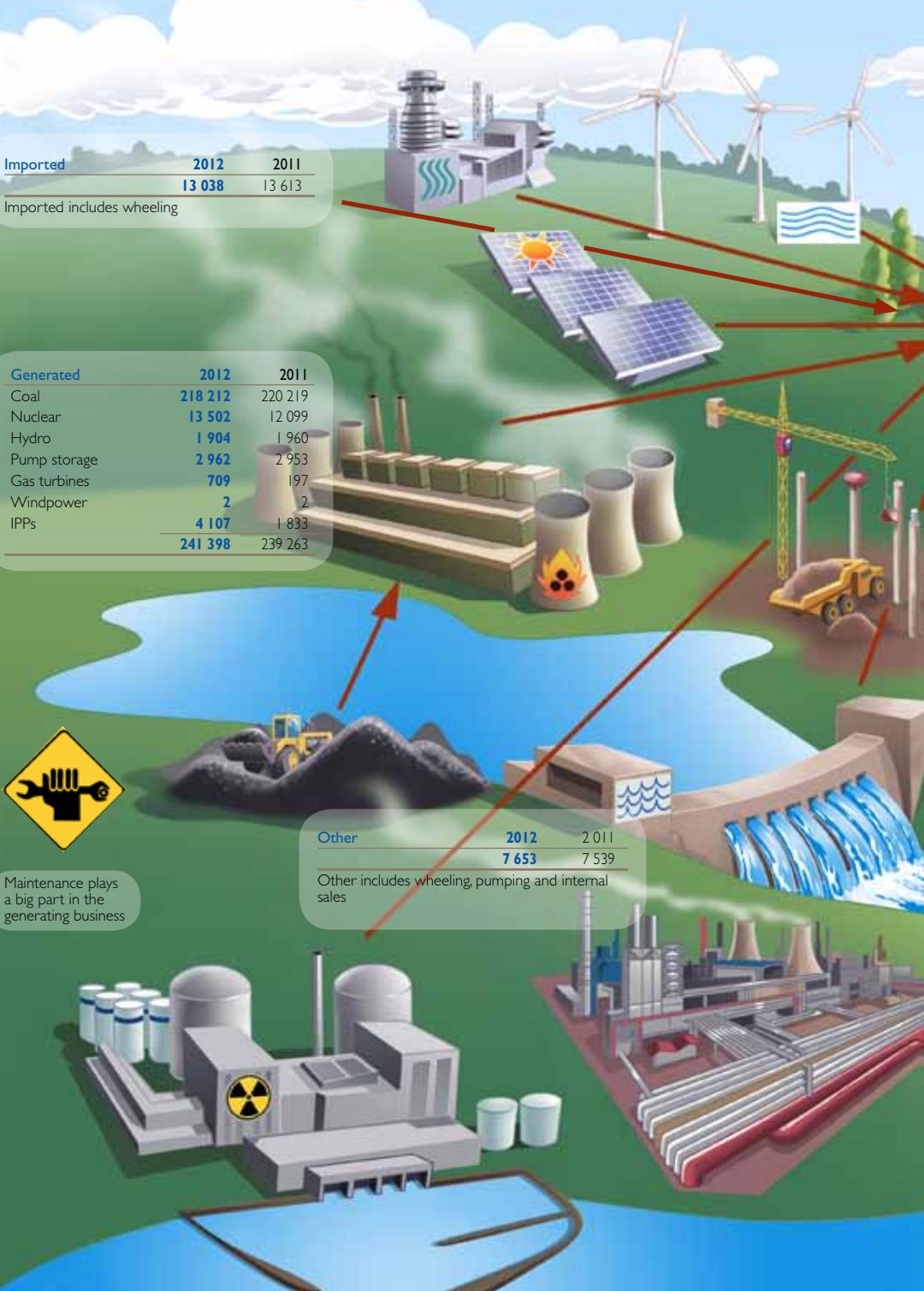
Generated	2012	2011
Coal	<b>218 212</b>	220 219
Nuclear	<b>13 502</b>	12 099
Hydro	<b>1 904</b>	1 960
Pump storage	<b>2 962</b>	2 953
Gas turbines	<b>709</b>	197
Windpower	<b>2</b>	2
IPPs	<b>4 107</b>	1 833
	<b>241 398</b>	239 263



Maintenance plays a big part in the generating business

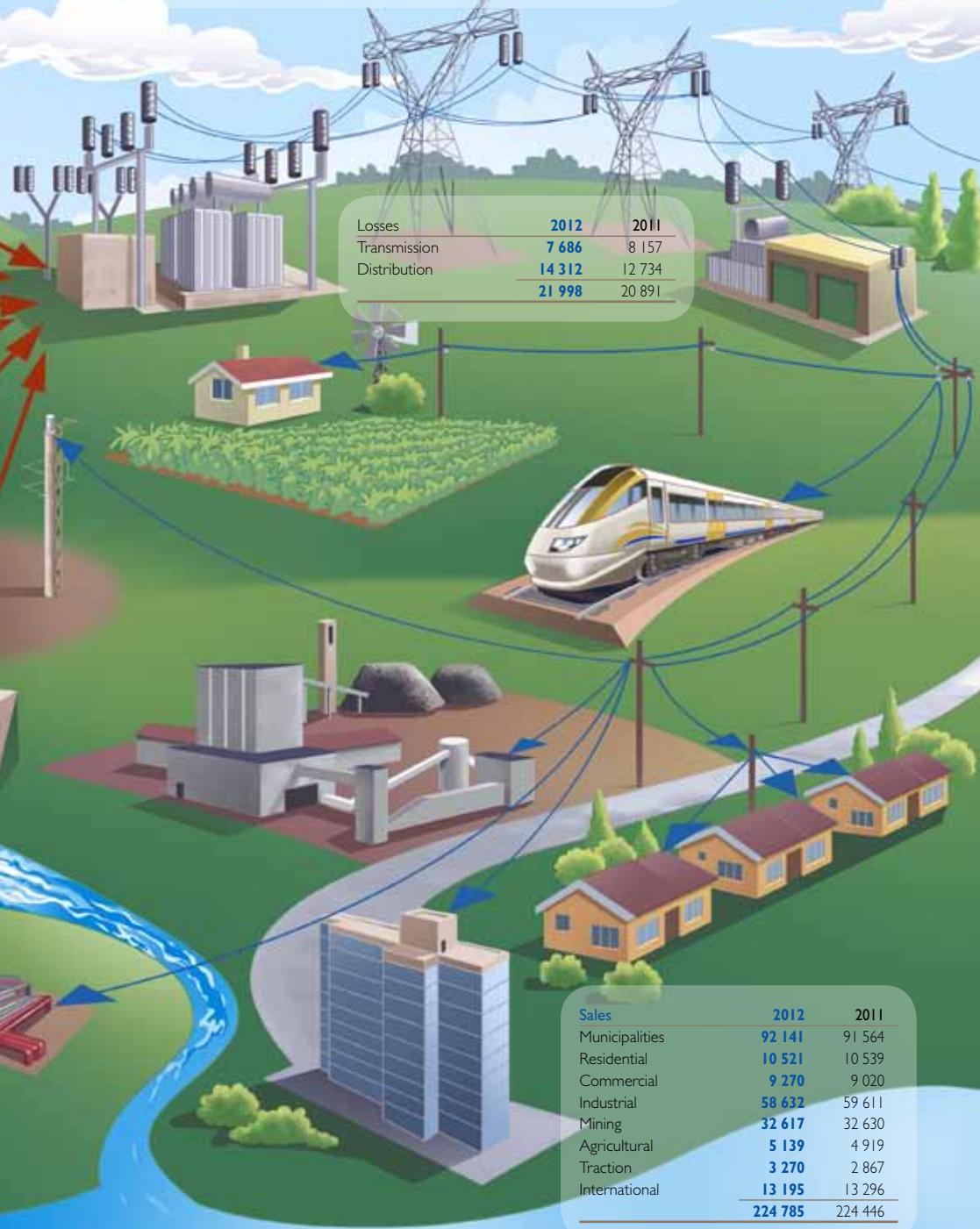
Other	2012	2011
	<b>7 653</b>	7 539

Other includes wheeling, pumping and internal sales



## Value chain of Eskom

Showing the generation and sale of electricity in GWh:



# Our performance

**25 Employees and contractors** passed away during the current year, the same number as the previous year



**System average interruption duration index** improved to 45.75hrs from 52.61hrs in the previous year



**Generated capacity** installed and commissioned during the year was 535MW, up from 315MW the previous year



**IPP power purchased** increased from 1 833GWh the previous year to 4 107GWh



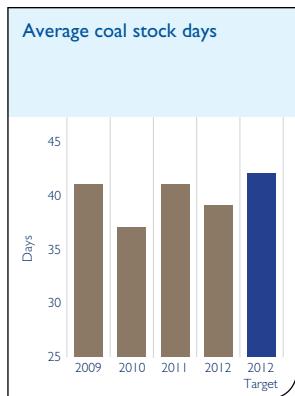
**The energy availability factor** decreased from 84.59% the previous year to 81.99% the current year



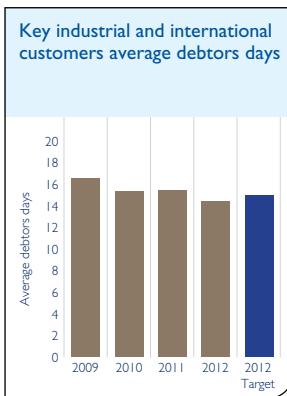
**Coal transported by rail** increased from 7.1Mt to 8.5Mt in the last year



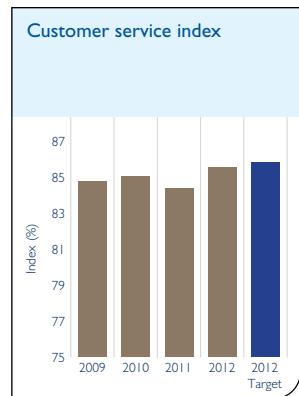
## Key facts and figures



Coal stock days at 39 days are 2 days lower than the previous year.

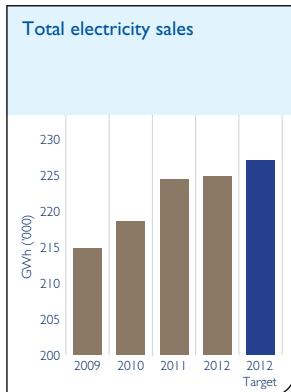


The debtors days for key industrial and international customers improved from 15.5 the previous year to 14.4 for the current year.

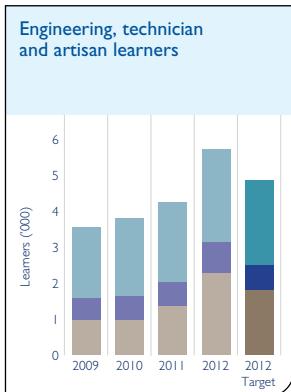


The customer service index improved from 84.37% the previous year to 85.55% for the current year.

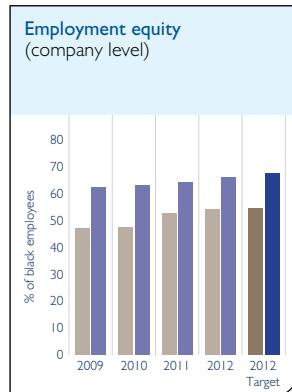
# Key facts and figures



Sales grew 0.2% year-on-year. Eskom bought back 1 078 gigawatt-hours (GWh) of power from business and purchased 4 107GWh from independent power producers. There has been no load-shedding.



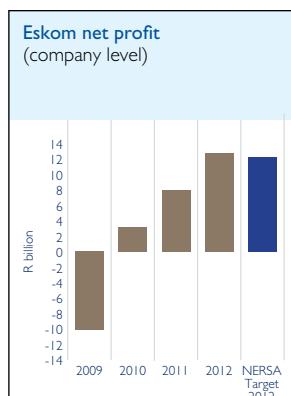
Engineering, technician and artisan learners in the pipeline have grown from 3 535 in 2008/09 to 5 715 at the end of 2011/12.



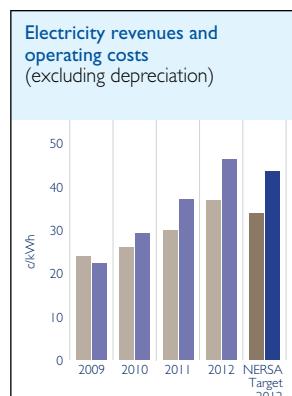
The percentage of senior management that is black grew from 46.9% in 2008/09 to 53.9% in 2011/12. Professional and middle-management equity levels have improved from 62.1% in 2008/09 to 65.7% in 2011/12.



Safety remains a priority for 2012/13.



The full R13.2<sup>1</sup> billion group profit will be reinvested in the business.

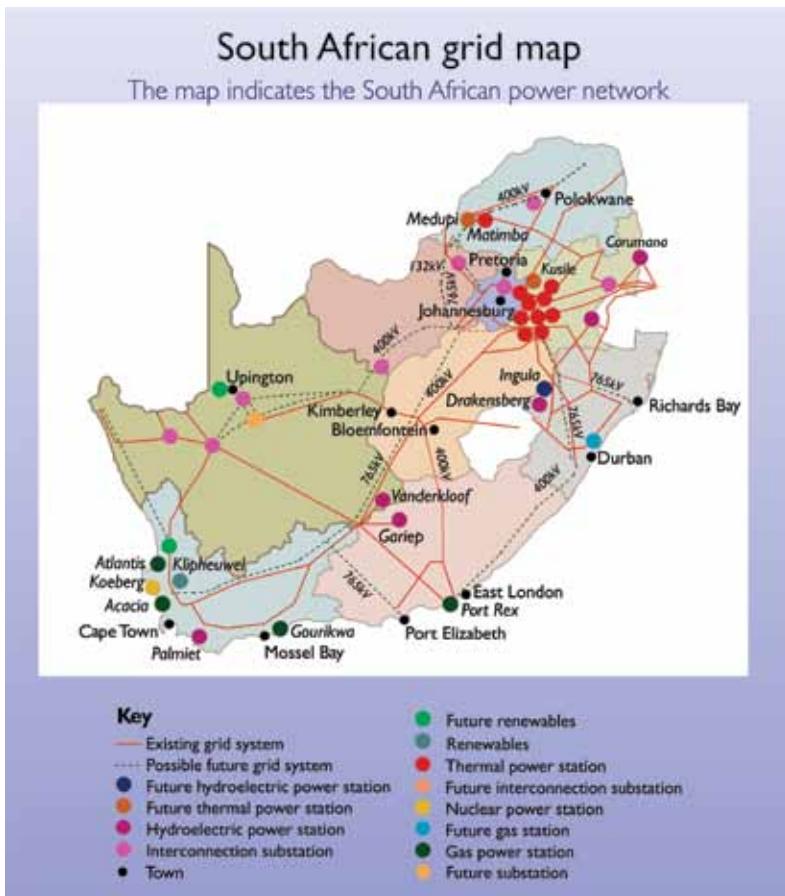


The margin between electricity revenues and operating costs (excluding depreciation) has increased steadily over the past three years.

<sup>1</sup> 1. 2011/12 profit at group level was R13.2 billion and R12.7 billion at company level.

# South African grid map

Eskom's power grid



## Eskom in Africa

While most of Eskom's business is within South Africa, the company also buys and sells electricity in the SADC region. Eskom's involvement in African markets beyond South Africa is currently focused on projects that have a direct impact on ensuring a secure supply of electricity for South Africa itself. Eskom is investigating additional opportunities in the SADC region.

Eskom Enterprises SOC Limited has two subsidiaries, Rotek Industries SOC Limited and Roshcon SOC Limited, with an interest in electricity operation and maintenance concessions in Mali, Senegal, Mauritania and Uganda.

# Highlights of 2011/12



## No load shedding

Despite supply-demand challenges, Eskom continued to avoid load shedding in 2011/12, as it has since April 2008.

Minister of Public Enterprises Mr Malusi Gigaba, actively championing the 49M campaign



## Consumer awareness

Eskom's Power Alert system, which uses television to inform the public about the load on the electricity grid, contributed to the saving of 261MW during evening peaks in 2011/12.



## Four million homes electrified

The 4.2 million households mark was reached in the electrification programme, since 1991.

March 2011

### 49M campaign launched

Eskom initiated the 49M campaign, which calls for a partnership with all South Africans to keep the lights on by calling on them to use energy efficiently.

June 2011

### New board appointed

The Eskom board was reconstituted in June 2011. Mpho Makwana retired as the chairperson, having served as a director for three terms, and was replaced by Zola Tsotsi.

July 2011

### Grootvlei unit 5 commissioned

On 18 July, Grootvlei power station's unit 5 was commissioned, adding 160MW to the national power grid. This completed the full return-to-service commissioning of Grootvlei.

September 2011

### Sustainability award

Eskom's 2010/11 Integrated Report won second place in the Ernst & Young Sustainability Reporting Awards. Eskom also received an Ernst & Young award for excellent corporate reporting in September 2011.

October 2011

### Preparations for independent system and market operator started

The System and Market Operator division, operating under the Eskom board, was established on 1 October 2011. This is the first step towards establishing an independent system and market operator (ISMO), a separate state-owned company.

### JSE Spire Awards 2011 Eskom Holdings awarded Best Issuer

This award goes to the issuer that is most committed to transparency, as demonstrated by regular and consistent sharing of information with investors and other market participants. It has clearly shown innovation and responsiveness to market conditions and investor needs. All market participants must feel they can trade the borrower's debt with confidence.

## November 2011

### COP 17

Eskom showcased its commitment to reducing its carbon footprint and making its energy mix less dependent on coal at the 17th Conference of the Parties to the United Nations (UN) Convention on Climate Change (COP 17), which took place in Durban in November and December 2011.

### Camden unit 6 commissioned

On 24 November, Camden power station's unit 6 which was originally returned to service at a lower capacity, had its capacity upgraded by 20MW.

## December 2011

### Komati unit 4 commissioned

Komati power station's unit 4 was commissioned on 29 December, adding 100MW to the grid.



Restoration work at Komati power station

## January 2012

### Public Sector Excellence Award

Eskom won the gold medal at the 2011 Public Sector Excellence Awards for excellence in the energy and minerals sector.

## February 2012

### EMEA Finance Award

Eskom Finance Company's Nqaba Finance Limited won the award for the best securitisation deal in Europe, the Middle East and Africa. Nqaba is a R5 billion residential mortgage-backed securitisation programme that finances mortgage loans with funding from the South African capital market. ABSA Capital, the sole lead arranger of the transaction, was named the best securitisation house of the year.

### Komati unit 5 commissioned

On 3 February, Komati power station's unit 5 was commissioned, adding 100MW to the grid.

## March 2012

### Staff and learner complement grew

The number of group employees increased by 1 695 during the reporting period, bringing the staff complement to 43 473 employees at 31 March 2012. The number of learners (engineers, technicians and artisans) with three- to four-year learning/bursary contracts increased by 1 475 during the reporting period to 5 715 learners.

### Approved tariff increase lowered

In March 2012 Eskom requested that the 25.9% tariff increase granted by the National Energy Regulator of South Africa (NERSA) be revised downwards to 16% for the period from 1 April 2012 to 31 March 2013. NERSA approved the request.

### Komati unit 6 commissioned

On 5 March, Komati power station's unit 6 was commissioned, adding 125MW to the grid. This leaves 3 units at Komati to be commissioned.

### Arnot unit 5 commissioned

On 5 March, Arnot power station's unit 5 capacity upgrade was commissioned, adding 30MW.

# About this report

Eskom's material issues discussed



Eskom's 2011/12 annual report is an integrated report that sets out an in-depth, contextual review of the company's overall performance for the year 1 April 2011 to 31 March 2012. It outlines business operations as they stand now, reviews challenges the company has faced over the past year and how it has overcome them or plans to do so, and presents Eskom's assessment of the period ahead.

## Determining materiality in partnership with our stakeholders

This report focuses on qualitative and quantitative issues arising in 2011/12 that are material to Eskom's business operations and strategic objectives. The question of what is "material" has been determined in extensive consultation with the company's stakeholders, while taking into consideration its core objectives and the way in which its value chain operates.

Eskom's stakeholders include employees and unions; the government and Parliament; lenders, analysts and investors; customers and regulators; industry experts, academics and the media; business groups, civil society and non-governmental organisations (NGOs); and suppliers and contractors (see the stakeholder engagement matrix on page 152.)

The report includes information about Eskom's shareholder compact and its summarised financial statements. The statutory annual financial statements and a more detailed divisional performance report, are available online at [www.eskom.co.za/IR2012/001.html](http://www.eskom.co.za/IR2012/001.html).

## An integrated report

Eskom has combined sustainability and financial reporting for a number of years, but this is the first integrated report that aligns with the principles contained in discussion papers published by the International Integrated Report Council and the Integrated Reporting Committee of South Africa. Integrated reporting is a new international initiative that has emerged in response to the shortcomings of traditional reporting, which emphasises financial results without taking account of the broader context in which companies operate, and fails to weave together different reporting strands.

Integrated reporting allows for reporting on financial results, governance, sustainability and other material factors in an interdependent manner. It addresses the challenges that companies face, the advantages they enjoy, the external factors that influence them and the way they in turn influence the external environment.

To support this new approach to reporting, Eskom formed an integrated reporting steering committee<sup>1</sup> to ensure alignment with other reporting processes. This demonstrates that the management of the business and internal reporting is closely aligned to the requirement for the year-end integrated report.

<sup>1</sup> The steering committee is a subcommittee of Eskom's executive management committee, and is responsible for the co-ordination of the integrated report for Eskom Holdings SOC Limited.

## The integrated reporting pilot programme



Eskom is a member of the International Integrated Reporting Council's pilot programme (<http://www.theiirc.org/>). All annual reports published by the more than 60 programme members worldwide in the period October 2011 to September 2012 (including this report) will be reviewed and analysed for their strengths and weaknesses. Lessons learnt during this cycle will contribute to a global standard for integrated reporting.

## Material issues navigation

### Eskom's material issues discussed



Leading and partnering to keep the lights on



Reducing our carbon footprint and pursuing low-carbon growth opportunities



Securing future resource requirements, mandate and the required enabling environment



Implementing coal haulage and the road-to-rail migration plan



Pursuing private sector participation



1st building block:  
Setting ourselves up for success



2nd building block:  
Ensuring our financial sustainability



3rd building block:  
Become a high-performance utility

Eskom has applied Global Reporting Initiative (GRI) principles in compiling this report. These principles ensure that the company incorporates the views of its stakeholders, as well as internal planning, reporting and risk-management processes.

Eskom has declared a B+ application level in terms of the GRI. Refer to the assurance provider's report on page 157 which confirms this declaration. The list of relevant GRI indicators is available online at: [www.eskom.co.za/IR2012/002.html](http://www.eskom.co.za/IR2012/002.html).

KPMG has provided assurance on selected sustainability information in this report (see page 157). Eskom follows a combined assurance approach (refer to page 33 for more details).

Eskom's reports are also prepared with due consideration of the King Report on Corporate Governance (King III). Refer to [www.eskom.co.za/IR2012/003.html](http://www.eskom.co.za/IR2012/003.html) for more information on King III.

### Structure of the report

This new global reporting platform takes cognisance of the need to present information succinctly. Consequently, this report is structured in a concise and accessible manner:

1. **Leadership overview** sets out Eskom's view of the environment in which it operates, the central achievements of the reporting period, priorities for the year ahead, strategic objectives and long-term challenges for the business.

## About this report continued

2. **About the company** outlines the nature of the business and its legal structure, as well as its purpose, strategic objectives and values.
  3. **Corporate governance** reports on the composition of the board and the executive management committee. It reviews committees and initiatives designed to ensure good governance and statutory compliance, and sets out Eskom's remuneration philosophy.
  4. **Operating context: material issues** assesses the primary material factors that have a bearing on Eskom's performance and discusses steps taken to manage associated risks.
  5. **Value chain performance** reviews the contributions of Eskom's operating line divisions during the reporting period, discussing material issues as they affect operations.
  6. **Service and strategic functions** outlines the key challenges of the service and strategic functions.
  7. **Financial performance** presents an overview of the financial performance for 2011/12.
  8. **Summarised financial statements** for 2011/12 (the statutory annual financial statements are available at [www.eskom.co.za/IR2012/004.html](http://www.eskom.co.za/IR2012/004.html)).
  9. **Future priorities** cover Eskom's priorities over the next five years.
10. **Appendices** include:
- A. Key indicators, comparing performance against Eskom's internal targets
  - B. Stakeholder engagement matrix, highlighting the material issues that arose through dialogue with stakeholders and the nature of these interactions
  - C. Sustainability responsibilities, approval and assurance statements from Eskom and the external assurance provider, detailing assurance provided on selected sustainability information
  - D. Glossary
  - E. List of acronyms
  - F. Eskom's contact details.

Refer to:

[www.eskom.co.za/IR2012/005.html](http://www.eskom.co.za/IR2012/005.html) where the following reports can be found:

- Statutory annual financial statements
- Divisional reports (detail performance information from a divisional perspective)
- The Eskom Development Foundation report (provides a review of Eskom's Corporate Social Investment (CSI) activities)
- The Eskom Factor Report (details Eskom's broader impact and contribution to society)
- Supplementary fact sheets

Throughout the integrated report links to supplementary information are provided.



Snow covers the intake canal of the Ingula pumped storage scheme under construction near Ladysmith

## Leadership overview



Lowering of the spherical valve distance piece at Palmiet pumped storage scheme

# Letter from the chairperson

Eskom's material issues discussed



Our mandate is to “provide sustainable electricity solutions to grow the economy and improve the quality of life of the people of South Africa and the region”.

At a time when global economic uncertainty is forcing many companies to curtail operations and limit growth, Eskom is hard at work on one of the largest capital expansion programmes in South Africa’s history. This R340 billion programme, which commenced in 2005, will have added 17GW of much-needed electricity-generating capacity to the national grid by 2018/19.

Eskom faces several challenges during the transition to increased generating capacity. The first new generating unit – unit 6 at Medupi power station in Limpopo – is expected to come online in 2013. Until then, the supply/demand balance will remain tight. If we want to ensure a stable power system, all of us – households and businesses – will have to reduce demand and use energy efficiently. To keep the lights on, Eskom counts on the support of all South Africans.

Eskom’s objectives are not limited to commercial concerns. We are a state-owned company and our performance is also measured by the overall value we add to the lives of the public. Our developmental responsibilities range from building and maintaining power plants and networks, to supplying households, schools and factories with electricity, supporting local industries, and stimulating skills and job creation.

Our mandate, as outlined by the Department of Public Enterprises, to which we are accountable, is to “provide sustainable electricity solutions to grow the economy and improve the quality of life of the people of South Africa and the region”.

We are working to reduce our environmental footprint, diversify our energy mix and lower carbon emissions, as endorsed by President Jacob Zuma at

## Summary of chairman’s statement

- 17GW of much-needed electricity-generating capacity to be added to the national grid by 2018/19
- We are working to reduce our environmental footprint, diversify our energy mix and lower carbon emissions
- The government has adopted the Integrated Resource Plan 2010, which represents a major step forward in identifying South Africa’s energy options. Urgent decisions are required concerning how the plan will be implemented, how it will be paid for and what role Eskom, as the country’s primary electricity utility, will play

COP 17 in Durban in 2011. In addition to reducing our carbon emissions in a manner consistent with South Africa's economic growth objectives, we are also committed to planning for the impact of climate change.

In the months ahead, several critical policy decisions need to be taken that will shape the future of the electricity industry. The government has adopted the Integrated Resource Plan 2010, which represents a major step forward in identifying South Africa's energy options. Urgent decisions are required concerning how the plan will be implemented, how it will be funded and what role Eskom, as the country's primary electricity utility, will play. Delays in key decisions can have negative consequences for the planning of capital expenditure, construction and engineering.

In 2013 we will be celebrating our 90th anniversary. For nine decades, Eskom has been adding quality to the lives of South Africans and enabling the country's economic growth. My colleagues on the board and I are privileged to be given the opportunity to build on these excellent foundations. With our very capable executive management committee, under the direction of Brian Dames, I am confident that our leadership team is prepared for the year ahead.

Eskom's progress equates to that of South Africa's advancement. In this regard, Eskom's success is crucial.



**Zola Tsotsi**

Chairperson



Chairman **Zola Tsotsi**

**Transmission lines installed during the year totalled 631 km, up from 443 km the previous year**



**Relative particulates improved to 0.31 kg/MWh from 0.33 kg/MWh in the prior year**



# Report of the chief executive

Eskom's material issues discussed



We kept South Africa's lights on, as we have now done consistently since April 2008. This achievement is the result of a focused approach by Eskom to managing the challenge of a tight power system, as well as expanded partnerships with businesses and households that aim to manage demand and raise awareness of the need to use electricity more efficiently.

## An integrated view of our business

At all major turning points in the life of an economy, companies face a difficult choice: how to meet present demand while ensuring that they are investing to safeguard the future.

As this integrated report shows, Eskom is achieving this balance. We are keeping the lights on and we are building the power stations and transmission infrastructure needed to power South African businesses and households well into the 21st century.

Doing so has not been easy and, as this report describes, the road ahead is strewn with obstacles. But we are confident that we are setting the utility up for success; that our organisation is becoming financially sustainable; and that as a result of initiatives now under way, we will in time become the high-performance organisation that South Africa needs to grow its economy and create jobs.

Our goal is to provide South Africa with secure, affordable, accessible and cleaner power in the decades to come. This report charts our progress along this path. It sets out, in a concise manner, the range of material concerns affecting our business. Beyond our financial bottom line, it addresses issues of governance, remuneration, risk and sustainability, and

explains how these factors interact and affect our ability to create and maintain value. Eskom has been a leader in integrated reporting for a number of years. This report is the first in a new, more focused format, in response to new international initiatives that are leading the way towards improved reporting. We welcome your comments and suggestions on both the content and the format of this report.

## The global challenges of energy supply

South Africa is not alone, particularly among developing countries, in facing the challenges of energy supply. Around the world, electricity utilities are grappling with how to provide energy to growing populations and economies in a safe and sustainable way. Doing so requires long-term planning that takes into account the complex interplay of economic growth, demographic shifts, a finite supply of primary energy resources (and countries' specific allocation of those resources), transmission requirements, protection of the environment, and cost recovery.

In Eskom's case, these challenges are underlined by the company's developmental mandate. Providing reliable and affordable electricity is not only a commercial undertaking; it is also about creating a foundation on which South

Africa can grow, helping to transform the lives of the large percentage of the population that lives in poverty.

As a state-owned company, Eskom is an enabler of the government's vision and a supporter of economic growth in our country and the southern African region. Eskom buys and sells electricity in the countries of the Southern African Development Community (SADC). Eskom is investigating additional opportunities in SADC that have a direct impact on ensuring a secure supply of electricity for South Africa.

Over the past year, the global economy registered a weaker-than-expected performance, marked by slow growth in most developed countries. These trends have been partially offset by strong growth in leading emerging markets – particularly China – which has helped to keep commodity prices at high levels. Slower growth in South Africa has softened electricity demand and, while this is certainly not a desirable outcome for the economy, it has coincided with a period of constrained electricity supply, reducing demand on an overloaded system. As economic growth gathers pace in the period ahead, and mines and factories increase their output, the margin between electricity supply and demand will narrow to uncomfortable levels.

The only solution to this dilemma is to build generating capacity while encouraging energy efficiency and managing demand – and this is just what we are doing. Eskom's capacity expansion programme is fully under way, with 5.8GW of the planned 17GW already commissioned. At the same time, we are working with the national government and municipalities, businesses and households to increase energy efficiency, and to raise



Chief executive Brian Dames

The **system average interruption frequency index** improved to 23.73 from 25.31 in the previous year



The **maintenance backlog** decreased to 26 as at 31 March 2012 from 36 as at 31 March 2011



# Report of the chief executive continued

awareness of the need to manage demand so that we can keep the lights on.

The business case for sustainability is getting stronger and we are committed to embedding sustainability into our business culture and operations. We remain committed to supporting the UN Global Compact, including the associated LEAD initiative – which aims to improve sustainability performance – as well as the CEO Water Mandate<sup>1</sup> and Caring for Climate. The UN has declared 2012 the “international year of sustainable energy for all”. The UN secretary-general launched the Sustainable Energy for All initiative in September 2011 and I am personally involved in the high-level advisory group for this project.

Eskom has extensive, on-going stakeholder engagements across the whole spectrum of Eskom's stakeholders, ranging from Government departments (including the Department of Public Enterprises, Department of Energy, Department of Water Affairs and National Treasury) local government and trade unions. In addition, Eskom has regular interactions with Eskom customer groupings, including the quarterly State of the System briefings, meetings with industry forums, community groups, etc. Refer to page 152 for more details of these interactions.

## 2011/12 accomplishments

Shortly after I became chief executive in the autumn of 2010, we conducted a strategic review of Eskom's operations. During 2011/12, with the support of our shareholder, we have started to deliver on the strategic initiatives we put in place to improve our long-term performance.

First and foremost, **we kept South Africa's lights on**, as we have now done consistently since April 2008. This achievement is the result of a focused approach by Eskom to manage the challenge of a tight power system, as well as expanded partnerships with businesses and households that aim to manage demand and raise awareness of the need to use electricity more efficiently. At the same time, we reached a milestone in the electrification programme: more than 4.2 million additional households have been provided with electricity since the programme began in 1991.

We took **major steps forward in our capital expansion programme**. Minister Gigaba launched the construction of the first boiler at Kusile power station in Mpumalanga, which is due to start generating power from the end of 2014, and we are on track for Medupi power station to deliver first power to the grid in 2013. We completed the return to service of the Grootvlei power station, along with three units at Komati power station. We commissioned a new 2 000 megavolt ampere (MVA), 765/400 kilovolt (kV) transformer at Perseus substation as part of the strengthening of the transmission system to the Western Cape. The capital expansion programme met its key performance targets during the period, considerably exceeding the targets for the amount of generation and transmission capacity commissioned.

Significant progress has been made towards securing water supplies for Medupi power station in Limpopo province, and for Komati and Kusile power stations in Mpumalanga.

<sup>1</sup> United Nations Global Compact's CEO Water Mandate is a unique public-private initiative designed to assist companies in the development, implementation and disclosure of water sustainability policies and practices.

We took steps to **strengthen financial sustainability**, earning a surplus which will be re-invested to fund capital expansion over the next six years and to reduce debt. Group net profit for the year to 31 March 2012 was R13.2 billion (2010/11: R8.4 billion). The 25.8% tariff increase (including the environmental levy) granted by NERSA during 2011 contributed to a 24.8% increase in revenue per kWh compared with the previous financial year. This was offset by a 25.9% increase in operating costs, mainly as a result of increases in primary energy costs (including the environmental levy). Given our improved financial health and operational performance and the support of our shareholder, we asked NERSA to reduce the electricity tariff increase granted for the year beginning 1 April 2012 from 25.9% to 16%. Eskom maintains healthy cash reserves and funding progress remains positive. By 31 March 2012, Eskom had secured more than 77% of the funding required for the capital expansion programme.

We registered some progress in **improving the efficiency of our operations**. We completed the first phase of our Back2Basics programme in October 2011, rolling out an enhanced single-instance SAP system on schedule and within budget. The Back2Basics programme is an internal performance-improvement initiative aimed at standardising, simplifying and optimising our processes and systems. We also launched the Eskom Leadership Institute to build and strengthen leadership capacity and to intensify the development outcomes of leadership assessments.

We strengthened our **commitments to environmental protection and mitigating the effects of climate change**. Eskom supported the government in hosting the

successful COP 17 meeting in Durban. We expect construction of the Sere renewable-energy wind project in the Western Cape to begin during 2012. We installed solar panels at Kendal and Lethabo power stations to supplement auxiliary power consumption at these stations – the start of a programme that will be rolled out across our fleet of coal-fired stations. We have improved performances regarding relative particulate emissions, water usage and contraventions of legislation, compared to 2010/11.

We have expanded our **social investment commitments**, including taking responsibility for the way operations affect the environment and promoting the objectives of the government's New Growth Path. Eskom believes its social responsibility goes beyond allocating funds to development projects through corporate social investment. It is also about incorporating an ethic of social responsibility into its business model, taking into account the ways its decisions will affect all its stakeholders.

Eskom is **building its human capital and contributing to the national skills base**. A significant number of engineering/technical learners received training over the past five years. In 2011/12, 5 715 (2010/11: 4 240) learners with three- to four-year learning/bursary contracts were in the pipeline, with a focus on engineers, technologists, technicians and artisans. This number will increase to 6 100 learners in 2015/16. We also train existing staff on a continuing basis.

These accomplishments notwithstanding, Eskom faces some tough challenges that must be addressed in the year ahead and beyond.

# Report of the chief executive continued

## Operational challenges facing our business

### Safety

Safety is a business imperative. Power plants and transmission and distribution infrastructure must be run in a way that protects surrounding communities and ensures that our employees are safe and healthy. During the year we

recorded a total of 13 Eskom fatalities and 12 contractor fatalities. This is not acceptable. Strong action is being taken to enforce our principles of zero harm and zero tolerance for unsafe practices. Our thoughts and prayers go to the families, friends and colleagues of the employees and contractors who died in the line of duty over the past year.

Employees	Contractor employees
<ul style="list-style-type: none"><li>– Nkosinathi Emmanuel Gwetyana</li><li>– Willem Jan Hendrick Jacobs</li><li>– Keyafisha Ernestina Lethuba</li><li>– Neekesh Sibran Mahie</li><li>– Mfelani Timothy Malaza</li><li>– Tshiro Alfred Mavuso</li><li>– Phumowakhe Robert Mbatha</li><li>– Setena Phineas Mekoa</li><li>– Johannes Mwiya</li><li>– Aifheli Joseph Nemavhidi</li><li>– Stanley Mbongiseni Ngema</li><li>– Philani Phakathi</li><li>– Daniël Jacobus Stols</li></ul>	<ul style="list-style-type: none"><li>– Kanyiso Dlanjwa</li><li>– Muntungani Isaac Khumalo</li><li>– Wayne Klue</li><li>– Mokete William Letsikhoane</li><li>– Mokalabata Foster Madisa</li><li>– Maurice Mgadi</li><li>– Sandile Miya</li><li>– Leronti Makalo Moeketsi</li><li>– Mokhothu Stephen Pitso</li><li>– Siphamandla Cedrick Sithole</li><li>– Nthabelang Gavin Sothoane</li><li>– Nxolosi Xhashimba</li></ul>

### Maintenance

We cannot continue the practice of keeping the lights on by deferring maintenance on our power stations. The existing generation maintenance plan and system outlook underline the constraints on the system, with growing risks for plant and environmental performance and safety. The deterioration in generating performance over the past several years is the result of delayed maintenance and burning of poor-quality coal. During the reporting period, these conditions were complicated in the summer months by high temperatures that affected the operation of dry-cooled power stations

and inconsistent imports of electricity from Mozambique's Cahora Bassa facility. There was some deterioration in the energy availability factor performance – a measure of a plant's availability to provide electricity.

All the power plant units need maintenance at some stage or another – while the backlog of 36 deferred outages as of March 2011 was reduced, during the reporting period other scheduled maintenance outages had to be deferred. As a result, the backlog as at 31 March 2012 is 26 outages.

Eskom requires about 3 000MW of generating capacity in reserve to take generating units off-line to perform essential maintenance. Continuing to reduce the maintenance backlog while keeping the lights on requires other supply-and-demand levers to help maintain the generating capacity reserve. We have developed a plan to address the short-term supply/demand dilemma. We also launched the 49M campaign to encourage South Africans to embrace energy savings as a national culture and reduce the country's electricity use by 10%. A mandatory national energy conservation scheme needs to be put in place and maintained until December 2013 as a safety net to ensure a stable system.

#### **Keeping the build programme on track and ensuring long-term capacity**

The Medupi project is not progressing as quickly as we had originally planned, mainly because of delays on the boiler contract. We announced during the year that the first unit would come online only during 2013.

The government has not yet announced how its Integrated Resource Plan will be implemented. Until these decisions are taken, the country has no new capacity commitments beyond the completion of Kusile in 2018/19. Eskom continues to develop a resource plan to cater for the anticipated technologies.

#### **Pricing for a sustainable electricity industry**

During 2012 Eskom will submit a proposal to NERSA for the third multi-year price determination (MYPD 3) which will be effective from 1 April 2013. NERSA's



*Employee and contractor safety remains a major concern*

# Report of the chief executive continued



*Coal stock levels remain healthy*



*Medupi power station near Lephalale*

decision in this matter will set an electricity pricing framework for the next period. An appropriate tariff structure that allows for cost recovery, including return on assets, is necessary to encourage investment in the electricity industry over the long term. This will ensure that South Africa has the energy infrastructure that it needs – and that the country can afford it. Tariffs need to be set at levels that are sustainable, by allowing an appropriate migration to cost-reflective tariffs while taking into account the impact on the economy with provision made to ensure that low-income households are able to obtain electricity in a sustainable manner.

## Vending system

The online vending system, through which more than 4.2 million customers buy prepaid electricity, failed on several occasions during the period November 2011 to February 2012. Eskom regrets the inconvenience experienced by some customers during the system failures. The system is now operational and ongoing fine-tuning is improving its reliability.

## Coal supply

Long-term coal supply remains a concern. Even though 80% of our requirements up to 2018 are secured, we need a framework to balance the development of South Africa's coal-export industry with the need for a secure supply of coal for domestic power generation over the life of the power stations.

## 2012/13 outlook<sup>1</sup>

Over the year ahead, we will focus on five critical areas:

- Improving safety
- Keeping the lights on

<sup>1</sup>. Refer to page 140 for information on Eskom's future priorities

- Strengthening financial sustainability and submitting our MYPD 3 application
- Meeting timelines for the capital expansion programme, particularly Medupi
- Bringing about a step change in the performance of our organisation through the Back2Basics programme.

We will tackle these tasks with determination and with the benefit of strong support from our shareholder – the South African government. I would like to thank Minister of Public Enterprises Malusi Gigaba and Deputy Minister Ben Martins for their encouragement and insight. During the year we welcomed several new

members of the board, including the new chairperson, Zola Tsotsi, and my thanks also go to them for their invaluable support. Our restructured executive team is positioned to provide leadership and ensure progress. Most important, of course, are the more than 43 473 Eskom employees and their families. Without them, our achievements would not have been possible. I thank them for their hard work and commitment.

Over the year ahead, we look forward to working with all of our stakeholders – employees and unions, the government and Parliament, businesses and investors, suppliers and contractors, customers and regulators, civil society and community organisations – to keep the lights on and build for the future.



**Brian Dames**  
Chief executive

## About the company



High-voltage line running from Kendal power station in Mpumalanga



## Nature of business and client base

Eskom is South Africa's primary electricity supplier. The company, which is wholly owned by the South African government, generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers, and to municipalities, which in turn redistribute electricity to businesses and households.

Eskom sells electricity directly to about 3 000 industrial customers, 1 000 mining customers, 50 000 commercial customers and 84 000 agricultural customers. It also supplies electricity to more than 4.7 million residential customers – many of whom are in rural areas – who account for about 40% of all residential customers (which include prepaid customers) in the country.



The Braamhoek dam is complete at the new Ingula pumped storage scheme



Rotek performs maintenance on many of the major power station components



The underground coal gasification project near Volksrust is progressing well

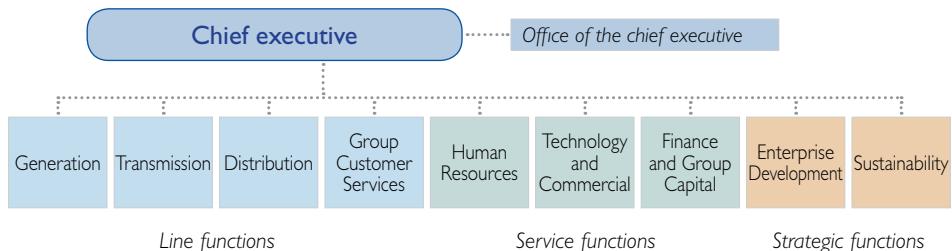
# About the company continued

## Legal and operational structure

Structure of Eskom Holdings SOC Limited (and major subsidiaries)



## Eskom line, service and strategic functions



## Eskom's new structure

Eskom has restructured its divisions as follows:

- Line functions operate the business and focus on creating value
- Service functions safeguard Eskom's assets, provide expertise on day-to-day standardised services and optimise functions that cut across all aspects of the business
- Strategic functions develop the enterprise, bringing about step changes in performance and providing broader strategic support to the group.

The office of the chief executive, which incorporates the delivery unit and the assurance and forensic department, has been expanded.

Eskom has its head office in Johannesburg, with satellite operations across South Africa. It maintains a small office in London, primarily for quality control of the equipment being manufactured for the capital expansion programme. Eskom has several subsidiaries:

- The Eskom Enterprises group provides lifecycle support and plant maintenance, network protection and support for the capital expansion programme for all Eskom Holdings SOC Limited divisions.

- Escap SOC Limited, Eskom's wholly owned captive insurance company, manages and insures Eskom's business risk.
- Eskom Finance Company SOC Limited grants home loans to Eskom employees.
- The Eskom Development Foundation NPC is a wholly owned non-profit company that manages Eskom's corporate social investment.

## Purpose, values and strategic objectives

The company's operations are underpinned by six values:

- Zero harm
- Integrity
- Innovation
- Sinobuntu (caring)
- Customer satisfaction
- Excellence

In September 2011 the Eskom board, informed by an extensive strategic review process, approved a six-year corporate plan that identified eight strategic objectives (identified in the figure overleaf as the three building blocks and the five numbered blocks).

# About the company continued

## Eskom's purpose, values and strategic objectives



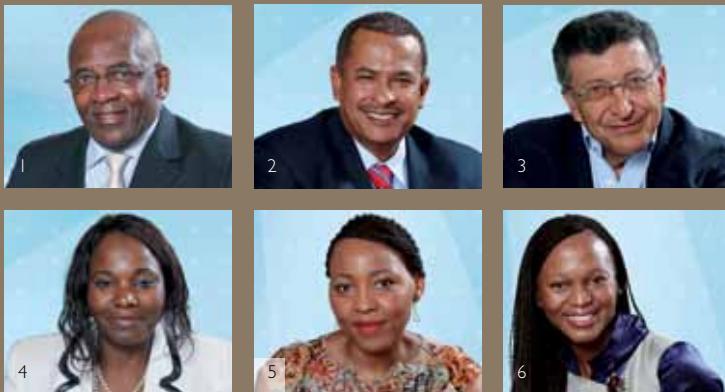
The key measures and material stakeholder issues aligned with these strategic objectives are shown in the appendix on pages 144 to 155.

## Corporate governance



Steel linings being transported to the Ingula pumped storage scheme near Ladysmith

# Corporate governance



Eskom's corporate governance focuses on effective ethical leadership to integrate strategy, governance and sustainability. Eskom takes its strategic direction from its board of directors. The executive management committee is responsible for putting decisions made at board level into effect and overseeing the company's day-to-day operations.

## Board of directors

Eskom has a unitary board structure with a majority of independent non-executive directors. The company's memorandum of incorporation stipulates that the shareholder will appoint a chairperson, chief executive, finance director and non-executive directors after consulting the board.

The directors are drawn from diverse backgrounds and bring a wide range of experience and professional skills to the board, supplemented at committee level by external members.

The performance of the board and individual directors is evaluated each year. The term of office of non-executive directors is three years, subject to review at the annual general meeting. Retiring directors are eligible for reappointment. The shareholder reconstituted the board in June 2011. Membership of the board at 31 March 2012 was as follows:



7



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14

1. **Zola Tsotsi** (65)

Independent non-executive director  
Chairman of the board

9. **Collins Matjila** (50)

Independent non-executive director

2. **Brian Dames** (46)

Chief executive

10. **Boni Mehlomakulu** (39)

Independent non-executive director

3. **Bernie Fanaroff** (64)

Independent non-executive director

11. **Mafika Mkwanazi** (58)

Independent non-executive director

4. **Queendy Gungubele** (53)

Independent non-executive director

12. **Paul O'Flaherty** (49)

Finance director

5. **Neo Lesela** (42)

Independent non-executive director

13. **Phenyanne Sedibe** (42)

Independent non-executive director

6. **Bejabulile Luthuli** (39)

Independent non-executive director

14. **Lily Zondo** (43)

Independent non-executive director

7. **Chwayita Mabude** (42)

Independent non-executive director

8. **Yasmin Masithela** (38)

Independent non-executive director

# Corporate governance continued

## Changes in board composition in 2011/12

- Zola Tsotsi was appointed chairperson after Mpho Makwana retired as chairperson, having served as a director for three terms and acting as interim chief executive.
- The following members were appointed during the year: Queendy Gungubele, Neo Lesela, Bejabulile Luthuli, Chwayita Mabude, Yasmin Masithela, Collins Matjila, Mafika Mlkwanazi, Phenyane Sedibe and Lily Zondo.
- The following board members retired during the year: Zee Cele, Daniel Dube, Lars Josefsson, Hee-Beom Lee, Wendy Lucas-Bull, John Mirenge, Jacob Modise and Uhuru Zikalala.

Please see:

[www.eskom.co.za/IR2012/006.html](http://www.eskom.co.za/IR2012/006.html)

for details of directors' qualifications, dates appointed and significant directorships.

## Delegation of authority

The board has the authority to delegate its power to executive structures and board committees. A delegation-of-authority framework is in place to facilitate this delegation without diluting the board's accountability. This framework is undergoing an extensive review process.

Board committees exercise their delegated authority in accordance with board-approved policies. Each board committee comprises a majority of independent non-executive directors and each is chaired by an independent non-executive director:

The board delegates management of day-to-day operations to the chief executive. The chief executive is assisted by the executive management committee and its subcommittees.

## Corporate governance structure



## Executive management committee members

### 1. Brian Dames (46)

Chief executive

### 2. Paul O'Flaherty (49)

Finance director and group executive – Group Capital

### 3. Bhabhalazi Bulunga (56)

Group executive – Human Resources

### 4. Thava Govender (44)

Group executive – Generation

### 5. Erica Johnson (43)

Group executive – Enterprise Development

### 6. Steve Lennon (53)

Group executive – Sustainability

### 7. Dan Marokane (40)

Group executive – Technology and Commercial

### 8. Tsholofelo Molefe (43)

Group executive – Customer Service

### 9. Ayanda Noah (45)

Group executive – Distribution

### 10. Mongezi Ntsokolo (51)

Group executive – Transmission



# Corporate governance continued

The board committees held the following number of meetings during the year:

- Audit and risk committee: six
- Investment and finance committee: four
- Tender committee: nine
- Social ethics and sustainability committee: five
- People and governance committee: four.

Please see:

[www.eskom.co.za/IR2012/007.html](http://www.eskom.co.za/IR2012/007.html)

for more information on the committees' activities throughout the year.

## Director induction and orientation

A comprehensive programme is in place to train and orientate new directors and external committee members on an ongoing basis.

## Executive management committee (Exco)

The executive management committee helps the chief executive guide the overall direction of the business and exercise executive control in the management of the day-to-day operations.

Other than the chief executive and finance director, who are executive directors, Eskom's group executives are appointed by the board. Group executives are full-time employees subject to Eskom's conditions of service.

## Changes in executive management committee composition in 2011/12

- Thava Govender became acting chief officer – Generation business in September 2010; he attended Exco meetings, but was not a member. In April 2011 he became a member of Exco.

- Tsholofelo Molefe, Ayanda Noah and Mongezi Ntsokolo became members of Exco in April 2011.

Please see:

[www.eskom.co.za/IR2012/008.html](http://www.eskom.co.za/IR2012/008.html)

for details of executive management committee members' qualifications, dates appointed and significant directorships.

## Corporate citizenship and sustainability

The board and its committees guide the strategy and set performance targets for Eskom's broad approach to corporate citizenship. This includes the following:

- A social, ethics and sustainability committee that focuses on sustainability and corporate citizenship.
- A tender committee that ensures that transformation, including skills development and empowerment, is encouraged through Eskom's procurement activities.
- An executive management committee assesses occupational health, safety and environmental performance and reviews major incidents to ensure that corrective action is taken.
- The Eskom Development Foundation runs development programmes for disadvantaged communities.
- The board works to align its decision making with the government's New Growth Path.
- A subsidiary governance framework is in place to facilitate the flow of information between the holding company and its subsidiary companies, which ensures that sustainability goals are aligned across the organisation.

### **Ethical business conduct**

Eskom's board is accountable for the group's ethics-management programme, which is run on an operational level by the executive management committee, assisted by the ethics office. The programme includes the following:

- Assessing the organisational risks and opportunities
- Fostering ethical standards in the form of a code of ethics, conflict of interest policy, including business courtesies and private work
- Raising awareness regarding ethics (training, reporting, advices)
- The ethics helpdesk and whistleblowing hotline.

Quarterly ethics status reports are used to monitor the progress of this programme. Eskom is also a signatory to the UN Global Compact, which includes an anti-corruption clause, as well as the World Economic Forum's Partnership Against Corruption Initiative.

### **Internal control**

The board is responsible for ensuring that internal controls at all levels are effective and has approved the implementation of an integrated framework to systematically evaluate and improve controls across the company.

The internal audit department reviews internal control systems and reports its findings to management and the audit and risk committee. The audit and risk

committee monitors and evaluates the responsibilities of management and of internal and external audit to ensure that all major issues reported have been satisfactorily resolved. It reports any unresolved important matters to the board.

### **Combined assurance**

In line with King III, Eskom is applying a combined assurance model to ensure coordinated assurance activities. The board audit and risk committee oversees assurance activities. The committee also oversees the establishment of effective systems of internal control to provide reasonable assurance that Eskom's financial and non-financial objectives are achieved.

The assurance and forensic department provides independent and objective assurance, consulting and investigative services to improve the organisation's operations. The department has unrestricted access to all functions, records, property and personnel. The general manager – audit and forensics attends executive management committee meetings.

Eskom's internal forensic capacity will be strengthened through a partnership with the Special Investigating Unit (SIU). A proclamation by the President in the current year formalised the SIU's mandate following an agreement in February 2011.

External auditors independently audit and report on the financial statements and selected sustainability information in this report.

## Corporate governance continued

During 2011/12, Eskom implemented the compliance management charter and the compliance strategic framework that had been approved by the board in 2010. Legislation pertaining to Eskom was reviewed and governance, management and reporting capability created to enhance Eskom's capacity to manage compliance. Baseline principles have been established and Eskom will develop the necessary supportive capacity in the coming year.

During the last quarter of 2011/12, Eskom conducted a comprehensive review of compliance with important acts and regulations. The review highlighted the importance of adequate and timely plant maintenance to reduce safety risks. Specific attention was also given to compliance with PFMA and NERSA requirements. Eskom is substantially in compliance with significant legislation affecting its operations.

### Security risk management

The board is responsible for ensuring that an integrated crime-prevention plan is in place to minimise Eskom's exposure to crime, particularly fraud. The security risk-management department develops strategies to protect assets, interests, information, people and processes and gives assurance that the required measures are implemented. The executive management committee is kept informed about security issues.

### Nuclear safety

All aspects of electricity production – including safety – at Koeberg power station

are directly accountable to the group executive: Generation. The nuclear safety assurance function is a separate department in Generation with its own technical experts and resources reporting directly to the group executive: Generation and is thus kept independent of the production function.



An executive delegation visits Koeberg power station

In line with global best practice, Eskom has a three-tier system of nuclear safety governance:

- The top tier is the board's social, ethics and sustainability committee, whose meetings are attended by international nuclear experts.
- The middle tier consists of the nuclear management subcommittee presided over by the group executive: Generation. This makes recommendations on issues such as nuclear policy, standards and benchmarks, and overall business requirements.
- The third tier, the safety review committees, brings together experts from various parts of Eskom to evaluate nuclear-safety issues and make recommendations.

## **Legislation and guidelines**

Eskom adheres to the statutory duties and responsibilities set out in the Companies Act and augmented by the PFMA. In addition, Eskom is guided on best practices by King III and the Protocol on Corporate Governance in the Public Sector, as well as international guidelines. Eskom has applied the majority of the King III principles and practices. Because Eskom is a state-owned company, some of these cannot be applied and, in some instances, Eskom has adopted alternative practices to those recommended by King III.

Eskom has amended its memorandum of incorporation to bring it into harmony with the Companies Act, 2008 and has submitted it to the Minister of Public Enterprises for comment. It is envisaged that the memorandum of incorporation will be approved by the shareholder during 2012.

## **Shareholder's compact**

The government of the Republic of South Africa is Eskom's sole shareholder. The shareholder representative is the Minister of Public Enterprises.

Each year Eskom, in consultation with the Minister of Public Enterprises, agrees on its performance objectives, measures and indicators in line with the PFMA. Annual targets are annexed to a list of principles agreed to by Eskom and its shareholder (the shareholder compact) and regular reports are provided.



Minister of Public Enterprises, Mr Malusi Gigaba, hands a cheque to Drina Engelbrecht, National Director for Meals on Wheels Community Services SA from funds raised at Eskom's inaugural 49M Charity Golf Day

## Corporate governance continued

This table is an overview of performance against the key performance indicators in Eskom's shareholder compact with the government, which is reported at an Eskom company level. See page 144 for a more detailed list of key indicators.

### Key performance areas of the shareholder's compact

Performance area	Company level performance indicator
Ensuring adequate future electricity	Generation capacity installed (MW)
	Transmission lines installed (km)
	Transmission capacity installed (MVA)
Ensuring reliable electricity supply	Management of the national supply/demand constraints
	Demand-side management energy efficiency (GWh)
Business sustainability	Internal energy efficiency (GWh)
	Water usage (L/kWh)
	Cost of electricity (R/MWh) (excluding depreciation)
	Debt: equity
	Interest cover
Supporting South Africa's developmental objectives	% local content in capital expansion contracts placed
	Total learners in the system (engineers)
	Total learners in the system (technicians)
	Total learners in the system (artisans)
Pursuing private sector participation	Set up a ring-fenced Systems and Market Operator division within Eskom

	Target 2012	Target achieved	Actual 2012	Actual 2011	Actual 2010
	385	✓	535	315	452
	606	✓	631	443	600
	500	✓	2 525	5 940	1 630
	No load shedding	✓	No load shedding	No load shedding	No load shedding
	1 051	✓	1 422	1 339	n/a
	25.5	✓	44.96	26.20	n/a
	≤1.35	✓	1.34	1.35	1.34
	387.02	✓	374.19	296.36	255.09
	≤2.6	✓	1.69	1.66	1.68
	≥1	✓	3.27	1.40	0.77
	52	✓	77.2	79.7	73.9
	1 800	✓	2 273	1 335	955
	700	✓	844	692	681
	2 350	✓	2 598	2 213	2 144
	Completed by year-end	✓	Done	n/a	n/a

# Corporate governance continued

## Remuneration

### Remuneration philosophy

Eskom's approach to remuneration and benefits is designed to position the company as a preferred employer. Eskom aims to attract and retain skilled, high-performing employees. To achieve this, Eskom has established the following remuneration principles:

- Ensure that business requirements determine market positioning
- Provide market-related remuneration structures, benefits and conditions of service
- Maintain external competitiveness to attract and retain key skills
- Ensure internal equity through defensible differentials in pay and benefits
- Remunerate employees in accordance with their job grade and at least at the minimum of the applicable salary scale
- Follow a lead-lag market approach.

Eskom's remuneration structures fall into four categories, set out below.

### Non-executive remuneration

Remuneration is paid in accordance with the approval of the shareholder and consists of a fixed monthly fee. Non-executives are reimbursed for company-related expenses.

### Bargaining unit

Bargaining-unit employees (all those below middle management) receive a basic salary and benefits. Major benefits include membership of the pension and provident fund, medical aid and an annual bonus (13th cheque). Basic salaries and conditions of service are reviewed annually through a collective bargaining process. Bargaining-unit employees also participate in the annual short-term incentive scheme (see overleaf).

### Managerial level

Managerial-level employees are remunerated on a cost-to-company/package basis. The package includes pensionable earnings, compulsory benefits and a residual cash component. Managerial employees also participate in the annual short-term incentive scheme.

### Executive remuneration

Executive remuneration links remuneration to the performance of the organisation and the individual's contribution. Basic salary is augmented by short- and long-term incentives. International and local benchmarks are considered in determining remuneration. The remuneration strategy is aligned with the shareholder guidelines.

The board approves the remuneration of the finance director and group executives. The chief executive's remuneration is approved by the shareholder. Factors taken into account include level of skill, experience, contribution to organisational performance and success of the group.

The balance between fixed and variable remuneration and short- and long-term incentives is reviewed annually.

The chief executive, finance director and group executives have permanent employment contracts based on Eskom's standard conditions of service.

The remuneration of the executive management committee members consists of the following:

- Guaranteed amount – fixed cash portion and compulsory benefits. This is reviewed annually
- Short-term incentives – rewards for achieving set objectives set by the chief executive and approved by the board committee (refer to the key indicators on page 144)

- Long-term incentives – rewards for achieving objectives set by shareholder (refer to the key indicators on page 144).

During the 2011/12 financial year, the following details are pertinent for executive management committee members:

- On average, they received below-inflation increases on their guaranteed portion of earnings
- Performance contracts indicate that only 20% of performance is based on individual performance, while 80% of performance is based on the collective Eskom performance weighted accordingly
- Cognisance must be taken of the responsibilities and risk carried by directors and executives, given their broad accountability
- On the key indicators table, the linkages to the chief executive's compact (performance targets) are indicated. Refer to Appendix A on page 144, and footnote 2 and 3 on page 150.

The remuneration of the directors and the group executives is disclosed on the following page.

# Corporate governance continued

## The remuneration of the directors and the group executives

The table shows the total remuneration for the year ended 31 March 2012 of the directors and the Group executives in office at 31 March 2012. In order to improve comparability the comparatives for the new Exco members in their previous positions have been included. For the detailed analysis of remuneration see [www.eskom.co.za/IR2012/009.html](http://www.eskom.co.za/IR2012/009.html).

Name	2012 R'000	2011 R'000
<b>Non-executive directors</b>	<b>6 149</b>	6 997
ZA Tsotsi (chairman)	908	—
PM Makwana (previous chairman as well as acting chief executive in 2010/11)	638	2 626
Other non-executives	4 603	4 371
<b>Executive directors</b>	<b>13 776</b>	12 544
BA Dames <sup>1</sup>	8 284	7 558
PS O'Flaherty	5 492	4 986
<b>Other Exco members (group executives)</b>	<b>34 078</b>	29 368
BE Bulunga	3 107	3 040
T Govender	4 228	3 190
EL Johnson	5 397	4 838
SJ Lennon	4 368	3 938
TBL Molefe	2 921	1 575
DL Marokane	4 375	4 155
A Noah	4 418	3 795
MM Ntsokolo	5 264	4 837
<b>Total remuneration</b>	<b>54 003</b>	48 909

<sup>1</sup>.The remuneration disclosed has been adjusted/restated to allocate the salary increase (backdated to the date of appointment of the director as CE) between the current and prior financial years. The increase was approved by the minister during October 2011. The remuneration for the 2011 year end has been restated with a total of R1.817 million consisting of a R1.201 million salary increase and a R616 000 short-term incentive scheme payment. The remuneration for the 2012 year end has been adjusted with an amount of R934 000 relating to the increase in the director's 2012 salary. Refer to note 45 in the Annual Financial Statements.

## Operating context: material issues and risks



One of the three wind turbines at the Klipheuwel wind facility in the Western Cape

# Operating context: material issues

The material issues and risks covered in this report are those that, in the view of both Eskom's stakeholders and management, have the potential to significantly affect the company's achievement of its strategic objectives.

## Linking strategic objectives and material issues and risks

The table below links the strategic objectives and material issues/risks in this section to the value chain, the key indicators and stakeholder engagement.

Material issues reference table

Strategic objectives
 Becoming a high-performance organisation
 Leading and partnering to keep the lights on
 Reducing Eskom's carbon footprint and pursuing low-carbon growth opportunities
 Securing future resource requirements, mandate and the required enabling environment
 Implementing coal haulage and the road-to-rail migration plan
 Pursuing private sector participation
 Ensuring financial sustainability
 Setting up for success



Maintenance at the Palmiet pumped storage scheme near Grabouw

Material issues and risks	Page reference
Focus on safety Improve operations Put customer at centre Internal organisational transformation Build strong skills	44, 85 45, 68, 73, 75, 92, 95 79 88 88
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# Operating context: material issues continued

## Risk and resilience

The Eskom board, through the audit and risk committee, manages Eskom's risk and resilience to provide greater security for its employees, customers and other stakeholders.

## Risk-monitoring system implemented

The executive committee has implemented a risk-monitoring system that enables management to respond appropriately to all significant risks that could affect the business. Eskom's integrated emergency response structures manage emergencies that exceed the scope of normal business in a coordinated manner.

Risk monitoring is done at departmental, regional, operating unit and subsidiary level and is reported upwards to group level. After these integrated risk reports are consolidated, the executive committee and the board's audit and risk committee review and evaluate the risk profile to determine the major corporate and business risks.

## Integrated risk and resilience framework under way

An internal benchmark review of Eskom's risk management maturity, conducted in the last quarter of the financial year, indicated that Eskom has a capability maturity close to the global benchmark for electricity utility companies. An integrated risk and resilience framework to make Eskom a "risk intelligent" company in the medium term is being developed.

What follows is a high-level examination of the key material issues and risks facing Eskom in the period under review, focusing on how these issues affect each other and what Eskom is doing to mitigate the risks they pose or capitalise on the advantages they offer. Greater detail on how these issues and risks affect the company's value chain is set out from page 57.

## Becoming a high-performance organisation



### Focus on safety

Safe working conditions are a core Eskom objective – alongside safe operation of its power plants and transmission and distribution infrastructure in the communities in which it operates. Work-related fatalities are an unnecessary tragedy with far-reaching consequences for staff morale and performance. Such events also negatively affect Eskom's reputation and may in certain instances have repercussions in terms of labour law. While there are significant health and safety risks associated with an electricity business that cannot be avoided entirely, Eskom works to minimise these factors.

### Incorporation of safety into performance-management system

Eskom has included safety in its performance-management system across all divisions. Any accidents reported count against the achievement of key performance targets.

### **Safety-management system established**

A safety-management system has been established. Eskom will continue to focus on training of safety practitioners which emphasises Eskom's policies and follow it up with compliance audits. Safety performance features strongly in Eskom's remuneration strategy (refer to page 144, and footnote 2 on page 150).

### **Safety training and monitoring for staff**

Eskom ran several safety awareness and training programmes for staff throughout the year. Employees are expected to follow the cardinal rules of safety or be disciplined. This has resulted in a considerable increase in safe behaviours (such as use of safety belts) since 2008. Targeted initiatives for specific types of health and safety incidents were also conducted.



Eskom manages around 11 000 people on the Kusile power station site.

### **Contractor safety forums conducted**

Eskom held contractor forums to ensure that the standard of safety management at Eskom sites was in line with best practice. Contractors are expected to comply with Eskom's safety, health and environmental policy; deviation from this policy is not tolerated and can lead to the termination of a contract.

### **Safety-improvement initiatives**

Several initiatives to improve safety were introduced:

- The Zero Harm campaign was launched
- Peer reviews on risk-control interventions were conducted at selected sites
- Work was stopped on a number of occasions to discuss and embed safety issues
- Management took robust action on repeat incidents
- Boot camps were held to focus on specific safety issues.

### **Regulation**

As a state-owned company and South Africa's primary electricity provider, Eskom is subject to extensive regulation of many aspects of its operations. These include licensing, tariff structure, trade commitments and environmental impacts.

Such regulation has the potential to affect Eskom and its stakeholders by changing its structures and operations (for instance, through the new ISMO Bill), by affecting its revenue stream (through regulating tariffs and imposing penalties for environmental emissions).

Eskom is engaging its shareholder (the government) and all relevant regulatory bodies to factor possible changes to its mandate, role and national commitments into all planning initiatives. Refer to [www.eskom.co.za/IR2012/010.html](http://www.eskom.co.za/IR2012/010.html) for more information on regulation.

# Operating context: material issues continued

## What is multi-year price determination?

As a regulated state-owned company, Eskom's revenues and South Africa's electricity prices are determined by NERSA through the process of a multi-year price determination. Eskom is currently in its second MYPD cycle, which began on 1 April 2010 and ends on 31 March 2013, and it is preparing its submission for the third cycle (MYPD 3).

The price-determination process requires Eskom to submit its proposed application to the South African Local Government Association, which represents the municipalities that constitute the single largest buyer group of electricity, and the National Treasury, for comment and takes into account their input into its application to NERSA.

NERSA analyses Eskom's application to ensure that the utility is operating efficiently and that customers are getting value for their money. It also consults with various stakeholders and the public before making its decision.

### Revision of 2012/13 increase in MYPD 2

NERSA approved an average tariff increase of 24.8% for 2010/2011, 25.8% for 2011/12 and 25.9% for the 2012/13 period of MYPD 2. In March 2012, at Eskom's request and after due consideration to ensure no negative impact, NERSA revised the second increase downwards to 16% for the period from 1 April 2012 to 31 March 2013.

## Preparation for MYPD 3 application

Eskom is preparing to submit its application for the third MYPD to NERSA in the second half of 2012. The application will address the following:

- **The transition to cost-reflective tariffs,** which is expected to continue based on a real return on replacement values for assets, but over a longer period. The Electricity Pricing Policy states that cost-reflective tariffs should be reached within a five-year period ending March 2015. However, given the importance of electricity in the economy, Eskom will suggest phasing in the increase over a longer period.
- **Building a financially sustainable and viable electricity industry**
- **Supporting economic growth and job creation**
- **Ensuring the security of supply.**

Whereas previous determinations spanned three years, Eskom proposes that MYPD 3 should cover a five-year period. This will allow customers to plan for price increases, provide rating agencies and lenders with certainty of revenue inflows over a longer period, and ensure that cost-reflective pricing is achieved.

## Stakeholder engagement

Should any of the corporate or business risks Eskom faces materialise and result in significant financial loss, price increases or load shedding, in isolation or in aggregate, it will have a significant negative impact on Eskom's shareholder and stakeholder relationships, and its brand and reputation – all of which may constrain Eskom's ability to raise capital. A strategy has been put in place to manage these risks and to engage with stakeholders.

### **Weekly system status bulletin**

Eskom releases weekly system status bulletins as well as quarterly briefings to the media, to keep stakeholders informed as to the status of its constrained supply system.

### **Building strong skills**

South Africa has limited availability of contractors with the required skills and capacity to support the capital expansion programme, and competition for skilled workers is intense.

To deepen the skills pool for the benefit of both the capital expansion programme and for future grid maintenance, Eskom has in the current year:

- Partnered with six leading South African universities to train engineers in areas relevant to Eskom.
- Launched the Eskom Welding School of Excellence to develop in-house skills and bring down the company's welding reject rate. The 150 learners enrolled in the programme will receive a dual South African and international qualification.

### **Critical information-systems failure**

Effective and secure information systems are essential for efficient management, accurate billing of customers, payment of suppliers and employees and effective power generation and transmitting of electricity over the national grid. The confidentiality, integrity and availability of information systems could be affected by ineffective design or controls, frequent failure of critical applications, inadequate disaster-recovery plans, lack of stability in

the integration environment, poor data security and deliberate cyber-attacks.

These risks could result in loss of day-to-day production and critical information, as well as the inability to recover the network as a result of inadequate disaster-recovery plans.

The controls in place to prevent system failure include information standards and control frameworks, third-party security assessments, vulnerability assessments, reviews of infrastructure and applications, automated application testing, change-control management and development and monitoring of disaster-recovery and business continuity management plans.

### **Leading and partnering to keep the lights on**

#### **Keep the lights on**



Electricity demand levels for 2011/12 were similar to the previous year, with peak demand during the winter of 2011 reaching 37 065MW at the end of May, including non-Eskom generation (May 2010: 36 970MW). The supply-demand balance is expected to remain tight throughout 2012 and 2013, until the first unit of Medupi power station starts coming online. Eskom has put in place a recovery team to ensure that load shedding is avoided, but energy conservation and partnership with all stakeholders will be essential to achieve this.

This is one of Eskom's key performance targets: ensuring that the lights stay on by managing supply and demand in such a

# Operating context: material issues continued

way that essential maintenance can be done.

## ***Reductions in energy demand achieved***

Eskom runs several energy and demand-reduction programmes to encourage industrial customers, municipalities and households to reduce their energy consumption. This makes more capacity available on the electricity supply system, creating opportunities for maintenance work and reducing the likelihood of load shedding in the future. These programmes include:

- Power buy-back agreements with industrial customers.
- The Energy Conservation Scheme, which sets energy allocations for the country's 500 largest electricity users. This voluntary scheme may become mandatory in future. To date 96 of Eskom's 135 key industrial customers (using  $\geq 100\text{GWh}$  per year) have been contracted.
- Residential power-reduction initiatives (installing low-flow shower heads, LED lights, pool timers, geyser blankets and subsidising solar water-heating systems).
- The Power Alert system, broadcast on television between the hours of 17:00 and 21:00, indicates the status of the load on the grid and urges viewers to turn off non-essential appliances in times of excessively high demand.
- The 49M campaign, which aims to encourage energy-efficient attitudes and habits in all consumers, particularly residential users.

Demand-side management has reduced peak electricity demand by 2 997MW for the combined financial years 2005 to 2012. A single power station unit contributes about 600MW to national electricity supply, so demand-side management has now conserved five generators' worth of output (a typical power station has six).

## ***The challenge of infrastructure deterioration***

Eskom's ageing electricity supply network and power stations require essential maintenance and upgrades. Given the constraints on the power system, there has been a reduction in the maintenance window, which has resulted in a backlog, which increases the probability of network or plant failure and, in some cases, contraventions of environmental regulations.

A project to coordinate a comprehensive, synchronised maintenance and refurbishment plan is under way. This project uses demand-side initiatives to create windows of opportunity to do the required work and so improve plant and grid efficiency while reducing the possibility of plant failure and load shedding.

Eskom's drive to become a high performance organisation by creating a step change in its technical performance is enabled by the deliverables of the Back2Basics programme launched. This includes a more consistent and world-class approach to engineering, maintenance and operating practices.

## The Back2Basics programme

The Back2Basics programme was established in 2010 to improve overall performance across Eskom by standardising, simplifying and optimising processes and systems. The programme aims to ensure that management information is complete, accurate, reliable, accessible and timely.

Eskom is currently improving data quality to effectively manage process risks, standardise reports and drive process and system training.

Back2Basics includes the following programmes: services tools, project tools, engineering tools and operations, and maintenance and outage management tools and initiatives. Eskom has achieved the major milestone of implementing a consolidated, standardised and improved SAP application on schedule and within budget.

In 2012/13, the Back2Basics programme will continue to develop and document standardised and optimised processes, focusing on the project and engineering tools and the maintenance and outage maintenance areas to improve Eskom's efficiency and performance.

## Deliver capital expansion programme

Eskom's capital expansion programme was initiated in 2005<sup>1</sup> and will increase generating capacity by 17GW by 2018. The capital expansion programme met its key performance targets during the reporting period, considerably exceeding them in the

case of the amount of generation capacity commissioned and the amount of transmission capacity installed and commissioned. In total, the programme has increased Eskom's generating and transmission capacity by 5 756MW, transmission lines by 3 899kms and transmission substation capacity by 20 195MVA since 2005.

The central challenge facing this programme is to remain on schedule. Eskom is using an integrated approach to manage schedules, budgets and risks associated with the expansion programme and all of its capital expenditure programmes.

This has involved using lessons learnt to date and putting in place procedures, tools and systems to make all capital programmes highly effective and efficient. These include a project lifecycle methodology, project development and readiness assessments, and the Eskom high-performance utility model. For more detail on these processes, see [www.eskom.co.za/IR2012/011.html](http://www.eskom.co.za/IR2012/011.html).

## *Capital expansion accomplishments*

In 2011/12, Eskom achieved the following:

- 535MW of generating capacity was added to the electricity supply system
  - Grootvlei power station 160MW
  - Komati power station 325MW
  - Camden power station 20MW
  - Arnot power station 30MW
- 631km of power lines were added to the grid
- 2 525MVA substation capacity was added to the grid

1. Eskom's total net maximum capacity in 2005 was 36.2GW.

# Operating context: material issues continued

- The return-to-service commissioning of Grootvlei power station was completed
- The return-to-service Komati power station commissioning was 74% complete by the end of the year, ahead of its 73% target
- The new Ingula pumped storage power station, due for completion in 2014/15, was 41% complete, behind its target of 48% due to the geological conditions related to the main turbine hall

## *Improving capital expenditure execution*

Given the size and strategic importance of the capital expansion programme as well as Eskom's significant periodic on-going capital expenditure, Eskom established the Group Capital division in September 2010 to improve capital portfolio management and the development and execution of projects.

The capital-allocation process is built on successful divisional methodologies and Eskom's integrated risk-management approach. These are now standardised across the group and strongly informed by the practices of local and international peer companies such as Sasol and Britain's National Grid.

Eskom's capital prioritisation and allocation processes are made up of a series of stages that:

- "Scrub" and validate individual projects before inclusion into the portfolio
- Rank projects based on risk scores and categories before accounting for constraints to project delivery
- Translate an execution-constrained project list into divisional budgets

- Monitor performance and adjust capital portfolio budgets based on new projects originated, changes in strategic direction and delivery performance.

## *Ensuring timely capital investment*

Until recently, decisions on capital investment were not made in good time, leading to a delay in the country obtaining sufficient generation capacity to meet anticipated demand. A lingering consequence of the late start of the capital expansion programme is that South Africa's supply-demand balance is expected to remain tight throughout 2012 and 2013, when the first unit of Medupi power station comes online. In the years ahead, a comprehensive capital investment schedule is required for the IRP 2010 and the need for timely investment decisions is being addressed in continual engagements between the government and Eskom.

## *Delays on Medupi power station's first unit*

Delays in the boiler for the new dry-cooled, coal-fired station at Medupi, the new power station being built in the Limpopo province, has resulted in the completion date for the first unit (unit 6) being postponed to 2013. This unit was initially due to come online in late 2012, adding 794MW to the power grid. This unsatisfactory delivery performance is being addressed with the contractor at the highest level and there has been significant improvement in performance since January 2012.

### ***Securing servitudes for transmission lines***

Delays in acquiring servitudes are leading to project delays and cost increases. Eskom continues to engage with land owners and is working with the government to resolve these matters.



Servitude at Thabazimbi

### ***Ensuring better engineering scope definition***

Inadequate engineering scope definition during project planning and development has led to delays in project timelines. Eskom is putting in place stronger controls through project readiness assessments to prevent this from happening in future.

### ***Addressing industrial action***

Industrial action as a result of employee dissatisfaction – particularly contractors' relationships with their employees – has led to project delays and property damage. This is being addressed through various mechanisms, including project labour agreements (for Medupi and Kusile) and strong industrial relations policies (Ingula).

### ***Changing technology***

Eskom continues to develop a resource plan to cater for anticipated technologies based on the possible energy-mix allocations in the Integrated Resource Plan 2010.

### ***Reducing the carbon footprint and pursuing low-carbon growth opportunities***



The way in which Eskom generates, transmits and distributes electricity unavoidably has an impact on the environment. This is particularly true in the case of Kusile and Medupi power stations which, when complete in 2018, will produce 4 800MW and 4 764MW of extra power, making them some of the largest coal-fired power stations in the world. Kusile and Medupi, power stations being built in Mpumalanga and Limpopo provinces respectively, have been the target of some protests because they will be coal-burning facilities. While the protests have not seriously disrupted construction, they have had a negative reputational effect. Although Kusile and Medupi power stations will increase the total carbon footprint, the design and technology of these power stations is more efficient compared with existing coal-fired plants, resulting in a reduction in water usage and carbon dioxide emitted per unit of electricity generated.

Eskom is aware of its impact on the environment and strives to embed a culture of environmentally responsible behaviour and decision making across the business. Eskom works hard to ensure that it operates as a responsible corporate citizen and takes its commitment to environmental responsibility seriously. The Eskom/Endangered Wildlife Trust (EWT) strategic partnership is in place to avoid or mitigate wildlife interaction with electrical infrastructure. The partnership continues to ensure that Eskom reduces its impact on biodiversity.

# Operating context: material issues continued

## Water scarcity

Eskom's power stations depend on a steady, adequate supply of water of a certain quality. Competing resource needs, drought in catchment areas, pollution and poor water supply infrastructure all have the potential to hinder Eskom's access to affordable water.

## Involvement in COP 17

Eskom and the South African government demonstrated their commitment to reducing carbon emissions at the COP 17 conference in November and December 2011. Government policy is already in place to determine national carbon budgets to curb South Africa's emissions. Eskom is working with the government to determine what carbon savings are possible from its side and what resources will be needed to achieve them.

## Renewable-energy projects and independent power producers

Eskom is finalising plans for a wind farm at Sere, due for completion in December 2013, and a pilot concentrating solar thermal power plant near Upington, due to start construction in December 2015. Together, these will add 200MW of power to the grid when completed.

Eskom is in the process of installing solar panels at 13 coal-fired power stations, four peaking stations and Megawatt Park to supplement auxiliary electricity consumption. The installations at Kendal and Lethabo power stations have been completed, and the remaining 15 sites will be operational in 2013.

Eskom actively supported the Department of Energy in finalising the request for proposals and power-purchase agreement for the Renewable Energy Independent Power Producer (IPP) programme, formally launched in August 2011. The request for proposals calls for 3 725MW of renewable-energy technologies to be in commercial operation between mid-2014 and the end of 2016. Proposals have been received from 28 preferred bidders so far, with the combined potential to provide 1 416MW of power. Eskom is working with government to connect successful IPPs to the grid.

## Carbon tax discussions

The National Treasury plans to introduce a carbon tax in 2013/14. Eskom has participated in discussions with the Treasury to identify ways to enhance the effectiveness of the tax and limit any unintended consequences for electricity tariffs and the economy.

## Gaseous emissions, water pollution and other environmental issues

Gaseous emissions have increased marginally across the fleet of power stations. The existing fleet does not have technology to reduce gaseous emissions. However Kusile will be commissioned with flue gas desulphurisation (FGD) and plans are in place to retrofit Medupi during the first general overhaul. FGD will remove at least 90% of sulphur emissions. Both power stations will be commissioned with technology to reduce nitrogen oxides. They will also have the most efficient fabric filter technology in Eskom's fleet of power stations, for the removal of particulate emissions.

In future Eskom will not only report on these emissions, but targets will be determined once Medupi and Kusile power stations are online and abatement technologies are retrofitted to existing power stations.

Lessons learnt from past environmental legal contraventions were shared with employees and contractors, contributing to a significant decrease in the number of environmental contraventions, from 63<sup>1</sup> in 2010/11 to 50 in 2011/12.

Eskom formed a task team during the reporting period to reduce particulate emissions and is implementing improvement plans.

A technical plan to eliminate liquid effluent discharge by recycling polluted water for reuse by power plants was developed and projects are under way to improve the water use performance at several power stations. Projects have been initiated to investigate the use of mine water and reduce the reliance on fresh water in the longer term. While Eskom does not utilise groundwater, its activities have the potential to result in groundwater pollution. Monitoring programmes are in place to detect potential pollution and mitigation measures implemented if pollution is detected.

A programme to achieve ISO 14001 certification progressed well this year with several power stations and construction sites achieving certification for the first time.

<sup>1</sup>. One environmental legal contravention was registered in March 2011 and, following an investigation, was reclassified as an event. This has resulted in the reported number of environmental legal contraventions for 2010/11 changing from 64 to 63.

### Compact fluorescent lamp programme

Eskom has distributed more than 47 million compact fluorescent lamps (CFLs) throughout South Africa since the inception of the CFL programme in December 2003.

### Engagement with civil society

Eskom facilitated a number of meetings with environmental NGOs in the period under review. In particular, a technical workshop was held to share information on Eskom's water strategy and provide an opportunity for NGOs to present their water-related initiatives and views on water management.

### Securing future resource requirements, mandate and the enabling environment



#### Competition for coal

Coal-fired power stations depend on a continuous supply of coal of an acceptable quality. However, long-term coal supply is threatened by international competition for South Africa's coal reserves and the influence this has on coal prices. New specifications for the acceptable quality of coal are also having an influence on supply.

Coal-stock levels were at 39 days at the close of the period under review, having recovered from a low of 36 days at the end of July 2011 following labour action at a number of collieries, but down from the 41 days at 31 March 2011.

# Operating context: material issues continued

## Conductor, equipment and electricity theft

Electricity theft (illegal connections) and the theft of distribution cables and other equipment continue to hamper operations. Operation Khanyisa, a campaign launched in 2010 to promote the legal use of power, is helping to address this issue as part of the energy-loss and theft-management programme.

## Maximising socio-economic contribution

Eskom contributes to government's New Growth Path by providing reliable, sustainable and cost-effective energy to fuel South Africa's power-intensive core industries (mining, beneficiation and manufacturing). It also contributes to job creation through its capacity expansion programme and training through the Academy of Learning and the learner programme ([refer www.eskom.co.za/IR2012/012.html](http://www.eskom.co.za/IR2012/012.html)).

## Pursuing private sector participation



Eskom is committed to facilitating the entry of IPPs and acknowledges the role that they must play in the South African

electricity market. Eskom has already signed agreements with non-Eskom generators and IPPs under the Medium-Term Power Purchase Programme (373MW), securing 515MW from municipal generators and 120MW of capacity under the short-term power purchase programme. To date, Eskom has signed power-purchase agreements with a total contracted capacity of 1 008MW.

On 21 May 2012, the Department of Energy announced a further 19 preferred bidders following the second round of bidding, totalling 1 275MW.

Eskom's board has also approved participation in the Department of Energy's Open-Cycle Gas Turbine IPP project, which will see Eskom purchase peak-hour electricity from IPPs. A Public Finance Management Act (PFMA) (1999) application to take part in this transaction has been submitted to the Department of Public Enterprises. Finalisation of the agreement is dependent on governmental approval.

## Cumulative IPP installed capacity and power purchased

Key performance indicator	Description	Actual 2012	Actual 2011	Actual 2010
IPP installed capacity (in MW)	Medium-term power purchase programme	373	373	–
	Municipal base load purchases	515	515	–
	Short-term power purchases	120	–	–
	<b>Total</b>	<b>1 008</b>	888	–
IPP power purchased (in GWh per annum)		4 107	1 833	–

## **Preparations for ISMO**

During 2011 the government tabled the ISMO Bill, which provides for a separate state-owned entity into which certain functions would be spun off from Eskom over time. A phased approach toward the ISMO was envisaged, starting with the ring-fencing of the relevant organisational units initially into an Eskom division, after which the division can be transformed into an Eskom subsidiary – and then into a separate state-owned company.

The System and Market Operator division, operating under the governance of the board, was instituted on 1 October 2011. Its functions include energy planning, feasibility studies, IPP procurements and market administration.

A comprehensive business plan has been developed following the phased approach in meeting the objectives of the ISMO Bill and Eskom is following the necessary governance and permissions processes to establish a subsidiary. Eskom expects to phase in the subsidiary structure during 2012/13.

## **Clarity regarding ISMO**

Eskom is engaging the government and relevant regulatory bodies for clarity on the implementation to factor possible changes into its planning.

## **Integrated Resource Plan 2010 allocation**

Eskom's new generation steering committee is currently engaging the Department of Energy and the Department of Public Enterprises about the allocation. This will impact Eskom's

ability to meet the targeted energy mix to reduce carbon dioxide emissions.

## **Ensuring financial sustainability**



Eskom must raise capital to pursue its capital expansion programme and improve its operations. New capital projects will require pre-identified funding sources before they are authorised to proceed. Eskom is investing strategically and leveraging its assets to secure financing. An appropriate tariff structure that allows for cost recovery, including a real return on the replacement value of assets, is necessary to encourage investment over the long term. Tariffs need to be set at levels that do not constrain economic growth, with provision made to ensure that low-income households can obtain electricity in a sustainable manner.

Eskom has raised a significant amount of debt (some government guaranteed) to fund the capital expansion programme, and the company's credit metrics are closely monitored.

Other risk factors (if unmitigated) affecting Eskom's ability to raise capital, as well as impacting the cost of borrowings, include:

- Reliance on the government's credit rating. Any negative change in the government's credit rating directly affects Eskom.
- Rand depreciation increasing the cost of imported equipment purchases, impacting the Rand value and hence the cost of foreign loans.
- Uncertainty regarding the tariff price path.

# Operating context: material issues continued

- Significant increases in environmental taxation (including carbon taxes) not recoverable from Eskom's customers.
- Non-payment for electricity as a result of increased electricity tariffs.
- Inappropriate cash liquidity levels in the future.
- Regulatory uncertainty regarding the establishment of the Independent System Market Operator.
- Power system crises that might result in a loss of investor confidence.

Continued repercussions from the global financial crisis could also negatively affect Eskom's ability to raise capital.

All of these risks are constantly monitored and action plans continually revised to address the potential risks.

## Financing negotiations

Eskom is working with the government, regulators and financing institutions to obtain adequate and affordable funding and has already secured more than 77% of its required funding up until the completion of the Kusile power plant in 2018/19 – the final project on the current capital expansion programme.

## Savings mechanisms put in place

Cost-saving drives are under way and Eskom is monitoring budgetary performance. Significant savings in operating costs were made in both 2010/11 and 2011/12.

## Mali subsidiary

During the year significant unrest occurred in Mali due to a coup. Eskom has since

March 2010 been negotiating to exit from Mali and the exit date for Mali has been extended to 31 July 2012. The Mali business continues to be disclosed as a discontinued operation. There is sufficient provision for exit and all the major financial risks have been addressed in the exit agreement.

## Market-making risk

Eskom partakes in local market-making activities in a bid to reduce the funding cost of the company. Most investors place a premium on liquidity of bonds and are therefore prepared to accept a lower yield (relative to alternative bonds) to invest in bonds where the issue sizes are large and deemed to be liquid.

The risks of market making include the anticipated loss on turnovers, typically the bid/offer spread thereon, which is partially mitigated through carry trading opportunities. In addition there is the potential negative impact on liquidity which Eskom believes is limited due to the strategy of holding sufficient liquidity buffers as well as a portfolio of liquid Government bonds.

## Adequate liquidity levels

Significant progress has been made in funding the capital expansion programme and Eskom is in a healthy funding and liquidity position. The latest projections indicate that Eskom has sufficient cash from cash on hand, investments, net operational cash flows and current secured facilities available to fund the business for the next 18 months.

## Value chain performance



A vulture flies past a high-voltage line at the new Ingula pumped storage scheme

# Value chain performance continued

Eskom's material issues discussed



Eskom's business covers the entire electricity value chain – from the construction of power infrastructure to the operation and maintenance of these facilities and the sale of the electricity they provide.

This section of the report has been structured according to this value chain to communicate important issues that arise in day-to-day operations. Eskom's performance in each of these fields is an indication of the health of its operations and how closely they are aligned with its strategic objectives.

The material issues and risks summarised at a higher level are spelt out along the value chain, which includes the following elements:

- Construction (managed by the service functions)
- Primary energy (managed by the service functions)
- Generating electricity
- Transmitting and distributing electricity
- Customer service
- Service and strategic function key issues (safety, health, environmental and quality issues are addressed under this section but are the accountability of the entire value chain)
- Financial performance.

## Construction

Since 2005, Eskom has been involved in a major capital expansion programme to increase South Africa's generation and transmission capacity to meet the growing demand for energy. The total cost of this phase of the programme to 2018/19 is estimated to be R340 billion (excluding capitalised borrowing costs). When completed, two of the deliverables, Kusile and Medupi power stations, will be the

third and fourth largest coal-fired power plants in the world. In addition to the capacity expenditure, Eskom has significant capital expenditure to refurbish, maintain and strengthen its current operating plant amounting to approximately R19 billion for the current year.

## Operational highlights

- Commissioned three Komati units (units 4, 5 and 6), Grootvlei unit 5, plus increased capacity at both Camden unit 6 and Arnot unit 5. Altogether Eskom added 535MW of power to the grid.
- The 304km, 765kV transmission line from Perseus in the Free State to Gamma in the Western Cape went live.
- Significant progress was made in placing contracts for Kusile power station.
- Medupi, Ingula, Kusile and power delivery projects obtained ISO 14001:2004 certification, indicating that they abide by the international environmental management system standard.

## Operational challenges

- Increasing generation capacity while limiting Eskom's carbon footprint
- Containing costs
- The capital expansion programme is contributing to skills development and local manufacturing capabilities, but Eskom is competing for skills locally and internationally
- Construction-schedule delays. Eskom has increased its monitoring of contractor performance to develop remedial strategies as required.

### **Future focus areas**

- Hydrostatic pressure test for Medupi Unit 6 planned for June 2012
- Complete Medupi's unit 6 boiler
- Finalise procurement strategy for the Sere wind-farm collaboration (Western Cape)
- Obtain servitudes for various transmission projects
- Finalise methodology for executing renewable-energy projects and continue with existing renewable-energy projects (for instance, research into biomass).

### **Capital expenditure**

Capital expenditure cuts across the value chain, as shown in the table below.



*The new Medupi power station in Lephalale, Limpopo province*

### **Summary of capital expenditure by division, excluding capitalised borrowing costs**

Division/expense (Rm)	Actual 2012	Actual 2011
Group capital	39 730	30 436
Generation	6 590	6 341
Transmission	1 554	1 503
Distribution	7 941	8 190
<b>Subtotal</b>	<b>55 815</b>	46 470
Cost plus mines (future fuel)	1 992	1 063
Service and strategic functions	535	190
Eskom Enterprises	473	209
<b>Total capital expenditure</b>	<b>58 815</b>	47 932

## Value chain performance continued

### Progress on capital expansion projects



#### In development

None	Nuclear-site assessment and front-end planning Biomass Primary energy projects (road and rail)	Sere wind farm, Western Cape (100MW) Concentrating solar power project (100MW) Solar panels (for Eskom's use)	Refurbishment and air-quality control projects	60 grid-strengthening projects
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#### Under construction

Komati (1 000MW)	Medupi (4 764MW) Kusile (4 800MW)	Ingula (1 332MW) Solar-panel installations at Megawatt Park (0.4MW)	Matla refurbishment Kriel refurbishment Duvha refurbishment	765kV projects Central projects Northern projects Cape projects
<b>1 000MW</b>	<b>9 564MW</b>	<b>1 332.4MW</b>	<b>Improved efficiency</b>	<b>801km</b>

#### Completed projects

Camden (1 520MW)	Grootvlei (1 180MW)	Ankerlig (1 338MW) Gourikwa (746MW)	Arnot capacity increase (300 MW)	
<b>2 700MW</b>		<b>2 084MW</b>	<b>300MW</b>	<b>3 899km</b>

Note: All coal-fired stations under construction are in Mpumalanga, apart from Medupi, which is in Limpopo.

### Power station projected completion schedule

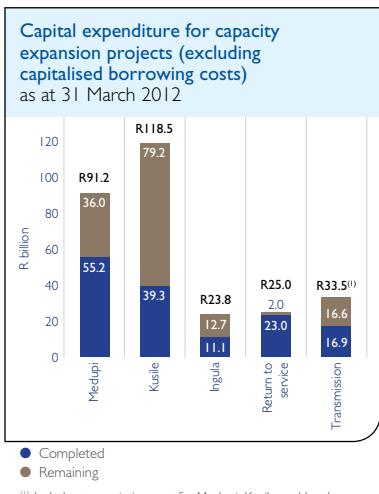
Projects	Actual 2011/12	Target 2012/13	Target 2013/14	Target 2014/15	Target 2015/16	Target 2016/17	Target 2017/18	Target 2018/19	Total
Grootvlei (return to service)	160	30							190
Komati (return to service)	325	200							525
Camden (return to service)	20	30							50
Arnot capacity upgrade (coal fired)		30							30
Medupi (coal fired)			794	794	1 588	794	794		4 764
Kusile (coal fired)				800	800	800	800	1 600	4 800
Ingula (pumped storage)				1 332					1 332
Sere wind farm (renewable)			100						100
<b>Total (MWs)</b>	<b>535</b>	<b>260</b>	<b>894</b>	<b>2 926</b>	<b>2 388</b>	<b>1 594</b>	<b>1 594</b>	<b>1 600</b>	<b>11 791</b>

Eskom is busy with upgrade and refurbishment projects at Kriel, Matla and Duvha power stations at an expected cost of R7.3 billion.

### Eskom's 765kV transmission projects, as at December 2011.



## Value chain performance continued



### Benchmarking new power station costs

The most common way to compare capital costs of power stations is the "overnight cost" method. This is expressed in US dollars per kilowatt (USD/kW) for installed capacity and generally includes engineering, procurement and construction (the basic plant cost), as well as a combination of owners' development, contingency and transmission costs.

Overnight cost calculations take into consideration factors such as site location, year of comparison, technology used and station size, but exclude escalation in equipment, labour, commodity, capitalised borrowing costs and operating and maintenance costs.

Another way to compare power station costs is the "levelised cost of electricity" (LCOE) method. This calculates the

present-value cost in USD/MWh of energy production. LCOE includes the capital cost, as well as fuel and all fixed and variable operating and maintenance costs. Interest rates, inflation and taxation are also taken into account.

Direct comparisons of plant cost are more difficult using the LCOE method due to the great number of cost components that need to be evaluated. However, LCOE is a better way to evaluate the overall cost of a plant because it takes into consideration operational and maintenance expenses.

Several factors make it a challenge to obtain consistent and accurate benchmarks for the cost of Eskom's new power plants:

- The numbers are commercially sensitive
- The assumptions behind comparison numbers (for instance, the technology used, the plant design, the base year and the exchange rate) vary greatly
- Costs are constantly changing and have increased substantially in recent years due to rising demand for equipment and commodity price movements
- Consideration of contextual issues such as localisation, supply chain, economic cycles/parameters and economies of scale.

Benchmarking information presented on page 63 comes from studies by the Electronic Power Research Institute, Lazard, an investment bank and the International Energy Agency. The limits of such high-level comparisons should be understood and considered with due care.

### Summary of benchmark information

Study	Rand/ USD exchange rate	Technology	Overnight costs (USD/kW)	Cost components	LCOE (USD/ MWh)	Cost components
EPRI (2010)	7.4	Pulverised coal with FGD <sup>1</sup>	2 403 – 2 656	<ul style="list-style-type: none"> <li>■ Basic cost</li> <li>■ Contingency</li> </ul>	80 – 85	<ul style="list-style-type: none"> <li>■ Capital cost</li> <li>■ Operational cost</li> <li>■ Fuel cost</li> </ul>
		Pulverised coal without FGD <sup>1</sup>	2 091 – 2 281		71 – 75	
Lazard (2009)	8. <sup>3</sup> <sup>2</sup>	Super-critical with and without carbon capture	2 800 – 5 925	<ul style="list-style-type: none"> <li>■ Basic cost</li> <li>■ Contingency</li> <li>■ Owners' development costs</li> <li>■ Borrowing costs</li> <li>■ Transmission</li> </ul>	78 – 144	<ul style="list-style-type: none"> <li>■ Capital cost</li> <li>■ Operational cost</li> <li>■ Fuel cost</li> <li>■ Transmission</li> </ul>
International Energy Agency (2010)	8.2	Super-critical from various countries	672 – 2 539	<ul style="list-style-type: none"> <li>■ Basic cost</li> <li>■ Contingency</li> <li>■ Owners' development costs</li> </ul>	29 – 100	<ul style="list-style-type: none"> <li>■ Capital cost</li> <li>■ Operational cost</li> <li>■ Fuel cost</li> </ul>
		Pumped storage	2 703		73 – 149	

1. Flue-gas desulphurisation.

2. The Lazard study has not indicated the R/USD exchange and whether transmission costs were included. Assumed R/USD exchange of 8.3 (Eskom value corresponding with 2009 base year) and inclusion of Transmission costs.

## Value chain performance continued

Eskom's costs have been adjusted to the same base year and exchange rate as the benchmark studies to match the cost components of these benchmarks. The outcome is presented in the table below.

### Eskom costs, adjusted to similar components from benchmarking information

Study	Overnight cost (USD/kW)			LCOE (USD/MWh)		
	Medupi	Kusile	Ingula	Medupi	Kusile	Ingula
EPRI	2 210	2 399	1 641	56	79	110
Lazard	2 786	3 269	2 045	53	72	103
International Energy Agency	2 048	2 325	1 540	51	71	99

The above comparison with international benchmarks shows that Eskom's plants are well within or below the international benchmark. While Medupi and Kusile are both coal-fired power stations, a cost difference arises because Medupi's costs do not include flue-gas desulphurisation (FGD). The capital expenditure phasing is also different, resulting in Kusile attracting higher escalation and financing charges.

The figures above were adjusted to the base year and exchange rate of the benchmarking figures on page 63. Based on the current economic and financial parameters applied by Eskom, the overnight cost (excluding borrowing costs

but including owners, development costs, transmission and contingency) and LCOE calculations for capital expansion projects are as follows:

### Current power plant overnight costs and LCOE

Power station	Over-night cost (USD/ kW)	LCOE (USD/ MWh)
Medupi	2 300	54
Kusile	2 500	73
Ingula	1 700	110



## Primary energy

Eskom needs to source and procure sufficient primary energy resources (coal, water, uranium, sorbent and biomass) of the necessary quality, on time and at minimum cost for its power stations to operate.

## Operational highlights

- Coal by rail to Majuba and Camden increased by 1.4 million tons to 8.5 million tons for the year
- Establishment of the rail line and inland coal terminals in Mpumalanga resulted in greater flexibility. Tutuka Coal terminal is on track to receive its first coal in July 2012
- Construction of Komati Water Scheme on track for completion at the end of 2012 and Department of Water Affairs began construction of Mokolo and Crocodile water augmentation project
- Primary Energy Division has achieved ISO 9001 certification as at the end of March 2012. They will work towards ISO 14001 in the coming financial year.

## Operational challenges

- Maintaining coal stock levels at acceptable levels
- Eskom had to purchase more expensive coal due to poor performance of cost-plus mines<sup>1</sup>

- Meeting coal-quality requirements at some power stations
- Quantifying total environmental liability at cost-plus mines
- Road fatalities involving the public and coal transporters continue despite safety initiatives
- Road-repair progress in Mpumalanga was affected by unreliable bitumen supply and delays in water-use licences.

## Future focus areas

- Eskom endorses the CEO water mandate<sup>2</sup> and pledges its commitment to the principles
- Finalise commitments for second phase of Mokolo and Crocodile water projects
- Investigate and implement water conservation, water demand management and mine water treatment and reuse at power stations
- Address national water challenges through stewardship and collective action
- Ensure coal suppliers comply with Eskom's contracting principles, that include compliance with all relevant environmental legislation
- Implement the containerised rail solution for power stations, including Tutuka

1. Cost-plus mines have contractual arrangements through which Eskom pays all capital and operating costs to mine the coal, plus an annuity return to the mining house.  
 2. United Nations Global Compact's CEO Water Mandate is a unique public-private initiative designed to assist companies in the development, implementation and disclosure of water sustainability policies and practices.

## Value chain performance continued

- Execute rail solution to Majuba power station
- Conclude long-term coal supply negotiations and finalise optimisation initiatives for cost-plus mines' production
- Implement a coal quality improvement strategy through beneficiation of coal
- Develop an integrated logistics strategy to cater for transportation of coal, biomass and sorbent
- Monitor and report on progress of the second phase of the road repair programme against Eskom coal delivery operational needs. The second phase is funded by the environmental levy and executed directly by the relevant road authority.

### Financial results for primary energy as at and for the year ended 31 March 2012

Rm	2012	2011
Coal cost	26 586	23 089
Water cost	1 165	990
Coal inventory balance	3 798	3 709
Future fuel balance <sup>1</sup>	5 452	4 089

### Coal

Eskom's coal stocks have risen from a low of 36 days at the end of July 2011 (following labour action) to 39 days at the end of the reporting period.



Eskom is reducing coal trucks on the roads through rail solutions

### Eskom's coal usage

	Unit of measure	Target 2012	Actual 2012	Actual 2011	Actual 2010
Coal burnt	Mt	125.47	125.21	124.68	122.70
Coal purchased	Mt	127.18	124.27	126.23	121.82
Coal transported by rail	Mt	8.2	8.5	7.1	5.1
Coal stock days	Days	42	39	41	37

1. See note 11 in the annual financial statements [www.eskom.co.za/IR2012/013.html](http://www.eskom.co.za/IR2012/013.html). This represents non-refundable advance payments to suppliers and fuel assemblies in process of fabrication.

## Coal quality

The quality of coal that Eskom uses is vital for efficient power plant operations. Eskom has largely concluded all its current contracts at a specification of coal that is based on power plant design and operations. However, in the course of mining coal and as a result of various issues with geological reserves, mining operations, equipment effectiveness and availability, there are times when the coal delivered from the mining suppliers is of a poorer quality than that which is contracted. This may be due to lower calorific value, higher ash content, higher moisture content and more rock impurities. This damages coal-handling and grinding equipment, reduces the efficiency of power plants, causes load losses, and increases emissions and the ash-removal burden.

Mining conditions and coal quality in Mpumalanga have deteriorated in recent years because the better-quality coal has already been extracted, leaving behind only poorer-quality deposits, and coal is now being mined in difficult geological areas.

Coal beneficiation (purification), blending and online quality-monitoring capabilities were not built into most long-term coal supply agreements, making it a challenge to maintain consistency of coal quality supplied to power stations. Eskom is undertaking various projects to improve the quality and consistency of its coal, including online coal-quality monitoring, cross belt sampling and beneficiation at cost-plus mines. Eskom is also engaging with mining houses to ensure the timely supply of life-of-mine plans to enable better control of coal qualities being mined and delivered to power stations.

## Road-to-rail migration plan

About 35.5Mt of coal was transported by road in the 2011/12 period, up from 30.5Mt in 2010/11. Eskom's long-term coal-supply strategy includes investing in low-cost coal-transport infrastructure through the road-to-rail migration plan. This strategy, which is being implemented with Transnet Freight Rail, includes designing and implementing rail-offloading capabilities at power stations that are linked or could be linked to the main rail network with rail sidings.

The strategy aims to:

- Secure coal supply by putting logistics solutions in place at Camden, Tutuka, Majuba, Grootvlei, Kendal and Hendrina to cater for a throughput potential of 32Mt per year by rail
- Improve cost efficiency, including lowering the cost of road repairs
- Improve road safety and minimise reputational damage to Eskom.

Coal road-to-rail migration



# Value chain performance continued



## Strategy for the Waterberg coalfields

The Waterberg coalfields in Limpopo province currently supply coal to Matimba power station and will supply coal to Medupi power station, both of which are in Limpopo. There is a 600km railway line from the coalfields to Mpumalanga, where Eskom's main coal-fired power stations are located, but it is not capable of meeting Eskom's growing needs or those of the export coal industry. The line is to be upgraded to carry at least 20Mt of coal in the near future, and a new rail line has to be built to increase this quantity in the long term.

It is planned that the Waterberg coalfields strategy be implemented by Eskom in conjunction with Transnet Freight Rail and the Department of Water Affairs. It will be monitored by the Presidential Infrastructure Coordinating Commission. Eskom is also in discussion with mines for long-term coal-supply contracts in the Waterberg and is planning the second phase of its water-augmentation project to ensure the timely availability of water. If the project proceeds as envisioned, rail imports to Mpumalanga could begin by 2019.

## Water

South Africa as a whole faces severe water challenges in the coming decades and Eskom is no exception. Sustainable supply of electricity is highly dependent on securing adequate water supplies to run generating plants.

Eskom's water strategy addresses the risks of water scarcity, security and pollution, and the impact of climate change.

The strategy's goals are to:

- Ensure long-term water planning
- Develop and implement conservation strategies
- Meet the water requirements of new and existing power stations

- Meet the water-quality objectives of the various catchment areas
- Efficiently manage water costs
- Influence policy, strategy, planning, legislative and regulatory issues related to water
- Work with stakeholders on water challenges and solutions
- Offer water management assurance, advisory service and support.

## Nuclear fuel strategy

Nuclear fuel is procured and delivered to Koeberg nuclear power station in accordance with government-authorised contracts for supplying uranium and enriched uranium, and for fabricating nuclear fuel. The current uranium and enriched uranium contracts are sufficient to satisfy Koeberg's demand until 2017 and the fuel-fabrication contracts will last until 2015/16.

## Generating electricity

Eskom has the ambition to ensure that no supply interruptions occur due to plant unavailability. To realise this ambition, Eskom aspires to become a world-class generating utility by demonstrating high reliability and availability of its generating assets, with an aspirational Energy Availability Factor (EAF) of 90%.

## Operational highlights

- Coal-related energy losses decreased compared to the previous year
- Received praise from the World Association of Nuclear Operators for Eskom's proactive approach in assessing Koeberg's state of readiness in response to the Fukushima review guidelines
- Reduction in number of unplanned automatic grid separations/7 000 operating hours (UAGS/7 000) compared to 2010/11
- Installed gaseous-emission monitoring systems on one unit of each coal-fired

- power station to improve Generation's monitoring capability
- Water-usage performance improved to 1.34 litres per kWh sent out (L/kWh SO) from 1.35 L/kWh SO in 2010/11.
  - Relative particulate emissions performance improved to 0.31 kilograms per MWh (kg/MWh SO) from 0.33 kg/MWh SO in the prior year
  - Environmental management standard (ISO 14001) certification was achieved at nine of the 13 power stations, Koeberg nuclear power station, the peaking operating unit and generation head office.

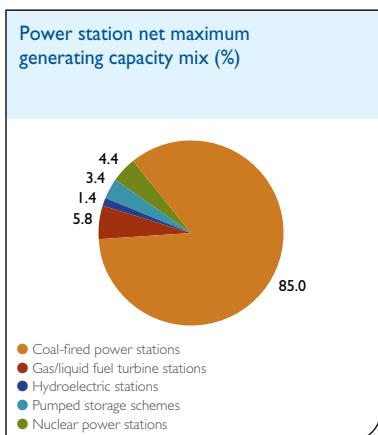
### **Operational challenges**

- Balancing the conflicting needs of shutting down power plants or units to perform maintenance with generating electricity to meet demand
- The unplanned outage on Koeberg Unit 2 (shut down from 28 October to 4 December 2011), the long-term shutdown of Duvha unit 4 and unplanned outages at coal-fired power stations severely affected the generation key performance indicators

- Coal-related energy losses at Matla, Tutuka, Duvha and Arnot power stations remain a concern and may increase if mines continue to deviate from coal-quality specifications
- The tight system, poor coal and under-performing plant resulted in a high number of exemptions against emissions standards set out in power station air emission licences being requested from authorities (33% of the time operating under exemption)
- Environmental compliance audits at several power stations during 2011/12 found that Eskom was not in full compliance with site permit and licence conditions.

### **Future focus areas**

- Focus on safety to achieve zero harm
- Return Duvha power station's 600MW unit generator to service in the second half of 2012
- Reduce Eskom's unplanned capability loss factor (UCLF) – a measurement of the power lost due to the unplanned shutdown of power stations – by 2% over the next three years
- Reduce carbon footprint by improving efficiency of power production and changing the energy mix towards lower-carbon-emitting technologies
- Reduce particulate emissions to 0.21 kg/MWh sent out by 2016/17 to minimise the impact on human health and comply with regulated emission standards, by inter alia, retrofitting fabric filter plants at power stations with high particulate emissions
- Obtain ISO 14001 certification for remaining power stations by March 2013
- Complete waste-management plans for all coal-fired stations to enhance waste-management practices.



## Value chain performance continued

### Financial results for Generation as at and for the year ended 31 March 2012

Rm	2012	2011
Operating maintenance costs	4 936	4 254
Total assets	90 095	78 685
Capital expenditure (excluding capitalised interest)	6 590	6 341

### Technical performance

Overall, Generation's energy availability factor (EAF) performance deteriorated to 81.99% in 2012 compared with 84.59% the previous year, failing to achieve the target of 84.1%. EAF is a measure of a plant's availability to provide electricity minus external energy losses not under control of plant management and internal non-engineering constraints.

### Technical performance

Measure (%)	Target 2012	Actual 2012	Actual 2011	Actual 2010
Energy availability factor (EAF)	84.1	81.99	84.59	85.21
Unplanned capability loss factor (UCLF)	6.50	7.97	6.14	5.10
Planned capability loss factor (PCLF)	8.4	9.07	7.98	9.04

Finding time to do essential maintenance in a capacity-constrained environment continues to be a challenge and there is a considerable maintenance backlog. The system was further affected by damage to unit 4 at Duvha power station in February 2011, which contributed more than 1% to the UCLF in the current year, and the use of poor-quality coal in the past, which negatively affected the performance of some of the coal-fired units. Koeberg's performance was negatively affected by a 36-day forced outage on unit 2 to repair a hydrogen leak related to the generator stator coolant system.

During the year Generation made use of every possible opportunity to undertake maintenance activities. This is reflected in the planned capability loss factor being significantly higher than the previous year and higher than target.

Eskom has made steady progress in reducing its maintenance backlog, from 36 required maintenance outages at 31 March 2011 to 26 by 31 March 2012.

## Benchmarking

### *Coal-fired stations*

Generation has benchmarked its coal plant performance over many years against some of its major European counterparts. Eskom's plant profile and performance aligns closely with that of VGB (Association of Large Boiler Operators). The energy availability of Eskom's coal-fired units is benchmarked against that of VGB's members. VGB is a European-based technical association for the electricity and heat generation industries, with 495 member organisations from 35 countries, representing a collective capacity of 520GW.

### *Energy availability*

When considering the best quartile and the median, Eskom's performance has historically been better than that of the VGB fleet. Over the past few years, this gap has, however, been closed, and for 2010 the performance for the two organisations was the same. The worst quartile has, however, seen a deteriorating VGB trend which has maintained the performance gap to Eskom.

Eskom's declining performance trend is due to increased operating pressure on the electricity production infrastructure and other operating factors outlined in the performance overview section.

Eskom's units continue to operate at higher load factors than VGB's coal-fired units.

### *Nuclear station*

Eskom is affiliated to the World Association of Nuclear Operators (WANO) and the Institute of Nuclear Power Operations (INPO). South Africa is a member of the

International Atomic Energy Agency. These affiliations enable Eskom to benchmark performance, conduct periodic safety reviews, help define standards, disseminate best practice and train personnel. Through INPO, Eskom has obtained international accreditation for its "systematic approach to training" of licensed and non-licensed nuclear operators at Koeberg. Eskom is the only non-US utility to receive such accreditation. An International Atomic Energy Agency Operational Safety Review Team visited Koeberg in August 2011 while a WANO Peer Review of Koeberg was undertaken in November 2011.

Although Koeberg's safety performance remains amongst the best in the world, its availability and hence electricity production performance in 2011 was adversely affected by the forced shutdown of unit 2 in 2011.



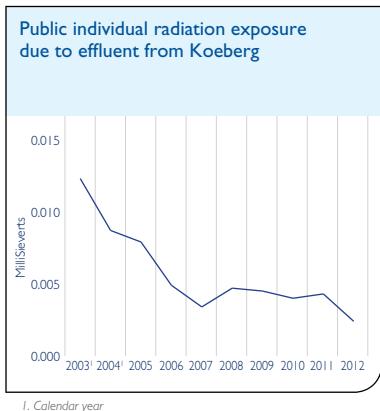
Maintenance work at the Koeberg nuclear power station

Koeberg also compares its performance, with respect to public exposure to radiation arising from Koeberg effluent releases, to the limits set by the National Nuclear Regulator (NNR). Exposure to radiation is measured in units of milliSievert (mSv). The limit recommended by the International Atomic Energy Agency for

## Value chain performance continued

public exposure to radiation is 1.0mSv per year. However, the National Nuclear Regulator has set a stricter limit of 0.25mSv per year for South Africa.

The average public exposure to radiation arising from Koeberg's operations has been less than 0.005 mSv in recent years (or less than 2% of the limit imposed by the National Nuclear Regulator).



Refer to [www.eskom.co.za/IR2012/014.html](http://www.eskom.co.za/IR2012/014.html) for more details of benchmarking by Generation.

### Thermal energy-efficiency programme

Eskom's planned thermal energy-efficiency programme aims to increase generation efficiency by at least 150MW by the end of 2015. This will equate to about 400kt less coal being used across all coal-fired power stations per year, which translates into a reduction of 1.5Mt of carbon dioxide emissions a year.

Energy savings for the year under review, based on steps taken at 10 coal-fired

stations, amounted to between 31MW and 35MW.

Monthly heat-rate trends – that is, coal energy in megajoules (MJ) consumed per unit of electric energy produced (in kWh) – at the pilot at Majuba power station showed that the station was able to perform better than the agreed 11.3MJ/kWh target for eight months of the year. The thermal energy-efficiency programme was extended to another five coal-fired stations, yielding positive results. The full energy-efficiency programme will be rolled out to the remaining coal-fired stations during 2012/13.

### Progress on restoring Duvha power station's unit 4

On 9 February 2011, the 600MW unit 4 at Duvha power station was taken off-load for a statutory turbine test. The protection on the unit failed, causing severe mechanical damage to the turbo generator and the surrounding area and starting a fire. The fire was rapidly brought under control by the power station's fire team. This was the first time one of the Duvha units failed during such a test. The other five Duvha units were not affected and continued to supply electricity.

The root cause of the incident was a modification applied by Eskom in 2004 that, inadvertently, when installing a new programmable logic controller, removed a maximum speed limit during over-speed test conditions. The modification error has been corrected on the remaining units, while corrective actions have been applied to eliminate contributory causes.

The Duvha recovery project is progressing in phases, with the unit due to come online in the second half of 2012.



### Progress of Duvha restoration

Phase	Status
I.	I.1 Q4 2011 I.2 Q1 2012
2.	Q1 2012
3.	Q2 2012
4.	Q3 2012

### Transmission

Transmission is part of the process of getting the electricity that is generated by Eskom's power stations to its distribution networks and end customers. It includes the tasks of balancing supply and demand in real time, trading energy internationally, and planning and operating the transmission grid consisting of 28 995km transmission lines and 153 substations.

#### Operational highlights

- Substantially improved the availability of transmission assets
- Reduced number of line faults per 100km performance
- Only one major incident<sup>1</sup> was recorded, less than the target of two as specified in the key performance indicators
- Identified future trading opportunities in the southern African region to assist in alleviating potential shortfalls in the medium-term electricity supply.

#### Operational challenges

- System minutes<sup>2</sup> events (<1 system minute) totalled 4.73 – negatively outside the target of 3.4
- High levels of conductor and equipment theft are affecting plant performance and increasing cost
- Deaths of protected birds due to collisions with power lines.

#### Future focus areas

- Strengthen the network to improve redundancy and thus reliability
- Connect Independent Power Producers (IPPs) to the grid
- Improve network reliability and technical performance
- Continue efforts to reduce conductor and equipment theft
- Obtain ISO 14001 certification by March 2014.

1. A major incident is defined as an interruption with a severity  $\geq$  one system minute.

2. System minutes are a global benchmark for measuring the severity of interruptions to customers. One system minute is equivalent to the loss of the entire system for one minute at annual peak.

# Value chain performance continued

## Financial results for Transmission, as at and for the year ended 31 March 2012

Rm	2012	2011
External revenue	4 873	4 125
Maintenance and refurbishment costs	290	98
Total assets	24 042	19 445
Capital expenditure (excluding capitalised interest)	1 554	1 503

## Technical performance

### Transmission system technical performance

	Target 2012	Actual 2012	Actual 2011	Actual 2010
Total system minutes lost for events <1 minute (in minutes)	3.40	4.73	2.63	4.09
Major incidents (system minutes lost ≥1 minute, number)	2	1	–	1

The system minutes lost <1 performance deteriorated during the year, primarily due to risks associated with the execution of increased expansion and refurbishment projects at operational sites.

### Benchmarking

Benchmarking Transmission performance against similar utilities is challenging because of differences in network firmness, reliability criteria, definitions and data capture.

The Transmission division participated in the International Transmission Operations and Maintenance Study during 2011/12 to identify best global practices. Twenty-seven companies participated in this study, which focused on maintenance and plant performance. Eskom's transmission-plant performance is in the first quartile for extra-high voltage switchgear and instrument transformers. Its performance is below average in the overhead line and compensation asset categories.

### Transmission grid maintenance

About 60% of Eskom's transformers and 55% of its power lines are more than 25 years old and require ongoing maintenance and refurbishment. Transmission equipment is maintained in accordance with manufacturer's specifications, as well as standards and procedures developed by Eskom for the lifecycle management of the assets.

### Southern African Energy

The SADC region has an abundance of renewable and other primary energy sources and could in time play a significant role in meeting South Africa's electricity requirements and assist with enhancing the energy mix to improve South Africa's environmental performance.

The Southern African Energy unit was established under Transmission to pursue business opportunities in the SADC region with a view to increase imports, strengthen transmission systems, access strategic



resources, and grow Eskom's market share in the region.

A number of projects are already being advanced in several countries, with the primary focus on hydro and natural gas resources and transmission strengthening. A number of SADC countries are implementing new generation projects.

In particular, Namibia increased its generation capacity by 90MW, while Botswana, having increased its capacity by 150MW during the year, is set to add a further 450MW before the end of 2012.

Eskom has engaged in cross-border trading for many years. While Eskom is a net exporter of electricity, the net volume exported (exports less imports) represents only 1.36% of the total energy available in South Africa. The majority of the imports are from Cahora Bassa (HCB) in central Mozambique with small volumes from Lesotho.

Eskom's exports firm power to the national utilities of Botswana (BPC), Namibia (NamPower), Swaziland (SEC) and Lesotho (LEC).

Eskom has trading relationships with Zimbabwe (ZESA) and Zambia (ZESCO), but these agreements are for non-firm power when surplus capacity exists and during emergency situations. In addition Eskom exports to three end-use customers, one in Mozambique and two in Namibia. Eskom wheels (transports) power on behalf of Electricidade de Mozambique (EDM), the national utility of Mozambique, from Cahora Bassa to the load centre in the south of Mozambique.

#### 1. SAPP members:

*Interconnected countries – South Africa, Namibia, Lesotho, Swaziland, Botswana, Zimbabwe, Mozambique, Zambia, Democratic Republic of Congo.*

*Non-interconnected countries – Malawi, Angola and Tanzania.*

Eskom has the opportunity to trade electricity on a market platform called the Day-ahead Market, although minimal volumes are traded on this platform due to the prevailing energy constraint across the region. Eskom, along with other Southern African Power Pool members<sup>1</sup>, has the right and obligation to trade and wheel electricity.

## Distribution

Distribution's mandate is to operate and maintain the distribution network. Eskom owns 47 509km of distribution lines, 311 831km of reticulation power lines and 11 415km of underground cables in South Africa, representing the largest power-line system in Africa.

Since 1991 Eskom has connected more than 4.2 million electrification households to the distribution network. The electrification strategy was to connect as many customers as possible with the available funding (least-cost approach). Network planning focused primarily on compliance with minimum regulatory requirements and not on continuity of supply requirements.

This approach resulted in lengthy radial subtransmission and distribution lines supplying large numbers of customers with few alternative supply options in the event of supply interruptions. Distribution's networks are therefore characterised by:

- Average feeder length of more than 100km (some as long as 300km)
- High number of customers (in some cases more than 10 000) per feeder;
- Low network visibility, limiting the remote control of switching devices.

# Value chain performance continued

## Operational highlights

- The system average interruption duration index (SAIDI) performance improved significantly and the system average interruption frequency index (SAIFI) performance improved marginally during the year
- Operation Khanyisa, a public-awareness campaign about legal power usage, is helping to reduce energy loss and decrease theft
- Electrification connections of 155 213 for the year exceeded the targeted 125 377
- Reduction of more than 50% in environmental legal contraventions.

## Operational challenges

- Safety performance is a serious concern, especially employee and contractor fatalities
- High levels of theft of equipment and electricity affect plant performance and increase cost
- Employee security remains a concern
- Collisions and electrocutions of birds on distribution power lines
- Acquisition of land and rights for electricity infrastructure.

## Future focus areas

- Reducing public safety incidents through awareness
- Conducting appropriate network maintenance and making the necessary capital investments
- Supporting government initiatives such as the universal access to electricity plan
- Continuing to improve network reliability and technical performance
- Providing viable electricity options to informal settlements
- Continuing rollout of Operation Khanyisa to reduce energy losses mainly due to theft.

## Financial results for Distribution, as at and for the year ended 31 March 2012

Rm	2012	2011
Grants received for electrification	1 784	1 720
Maintenance and refurbishment costs	3 851	2 947
Total assets	49 934	44 428
Capital expenditure (excluding capitalised interest)	7 941	8 190

## Benchmarking

Distribution participated in a 2010 benchmarking study, conducted by an independent international consulting group, with utilities in North and South America. The reporting methodology, network characteristics, environment and operational processes and practices of the distributors in the benchmark panels are not the same, which results in a wide range of performance levels. This makes any direct performance comparison a challenge.

Eskom's network interruption performance is dominated by the performance of rural lines, which have been built on a least-cost basis. In this way, Eskom's distribution networks differ significantly from those of distribution companies that have supply areas that include large cities and towns. Rural lines in South Africa include long radial lines with very limited redundancy and back-feed capability<sup>1</sup>. This significantly distorts direct comparison with North American distributors. In the benchmark panel the South American peer group is more appropriate from a network investment and customer point of view, than the North American peer group (as well as European peer groups). The Eskom

1. When a power line has a fault, if there is not a second line to continue supplying power, or if there is not a line from another supply point to continue supplying power into the area from another source.

system average interruption duration index (SAIDI) and system average interruption frequency index (SAIFI) are currently in the fourth quartile.

System average interruption duration index performance in South America (2010) is between 2.8 and 362.3 hours per

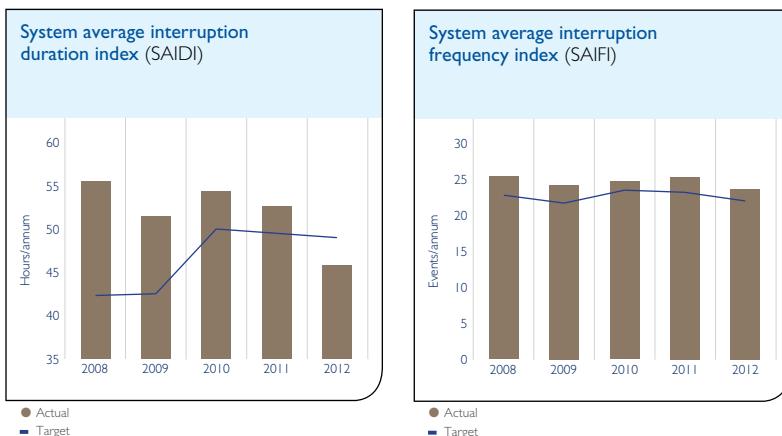
year and for Eskom it is currently 45.75 hours.

System average interruption frequency index performance reported in South America (2010) was between 2.5 and 106.2 sustained supply interruption events per year and for Eskom it is currently 23.73 events.

#### Technical performance SAIDI and SAIFI performance

Measure	Description of measure (and unit)	Target 2012	Actual 2012	Actual 2011	Actual 2010
SAIDI	System average interruption duration index (hours per year)	≤49	45.75	52.61	54.41
SAIFI	System average interruption frequency index (number per year)	≤22	23.73	25.31	24.65

The improved SAIDI performance is attributed to implementing network reliability improvement plans in operating units.



- I. When a power line has a fault, if there is not a second line to continue supplying power, or if there is not a line from another supply point to continue supplying power into the area from another source.

## Value chain performance continued

Distribution's long-term objective is to reduce SAIDI to 39 hours and SAIFI to 17 interruptions by 2016/17. Four strategic initiatives are planned to help achieve these targets:

- Establishing additional technical service centres to ensure that field staff members are located close to customers and networks.
  - Increasing live-line work so that power does not have to be disconnected when maintenance is performed or new customers are being connected to the network. Live-line work currently accounts for 50% of planned work, which has had a substantial positive impact on both SAIDI and SAIFI. A business case to increase live work to 70% of planned work is being prepared.
- Refurbishing and strengthening networks, which includes:
    - Revising the planning criteria used to reduce the number of customers affected by a fault and setting the criteria for the creation of redundancy on networks
    - Identifying poor-performing networks that require special attention
    - Increasing visibility of network "switches" to allow remote operation, reducing travelling time and facilitating fault-finding.
  - Providing staff members who carry out unplanned outage work orders in the field with a rugged mobile computing device that uses a navigation system to direct them to the location of faults.

### Working towards universal access to electricity in South Africa

Eskom implements the integrated national electrification programme on behalf of the Department of Energy in the company's licensed supply areas. Electrification in a municipality's licensed areas of supply is carried out by the municipality.

#### Progress of electrification programme

		Target 2012	Actual 2012	Actual 2011	Actual 2010
Department of Energy funded	Number	<b>99 377</b>	<b>125 628</b>	129 945	106 603
Eskom funded	Number	<b>26 000</b>	<b>29 585</b>	16 217	39 554
Municipality/other funded	Number	—	—	3 752	3 744
Total electrification connections	Number	<b>125 377</b>	<b>155 213</b>	149 914	149 901

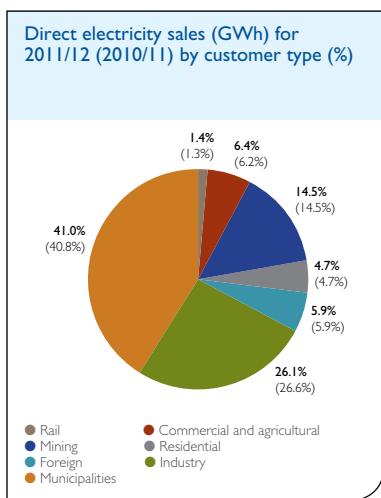
Meeting the government's target of universal access to electricity is primarily dependent on the availability of funding from the Department of Energy. Eskom works with the department and other interested parties continuously on planning, funding and other requirements for universal access. The targeted number of electrifications for the next five years amounts to 724 636 connections.



## Group customer services

To improve customer service and its public image Eskom has created a Group Customer Services division. It aims to put the customer at the centre of Eskom's business and to ensure a single point of accountability and relationship management for all customers. To this end, it has established a customer service centre of excellence, with structured operating units to improve operations and to manage reputational risk.

The division also includes all the integrated demand management initiatives undertaken by the company.



## Operational highlights

- Improvement of the large power-user top customers debtor days
- Secured a number of power buy-back deals

- Successfully encouraged customers to reduce electricity load at short notice when required
- Positive engagements between stakeholders and customers on the capacity situation, including system status reports submitted daily to Eskom's customers
- Media advert "Power Alert" continued to drive savings in critical times. During the year average demand savings of 261MW was attained during "red" periods. The overall savings of Power Alert translate to 50.6GWh of energy savings
- Accelerated the solar water-heating rebate programme. In the current year 158 175 units have been verified
- Rolled out 49M, a marketing campaign aimed at promoting long-term behavioural change in favour of energy savings
- Introduced alternative incentive programmes for managing demand.

## Operational challenges

- The high electricity price increases negatively affect the profitability and financial sustainability of Eskom's customers and their ability to pay their electricity bills
- Increasing number of defaulting municipalities which may have cash flow implications for Eskom
- The management of outstanding debt in Soweto
- Environmental levies and cross-subsidisation between customer categories are becoming an issue with large customers having to cross-subsidise residential customers
- Ensuring that tariffs are cost reflective taking into account size, locality and time of use by customers.

# Value chain performance continued

- Ensuring customers are updated on their quality of supply, as well as planned outages. Quality of supply is showing a negative trend and customer perception is that the quality of supply does not meet the required standard
- Rollout of the Energy Conservation Scheme – ensuring that all affected customers understand process and are comfortable with the reference consumption.
- Continue investigating new implementation and technology opportunities
- Achieve successful outcome with remaining special pricing agreements
- Rolling out the upgraded on-line vending system
- Rolling out the customer service excellence programme
- Revising the customer satisfaction questionnaires to ensure that all service aspects that are important to customers are taken into account.

## Future focus areas

- Manage power demand by ensuring that all possible options are explored with customers regarding grid access, power buy-back, demand management participation (DMP) project, to help close the energy gap
- Implement 500MW demand-response pilot programme, which will see small industrial and commercial undertakings reduce usage through power buy-back agreements and demand-side management initiatives
- Continue the energy-efficiency drive in the residential market through the recently approved residential mass rollout initiative which involves going door to door to residential homes and installing energy efficient technologies including CFL bulbs, LED lamps, low flow shower heads, flow restrictors, timers and geyser blankets
- Drive the recently implemented incentive programmes further into the market

## Financial results for Group Customer Services as at and for the year ended 31 March 2012

	2012	2011
External (local) revenue Rm	108 260	86 454
Impairments Rm	587	669
IDM <sup>i</sup> costs Rm	1 942	779
Debtors less provisions Rm	8 835	6 955
Large power users debtors days – top customers excluding disputes	14.4	15.5
Large power users debtors days – municipalities and other	21.8	18.9
Small power users debtors days excluding Soweto	42.9	45.1

<sup>i</sup>. Integrated Demand Management cost.

## **Performance**

### ***Transformation journey to customer service excellence***

Eskom has set itself an aspiration of becoming a world-class customer service organisation by creating fully satisfied and serviced customers who consistently rate Eskom in the top quartile.

In order to overcome the current challenges to reach the aspiration, Eskom will progress in three phases with completion expected in 2014.

Over the past 12 months, significant progress was made in setting up a new division with centres of excellence and structured operating units to ensure a single point of accountability and relationship management for all customers of Eskom. For the second phase going forward, a 12-month transformation journey has been developed to eliminate the negative sentiments of the public about Eskom's customer service.

The phases for 2012/2013 will be focused on:

- Getting the basics right by simplifying, standardising and optimising our processes, systems and data, as part of Eskom's Back2Basics programme.
- Building skills to enhance people and organisation competence to ensure the best people are the face of Eskom to customers. Through the Eskom Academy of Learning, the School of

Customer Service has been established to provide the necessary training required to all Customer Service front-line staff and other customer-facing employees of Eskom.

- The structured delivery units will focus on all customer service channels and touch points such as walk-in centres, contact centres and vending outlets. Eskom will also explore how it can leverage technology, such as the use of social media platforms for customer communication.
- In support of Eskom's purpose "to improve the quality of life of all South Africans", Eskom continues to strive to ensure that customers have reliable and sustainable electricity solutions (quality product and services) through improved access to Free Basic Electricity (FBE), uninterrupted access to electricity token vending, accurate bills, simplified tariffs and transparent communication.

The final phase in 2013/2014 will focus on developing segment-specific strategies to ensure utilisation of the most appropriate, optimal channels and service offerings to each customer base. A nerve centre to ensure regular monitoring and response to matters impacting the customer experience will be established. Performance and measurement tools will be enhanced to enable Eskom to respond to customer needs and introduce ongoing improvements where appropriate.

# Value chain performance continued

## **On-line vending system**

The on-line vending system in Eskom had operational performance issues that affected customers in the country on a large scale at the end of 2011 and start of 2012. The problems were mainly due to infrastructure issues during the change-over to new hardware. In addition to this a vendor software system malfunctioned after they made changes to their system. The system is operating normally and is being closely monitored. No major incidents have been experienced since the middle of February 2012.

The infrastructure is in the process of being replaced, and further application changes by the vendor are anticipated in the near future. No further unplanned interruptions are expected as all known issues have been resolved.

Eskom understands the impact to the customer when system issues are experienced and apologises for the inconvenience caused.

## **Benchmarking**

### ***Customer service index***

Eskom uses a combination of monthly perception and interaction-based customer surveys to measure the service delivered to, and the satisfaction of, its residential, small and medium customers. The index combines the results of two external surveys and four internal measures. Eskom achieved a score of 85.55% (2011: 84.37%) against the target of 85.82%. Eskom uses these results to identify which aspects of service require improvement.

## **Demand-side management**

### ***Commercial and industrial initiatives***

Eskom will continue to engage with customers about balancing supply and demand during periods of generation

constraints. Large customers have responded favourably and already contribute to the stability of the national power system by reducing load through power buy-back agreements and demand-side management initiatives.

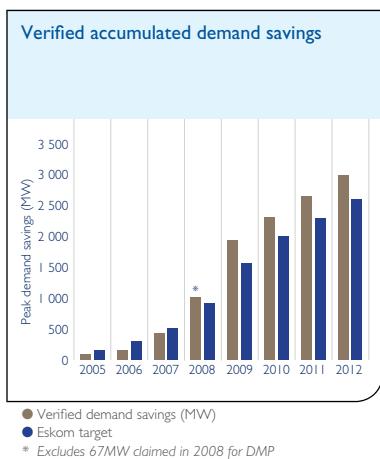
Eskom's demand market participation programme is to be extended to small industrial and commercial undertakings through a programme called "demand response aggregation". This programme will be piloted for customers consuming more than 500MW.

The proposed Energy Conservation Scheme, if passed into law, will see energy-reduction targets being set for the country's 500 largest electricity users and charges imposed for non-compliance. Eskom has already implemented a voluntary energy conservation scheme and is engaging with the South African Local Government Association and municipalities to help their customers implement energy-conservation measures.

## ***Power buy-back initiative***

As part of the efforts to create the necessary space to perform essential and critical generation plant maintenance, Eskom has entered into power buy-back agreements with certain of its large industrial customers. The power buy-back period is typically for 30 days or longer with all current agreements terminating by 31 May 2012. The requirement is that customers reduce their base load demand and this reduction is purchased by Eskom at a rate negotiated with customers. The rate takes into account the customers' fixed costs, contractual obligations and various other requirements, including the requirement of no permanent job losses.

This initiative has proved to be beneficial in creating the additional space on the power system through base load demand reduction. During this power buy-back period, lower-than-usual commodity prices and surplus stock levels would have had a significant negative impact on the economy, jobs and our customers' business operations. Eskom believes that through the power buy-back scheme, customers are in a slightly more favourable position than they would have otherwise been in creating a win-win situation for both parties.



Total evening peak demand and energy savings achieved were:

		Target 2011/12	Actual 2011/12	Actual 2010/11
Evening peak demand savings	MW	313.0	365.4	354.1
Energy savings	GWh	1 051	1 422	1 339

### Residential initiatives

A residential mass rollout programme has recently been approved to make households more efficient by installing low-flow shower heads, LED lamps, pool timers and geyser blankets.

There has been a significant increase in solar water-heating system installations, with 158 175 claims (27 149 for high-pressure systems and 131 026 for low-pressure systems) verified during the financial year.

Eskom's Power Alert and geyser evening campaigns between 17:00 and 21:00 aim to reduce power demand during the evening peak.

### Eskom internal initiatives

Eskom aims to improve the energy efficiency of its plants and offices by conducting energy audits and undertaking efficiency programmes that focus on lighting, heating, ventilation and air-conditioning. The demand savings of 1.4MW achieved in 2011/12 translates to energy savings of 45.0GWh (2011: 26.2GWh) for the year, against a target of 25.5GWh.

## Service and strategic functions



A youth group sews hot boxes for cooking at one of Eskom's Energy and Sustainability programme projects



In 2010/11, Eskom introduced the integrated high-performance utility model for the identification of core capabilities, processes and the required reporting that spans across the entire value chain, including the service and strategic functions. Refer to Divisional Report [www.eskom.co.za/IR2012/015.html](http://www.eskom.co.za/IR2012/015.html)

These service and strategic functions include the management and monitoring of:

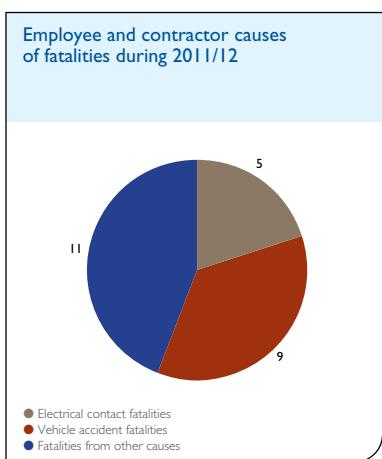
- Financial performance (presented on page 100)
- Safety
- Quality management
- Skills
- Transformation and employment equity
- Regulation and legal
- Supplier development and localisation
- Group information technology (IT)
- Delivery unit
- Research and technology
- Environmental management
- Climate change
- Corporate social investment.

### Safety

A price cannot be put on the value of human life or that of human abilities. While many campaigns, policies, procedures and programmes have been instituted in Eskom over the past few years to prevent occupational health and safety (OHS) related incidents and fatalities, the results of these interventions have been unsatisfactory as highlighted by the Eskom safety record.

To deliver on the OHS objectives, the OHS capability within Eskom from a policy, compliance and implementation co-ordination perspective has been centralised into a single department within Eskom. This department will drive the OHS strategy which focuses on addressing seven key areas to achieve the desired objectives and bring about the step change sought:

1. **Connecting** OHS to everything that is done in Eskom and personalising OHS
2. Attaining **commitment** to ZERO harm and OHS across Eskom
3. Making **compliance** with OHS requirements a non-negotiable
4. Ensuring that Eskom has an optimal OHS organisation structure resourced with the required **competencies** and number of competent staff to deliver on the OHS mandate



# Service and strategic functions continued

5. **Communicating** OHS and ZERO harm in a manner that entrenches and re-inforces the ZERO Harm value and related success, incidents, etc.
6. **Consistency** of actions, decision making, etc.
7. Ensuring that Eskom has a **cycle of continuous improvement, tracking and monitoring** in OHS through the development of appropriate KPIs, KPIs and proactive assurance processes.

The above key areas will apply to all of Eskom's strategic objectives and activities.

## Safety performance

Eskom's commitment to "zero harm" builds a strong foundation for health and

safety. Its safety expectations entail a simple set of non-negotiable policies, principles and standards set to achieve "zero harm to all" as a way of life.

Sadly, there were 13 employee fatalities and 12 contractor fatalities during 2011/12. Any loss of life is unacceptable and a massive concern. Eskom has implemented a number of safety improvement initiatives to reduce the number of safety-related incidents to zero.

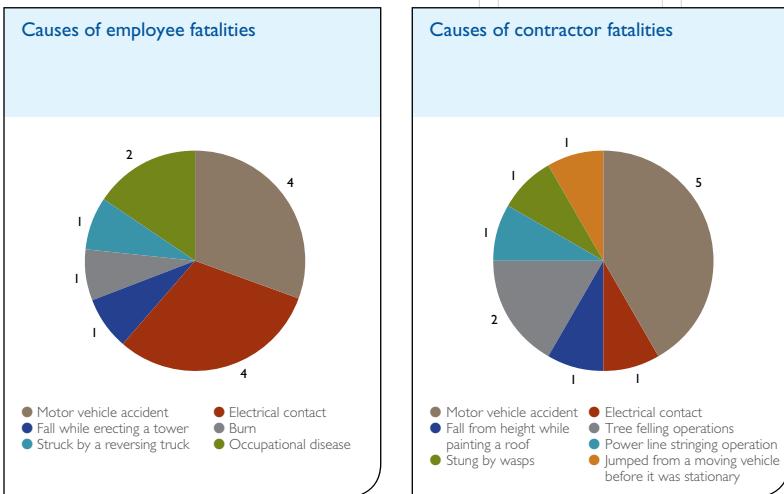
Despite the unacceptable safety performance, there were positive achievements during the last year. Some units have achieved up to 35 years without lost-time injuries.

## Safety performance 2010 – 2012

	Unit of measure	Actual 2011/12	Actual 2010/11	Actual 2009/10
<b>Employee safety</b>				
Total fatalities	number	13	7 <sup>1</sup>	2
Electrical contact fatalities	number	4	3 <sup>1</sup>	0
Vehicle accident fatalities	number	4	0	2
Other fatalities	number	5	4	0
Lost-time incident rate, including occupational diseases <sup>2</sup>	index	0.41	0.47	0.54
<b>Contractor safety</b>				
Total contractor fatalities	number	12	18	15
Electrical contact fatalities	number	1	1	1
Vehicle accident fatalities	number	5	10	6
Other fatalities	number	6	7	8

1. Incident occurred on 1 January 2011 and employee died on 10 July 2011.

2. The progressive lost-time incident rate (LTIR) is a proportional representation of the occurrence of lost-time injuries over 12 months per 200 000 working hours.



Safety is crucial in Eskom given the nature of our business

# Service and strategic functions continued

## **Lost-time incident rate (LTIR)**

The progressive LTIR is a proportional representation of the occurrence of lost-time injuries over 12 months. The actual lost-time injury rate (LTIR) performance was 0.41 per 200 000 man-hours worked against a target of 0.40 for 2012. The LTIR target was not met, which is a great disappointment, but the safety of our people remains fundamental to our business.

In risk-specific terms, the leading causes of injuries were motor vehicle accidents, caught between, and struck by objects and falls.

## **Quality management**

Eskom has made an undertaking to develop and implement management systems that are ISO 9001, ISO 14001 and OHSAS 18001 compliant to achieve sustainable performance improvement, with zero harm to people and the environment. The first milestone of this performance improvement journey is the establishment of ISO 9001 Quality Management Systems as the foundation for good business management. This will pave the way towards positioning Eskom for sustained success to ultimately become a high-performance organisation and top global utility. Upon achieving ISO 9001 compliance, the management systems will be enhanced by addressing Environmental, Health and Safety requirements. The execution of the ISO 9001 implementation plans is under way, with good progress made on certification.

## **Skills**

Eskom aims to grow human capital by retaining core, critical and scarce resources, and by effectively developing skills and talent.

Eskom has sustained its skills base and a significant number of learners received training over the past five years. In 2011/12, 5 715 (2010/11: 4 240) learners (engineers, technicians and artisans), with three- to four-year learning/bursary contracts, were in the pipeline. This number will increase to 5 907 in 2012/13, with incremental increases in the years that follow. By 2015/16, there will be a pipeline of 6 100 learners.

All targets have been exceeded including the learner pipeline, engineering, technician, artisan and a youth programme of 5 159 for period 2011/12 against a target of 2 100.

Eskom is to implement an integrated workplace skills plan to address the key training priorities in closing the core and critical competency gaps.

## **Transformation and employment equity**

Eskom has implemented an ambitious employment equity plan, supported by a long-term, target-setting strategy (Equity 2020) to drive the transformational agenda. The plan seeks to create a workplace and staff profile that is diverse and inclusive, and to ensure that diversity becomes the "Eskom way".

In November 2010 Eskom participated in the Department of Labour's director-general review process. In February 2012 the department confirmed that Eskom has the necessary transformation interventions in place and the key indicators show that there has been a generally positive trend in racial and gender equity representation at every level.

The table overleaf details the employee profile for Eskom's four top occupational levels in terms of gender and race for group and company.



Given the long distances covered by Eskom staff, driver training is a key component of the safety programme

## Service and strategic functions continued

Eskom Group employee profile for the top four occupational levels (task grades nine and above). There are no specific targets set for the group.

Occupational level	Date
Top management	March 2010 actual %
	March 2011 actual %
	<b>March 2012 actual %</b>
Senior management	March 2010 actual %
	March 2011 actual %
	<b>March 2012 actual %</b>
Professional, specialists and mid-management	March 2010 actual %
	March 2011 actual %
	<b>March 2012 actual %</b>
Skilled technical, academic qualified workers, junior management, supervisors	March 2010 actual %
	March 2011 actual %
	<b>March 2012 actual %</b>

Eskom Company employee profile for the top four occupational levels (task grades nine and above)

Occupational level EAP %	Date
Top management	March 2010 actual %
	March 2011 actual %
	<b>March 2012 target %</b>
	March 2012 actual %
Senior management	March 2010 actual %
	March 2011 actual %
	<b>March 2012 target %</b>
	March 2012 actual %
Professional, specialists and mid-management	March 2010 actual %
	March 2011 actual %
	<b>March 2012 target %</b>
	March 2012 actual %
Skilled technical, academic qualified workers, junior management, supervisors	March 2010 actual %
	March 2011 actual %
	<b>March 2012 target %</b>
	March 2012 actual %

	Male				Female				Foreign nationals	
	A	C	I	W	A	C	I	W	Male	Female
	20.83	4.17	16.67	37.50	8.33	4.17	4.17	4.17	0.00	0.00
	28.57	4.76	14.29	33.33	4.76	4.76	4.76	4.76	0.00	0.00
	<b>34.48</b>	<b>3.45</b>	<b>13.79</b>	<b>24.14</b>	<b>13.79</b>	<b>3.45</b>	<b>3.45</b>	<b>3.45</b>	<b>0.00</b>	<b>0.00</b>
	18.10	2.94	9.95	42.53	9.50	2.71	4.30	5.20	4.07	0.68
	20.83	3.70	10.42	38.89	10.42	2.78	4.40	6.02	2.08	0.46
	<b>21.43</b>	<b>3.57</b>	<b>10.94</b>	<b>36.61</b>	<b>10.71</b>	<b>2.68</b>	<b>4.24</b>	<b>6.47</b>	<b>2.46</b>	<b>0.89</b>
	26.67	5.17	7.41	27.38	18.25	1.95	2.85	6.73	2.82	0.77
	26.72	5.05	7.28	26.85	19.28	1.99	2.88	6.80	2.54	0.61
	<b>27.29</b>	<b>5.11</b>	<b>7.17</b>	<b>25.76</b>	<b>20.36</b>	<b>2.10</b>	<b>2.90</b>	<b>6.45</b>	<b>2.34</b>	<b>0.53</b>
	34.14	5.00	2.46	21.86	24.05	2.68	1.66	6.88	0.93	0.35
	34.28	5.03	2.52	20.72	25.08	2.86	1.66	6.74	0.82	0.28
	<b>36.39</b>	<b>5.11</b>	<b>2.50</b>	<b>19.62</b>	<b>24.86</b>	<b>2.74</b>	<b>1.65</b>	<b>6.15</b>	<b>0.76</b>	<b>0.24</b>

	Male				Female				Foreign nationals	
	A	C	I	W	A	C	I	W	Male	Female
	39.20	6.10	1.90	6.70	34.20	5.20	1.10	5.50	0	0
	23.81	4.76	19.05	28.57	9.52	4.76	4.76	4.76	0.00	0.00
	28.57	4.76	14.29	33.33	4.76	4.76	4.76	4.76	0.00	0.00
	<b>28.57</b>	<b>4.76</b>	<b>14.29</b>	<b>33.33</b>	<b>4.76</b>	<b>4.76</b>	<b>4.76</b>	<b>4.76</b>	<b>0.00</b>	<b>0.00</b>
	34.48	3.45	13.79	24.14	13.79	3.45	3.45	3.45	0.00	0.00
	17.80	3.04	10.07	42.62	9.37	2.81	4.22	5.15	4.22	0.70
	20.62	3.84	10.55	38.85	10.31	2.88	4.32	6.00	2.16	0.48
	<b>21.49</b>	<b>3.51</b>	<b>8.55</b>	<b>35.75</b>	<b>13.82</b>	<b>3.29</b>	<b>3.73</b>	<b>5.26</b>	<b>3.95</b>	<b>0.66</b>
	21.33	3.67	11.01	36.24	10.78	2.75	4.36	6.42	2.52	0.92
	26.70	5.22	7.49	26.85	18.61	2.04	2.87	6.73	2.69	0.80
	26.80	5.14	7.38	26.11	19.73	2.09	2.91	6.83	2.40	0.62
	<b>28.86</b>	<b>5.36</b>	<b>6.45</b>	<b>23.08</b>	<b>21.36</b>	<b>2.59</b>	<b>2.54</b>	<b>6.48</b>	<b>2.52</b>	<b>0.75</b>
	27.28	5.19	7.28	25.11	20.82	2.18	2.94	6.49	2.16	0.54
	33.85	5.12	2.41	20.81	25.16	2.80	1.71	7.01	0.78	0.36
	34.62	5.16	2.46	19.46	26.05	2.96	1.67	6.72	0.64	0.26
	<b>34.79</b>	<b>5.29</b>	<b>2.32</b>	<b>18.22</b>	<b>26.76</b>	<b>3.23</b>	<b>1.60</b>	<b>6.72</b>	<b>0.73</b>	<b>0.34</b>
	36.03	5.26	2.47	18.44	26.15	2.88	1.69	6.25	0.61	0.22

## Service and strategic functions continued

### People with disabilities

As per the Employment Equity Act, Eskom continues to strive for a fair representation of people with disabilities. The Eskom group currently has 1 032 (2010/11: 1 012) employees with recognised disabilities. The table below details Eskom's disability profile at all occupational levels compared to the internal target.

**Percentage of all Eskom employees with disabilities**

	Target 2012	Actual 2012	Actual 2011	Actual 2010
Group	n/a	2.36	2.36	2.29
Company	3.00	2.49	2.53	2.54

Although the actual group disability figure of 2.36% is below the target of 3% of the workforce, this is well above the national norm of 0.7% (Employment Equity Commission's report, 2009) and the government's 2% target for the public service.

### Regulation and Legal

The Regulation and Legal division ensures that Eskom conducts its business within its licence to operate by ensuring good governance; providing assurance and legal advice regarding compliance with current policies, regulations and legal frameworks; and influencing such policies to promote Eskom's strategic objectives.

The following were specific focus areas during 2011/12:

- Implementing mechanisms to enhance stable, predictable pricing, including commencing the MYPD 3 application, meeting NERSA's reporting requirements, and implementing the Companies Act (2008), the Companies Amendment Act (2011) and the Consumer Protection Act (2008)
- Implementing the improved internal compliance framework
- Identifying and implementing governance best practices, including revised delegation of authority in accordance with changes in corporate structure
- Supporting industry restructuring and the development of the ISMO
- Developing a subsidiary governance framework in accordance with King III.

## Supplier development and localisation

Local supplier development and localisation is a key performance area. The annual target for local content in capacity expansion contracts awarded is 52%. In the period under review, R7.6 billion in contracts were committed to local suppliers, amounting to 77.16% of the total value of contracts awarded.

Local supplier development includes skills development and job creation. Since capital expansion contracts started being awarded, a total of 7 226 (2010/11: 6 970)

contractor employees have been targeted for skills development. By the end of March 2012, 28 616 jobs had been directly created by the build projects (40% skilled jobs, 25% semi-skilled jobs and 35% non-skilled jobs). A total of 13 954 people (49% of the total jobs created in capital expansion projects) were employed from the districts where the projects are taking place.

Over and above the jobs created in capital expansion projects, a total of 5 225 jobs have been committed through Eskom's supplier network.

## Eskom B-BBEE attributable expenditure performance<sup>1</sup>

	Target 2011/12	Actual 2011/12	Actual 2010/11	Actual 2009/10
Measured procurement spend (R billion)	n/a	<b>98.5</b>	79.9	72.6
Attributable spend <sup>2</sup> (R billion)	n/a	<b>72.1</b>	41.9	20.8 <sup>3</sup>
Attributable spend (%)	<b>60.0</b>	<b>73.2</b>	52.3	28.6 <sup>3</sup>
Attributable spend on black-women-owned businesses (R billion)	n/a	<b>3.3</b>	3.4	2.5
Black-women-owned businesses as % of measured procurement spend	<b>8.0</b>	<b>3.3</b>	4.3	12.1 <sup>4</sup>

1. Figures relate to Eskom only.

2. Attributable spend is the actual spend for each compliant supplier multiplied by that supplier's B-BBEE recognition level.

3. Attributable spend for 2009/10 comprised the top 295 suppliers out of the 11 790 active vendors. In the current year the reported number encompasses the entire supplier population.

4. Black-women-owned business for 2009/10 calculated as a percentage of attributable spend.

# Service and strategic functions continued

The attributable spend target is in line with the Codes of Good Practice that prescribe a minimum of 50% for the first five years that the codes are in effect. The 73.2% achieved indicates that Eskom has exceeded its B-BBEE target for the year. Strategies will be put in place to improve the performance of black-women-owned businesses in particular.

## Group information technology (IT)

Effective and secure information systems are essential for efficient management, accurate and timeous customer billing, creditor and employee payments and effective power generation and transmission over the national grid. Current IT operating expenditure represents 2.6% of group revenue.

Over 2011/12, Group IT focused on:

- Launching the first phase of the SAP enterprise application to streamline operations
- Planning for business continuity in the case of data loss due to IT systems fault
- Upgrading the backup and disaster-recovery infrastructure
- Migrating 25 000 computer users to Microsoft Outlook
- Planning a learnership programme, which began on 1 March 2012

- Upgrading the bandwidth on Eskom's data network.

During this period, Group IT developed a crisis management plan and an IT recovery plan.

## Delivery unit

The Delivery unit coordinates Eskom's performance-improvement programmes by tracking, monitoring and reporting on the implementation of strategic transformation initiatives.

Four key delivery unit business areas were created:

- Transformation project implementation
- The Eskom Leadership Institute
- The internal consulting business area
- Mega systems and projects.

The Delivery unit implemented Primavera P6, an integrated solution for managing these strategic initiatives. Eskom has also effected funding processes for these initiatives.

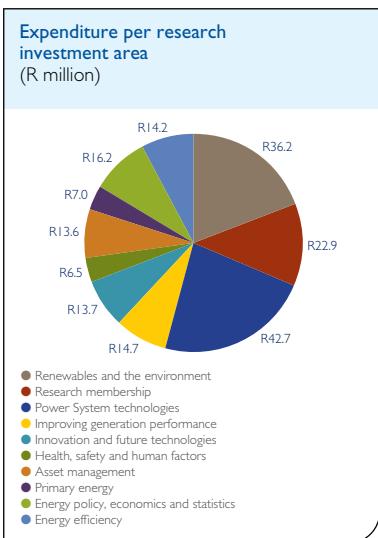
Eskom has implemented the delivery of strategic initiatives through the project lifecycle model. Eskom's 54 strategic initiatives have been developed using the model. Currently, 80% of these initiatives

are in the planning phase, 19% are in the execution phase, with 1% in finalisation.

## Research and technology

Eskom's technology unit aims to ensure that the company makes the best use of current and emerging technologies to improve performance at existing facilities and infuse the capital expansion projects with excellence in engineering design.

The research investment for the year to 31 March 2012 was R187.7 million (2011: R199.5 million).



## Environmental management

Eskom aims to excel in its environmental management practices. To this end, the company has set out the following environmental objectives:

- Avoid harming the natural environment and so minimise financial and legal liabilities
- Reduce the carbon footprint through efficient energy production and by diversifying the energy mix
- Reduce particulate and gaseous emissions to minimise the impact on human health and comply with regulated emission standards
- Reduce freshwater usage by using mining water and eliminate liquid effluent discharge to avoid damaging water resources
- Reduce, reuse and recycle resources
- Comply with environmental legislation as a minimum requirement in all activities
- Minimise the impact of Eskom's activities on ecosystems and enhance the value added by natural ecosystems to business by responsible land-management practices.

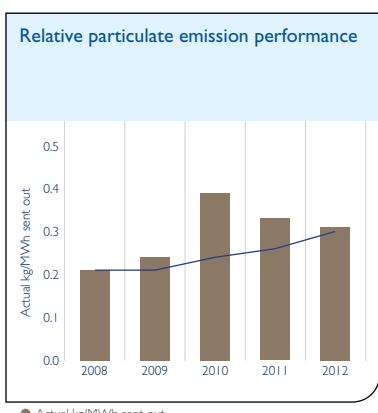
See [www.eskom.co.za/IR2012/016.html](http://www.eskom.co.za/IR2012/016.html) for more information on Eskom's environmental management and related performance.

# Service and strategic functions continued

## Eskom's environmental indicators

	Target 2012	Actual 2012	Actual 2011	Actual 2010
Relative particulate emissions (in kg/MWh)	≤0.3	0.31	0.33	0.39
Specific water usage (in L/kWh)	≤1.35	1.34	1.35	1.34
Carbon dioxide emissions (in Mt) <sup>1,5</sup>	n/a	231.9	230.3	224.7
Carbon dioxide emissions (relative) (kg/kWh) <sup>1,5</sup>	n/a	0.99	0.99	0.98
Nitrogen oxide emissions (in kt) <sup>1,4</sup>	n/a	977	977	959
Sulphur dioxide emissions (in kt) <sup>1</sup>	n/a	1 849	1 810	1 856
Nitrous oxide emissions (in t) <sup>1</sup>	n/a	2 967	2 906	2 825
Environmental legal contraventions (number) <sup>2</sup>	48	50	63 <sup>3</sup>	55

See [www.eskom.co.za/IR2012/017.html](http://www.eskom.co.za/IR2012/017.html) for the climate change fact sheet giving details of the calculation of the relative CO<sub>2</sub> emission factor.



## Climate change

### COP 17

South Africa is not legally bound to reduce emissions, but will be expected to discuss enforced reductions from 2020. The government has put in place a process to determine carbon budgets to curb the country's emissions. Eskom is engaging the government on the carbon budget based on the Integrated Resource Plan 2010, including discussions about what is possible and where additional resources are required.

- Calculated figures based on coal characteristics and the power station design parameters. Sulphur-dioxide and carbon dioxide emissions are based on coal analysis and using coal burnt tonnages. Figures include coal-fired and gas-turbine power stations, as well as oil consumed during power station start-ups and, for carbon dioxide emissions, the underground coal gasification pilot.
- Eskom's continued aspiration is for zero environmental violations. Targets have been set in the business plan to achieve this.
- One environmental legal contravention was registered in March 2011 and, following an investigation, was reclassified as an event. This has resulted in the reported number of environmental legal contraventions for 2010/11 changing from 64 to 63.
- NO<sub>x</sub> reported as NO<sub>2</sub> is calculated using station specific emission factors, which have been measured intermittently between 1982 and 2006, and tonnages of coal burnt.
- Refer to [www.eskom.co.za/IR2012/018.html](http://www.eskom.co.za/IR2012/018.html) for the climate change fact sheet, giving details of the relative CO<sub>2</sub> emission factor.

The outcome of COP 17 presents many opportunities. Eskom can:

- Submit robust investment plans to the government to access funding from the Green Climate Fund when it becomes available
- Provide input to the technology mechanism, which is intended to support mitigation and adaptation to climate change, based on Eskom's experience in innovation, research and development, through the Department of Science and Technology
- Provide input to the development of the national adaptation plan through the Department of Environmental Affairs and Department of Energy
- Access additional sources of revenue for new technologies and energy-efficiency programmes through the carbon markets.

Eskom will use the momentum from COP 17 to further entrench its energy-efficiency messages and discuss the effort and resources required to diversify the electricity mix.

The Department of Environmental Affairs issued a white paper on the national climate change response in November 2011. This document outlines a process, to be concluded within a two-year period, for developing (in consultation) sectoral and company carbon budgets that align with South Africa's pledge at Copenhagen.

The National Treasury continues to engage stakeholders on its carbon tax proposal

and a revised policy/proposal is expected to be published in the near future. Eskom and the National Treasury have discussed ways to enhance the effectiveness and limit the unintended negative consequences that such a tax could have on electricity tariff increases and the economy.

Eskom manages the national CFL clean development mechanism project within the terms of the emissions reduction purchase agreement signed with BNP Paribas in September 2010.

### Corporate social investment

The Eskom Development Foundation NPC is responsible for the corporate social investment strategy. Eskom supports governmental priorities in skills development, job creation and poverty alleviation – particularly in communities where the company implements its capital expansion programme. The foundation also donates to philanthropic and welfare causes through registered non-profit organisations.



*Early childhood development is a major focal area in Eskom's corporate social investment strategy*

## Service and strategic functions continued

### Foundation-approved funding

	2012	2011	2010
Funding granted (R million)	<b>87.9</b>	62.3	58.7
Number of projects	<b>256</b>	254	203
Number of beneficiaries	<b>531 762</b>	303 983	590 440

More information on Eskom's corporate social investment initiatives can be found at [www.eskom.co.za/csi.html](http://www.eskom.co.za/csi.html).



Graduates complete medium- and low-voltage line construction training at Eskom's Contractor Academy

## Financial performance



A large motor at the Palmiet pumped storage scheme in the Western Cape

# Financial performance continued



Summarised financial statements are provided, commencing on page 108. Eskom's statutory annual financial statements are available at: [www.eskom.co.za/IR2012/019.html](http://www.eskom.co.za/IR2012/019.html).

## Results of operations

Eskom has achieved a group net profit for the year to 31 March 2012 of R13.2 billion (2010/11: R8.4 billion) and a company net profit of R12.7 billion (2010/11: R8.0 billion).

Compared to the prior year, the 25.8% tariff increase (including the environmental levy) granted by NERSA to Eskom resulted in a 24.8% increase in revenue per kWh. The increase came into effect on 1 April 2011 for non-municipal customers and 1 July 2011 for municipal customers. This increase was offset by a 25.9% increase in operating costs per kWh mainly due to increases in primary energy costs.

### Electricity sales (in GWh)

	Actual 2012	Actual 2011
Southern African Energy		
International	13 195	13 296
<b>Customer service</b>		
Top customers	87 984	88 794
Other large, small and residential customers	123 606	122 356
<b>Total Eskom</b>	<b>224 785</b>	224 446

### Electricity revenue (in R million)

	Actual 2012	Actual 2011
Southern African Energy		
International	4 909	4 096
<b>Customer service</b>		
Top customers	38 898	31 611
Other large, small and residential customers	69 192	54 668
<b>Total Eskom</b>	<b>112 999</b>	90 375

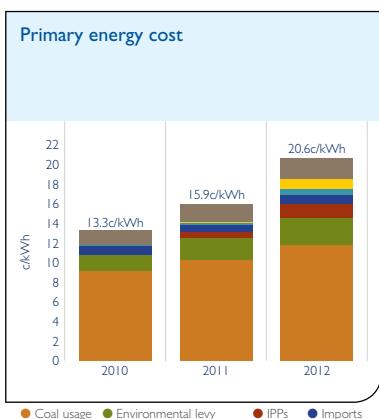
The operating profit for the year before fair value gains and losses on embedded derivatives and net finance costs was R22.0 billion (2010/11: R17.7 billion) for the group and R21.3 billion (2010/11: R17.1 billion) for the company.

## Sales and revenue

Group revenue for the year to 31 March 2012 was R114.8 billion (2010/11: R91.4 billion), while company revenue was R113.5 billion (2010/11: R90.9 billion). Included in electricity revenue is the environmental levy of R4.3 billion (2010/11: R4.3 billion) charged to customers. The sale of 224 785GWh of electricity for the year represents an increase of 0.2% compared to the previous year (2010/11: 224 446GWh).

## Primary energy costs

The primary energy costs for the year (group and company) amounted to R46.3 billion (2010/11: R35.8 billion). The costs include the environmental levy of R6.2 billion paid to the government (2010/11: R5.0 billion). The cost of primary energy as a percentage of electricity revenue was 41.0% (2010/11: 39.6%).



The cost of primary energy increased by 29.2%, from 15.9c/kWh in 2010/11 to 20.6c/kWh for the year to 31 March 2012. The 4.7c/kWh increase is mainly due to the following:

- The 20.8% increase in the cost of coal burnt contributed 1.54c/kWh (33% of the increase)
- The cost of using IPPs (R3.3 billion) contributed 0.88c/kWh (19% of the increase)
- Demand-market participation, power buyback and co-generation costs increased 923% to R2.2 billion and contributed 0.87c/kWh (19% of the increase).

- The environmental levy increase of 0.5c/kWh, which took effect on 1 April 2011, contributed 0.55c/kWh (12% of the increase)
- Open-cycle gas turbine (OCGT) costs increased 281% to R1.5 billion and contributed 0.49c/kWh (10% of the increase)
- The increases in coal handling, gas-fired startups, road repairs and water usage costs make up the remaining 7% of the increase.

## Operating costs

Group and company operating costs consist of:

### Employee benefits

Group employee numbers increased by a net 1 695 in the year to 31 March 2012, to 43 473 employees, from 41 778 at 31 March 2011. Company employee numbers increased from 39 034 at 31 March 2011 to 40 802 at 31 March 2012.

Group gross employee costs (before capitalisation) for the year to 31 March 2012 amounted to R24.4 billion (2010/11: R20.4 billion). Company gross employee costs for the same period amounted to R22.0 billion (2010/11: R19.0 billion). Group and company employee costs of R4.2 billion were capitalised to capital projects during the year (2010/11: R3.7 billion).

## Financial performance continued

### Arrear debt

Group annual arrear debt was 0.53% of the external revenue for the year to 31 March 2012 (2010/11: 0.75%). The residential debt in Soweto continues to grow. Electricity debtors increased from

R11.5 billion at 31 March 2011 to R14.6 billion at 31 March 2012. The allowance for impairment for electricity receivables increased from R2.8 billion to R3.3 billion over the same period.

### Debtor days

Debtor days	Measure	Actual 2012	Actual 2011	Actual 2010
Key industrial and international customers	Days	14.4	15.5	15.4
Customer service (large power users)	Days	21.8	18.9	18.9
Customer service (small power users)	Days	42.9	45.1	40.5

Municipal debt, while not yet at optimal levels, has improved when compared to the previous year. There has been a significant improvement in the level of provincial government support (via the Premier's offices, the Department of Co-operative Governance and Traditional Affairs [COGTA] and provincial treasuries) and a heightened awareness and understanding of what the challenges facing the municipalities are. This has resulted in the formulation of action plans to address the financial performance and sustainability of the municipalities. Municipal entities are concluding payment arrangements with Eskom, which reduces the overall pressure caused by non-payment of electricity debt.

Eskom does not currently provide for arrear municipality debtors.

### Repairs and maintenance

Other group operating expenses for the year to 31 March 2012, which amounted to R15.2 billion (2010/11: R12.1 billion) for the group and company, consist primarily of repairs and maintenance and are monitored closely.

The company's gross repairs and maintenance expenditure<sup>1</sup> for the year to 31 March 2012 was R17.6 billion (2010/11: R14.1 billion). Ensuring that the outage plan is executed in good time remains a challenge given the electricity demand-and-supply balance.

Company repairs and maintenance costs of R3.2 billion (2010/11: R2.1 billion), that were classified as major overhauls, were capitalised during the year.

<sup>1</sup>. Including employee benefit cost relating to repairs and maintenance.

The group's maintenance cost is slightly less than the company's due to the elimination of intercompany transactions, stemming from maintenance work performed by Eskom subsidiaries Roshcon and Rotek.

### **Net fair value loss on financial instruments, excluding embedded derivatives**

The net fair value loss on financial instruments, excluding embedded derivatives, was R2.4 billion for the year to 31 March 2012 (2010/11: a loss of R1.8 billion) for the group and a loss of R2.4 billion (2010/11: a loss of R1.9 billion) for the company. These losses consist primarily of the costs attributable to the rolling over of forward exchange contracts, all of which are 12 months in duration. The costs vary from period to period due to the timing of the placement of related procurement contracts and exchange rates.

### **Gain on embedded derivatives**

The net impact on the income statement of changes in the fair value of the embedded derivatives (relating to the special pricing agreements) for the group and company was a fair value gain for the year to 31 March 2012 of R0.3 billion (2010/11: loss of R1.3 billion). The embedded derivative assets were Rnil (2010/11: Rnil) and liabilities amounted to R5.5 billion (2010/11: R5.9 billion). Discussions continue with interested parties, including the Department of Public Enterprises and the National Treasury, to find a solution regarding the remaining special-pricing agreements.

### **Net finance cost**

After capitalising borrowing costs and including unwinding of interest on provisions, the net finance charges for the year to 31 March 2012 was R4.0 billion (2010/11: R4.7 billion) for the group and R3.9 billion (2010/11: R4.8 billion) for the company. Gross finance income for the year to 31 March 2012 was R3.5 billion (2010/11: R2.4 billion) for the group and R3.6 billion (2010/11: R2.4 billion) for the company.

Gross finance cost for the group and company for the year to 31 March 2012 was R12.2 billion (2010/11: R15.4 billion). Included in gross finance cost was the effect of a re-measurement of the government loan at 31 March 2012 resulting in a gain of R5.5 billion (2010/11: R2.5 billion loss). The combined borrowing costs capitalised for the group and company was R5.0 billion for the year (2010/11: R8.6 billion). Unwinding of interest for the group and company amounted to R2.0 billion (2010/11: R1.7 billion).

Gross finance costs (excluding the remeasurements of the government loan) continue to increase as additional borrowings are raised to fund the capital expansion programme. The weighted annualised cost of borrowing as at 31 March 2012 was 9.78%<sup>1</sup> (2010/11: 9.54%).

### **Taxation**

The effective tax rate for the year was 28.0% (2010/11: 27.9%) for the group and 28.3% for the company (2010/11: 28.2%),

<sup>1</sup>. Excluding Government loan remeasurement.

# Financial performance continued

both in line with the current statutory tax rate of 28%. On a company level, provision is made only for deferred tax as Eskom is in an assessed loss position.

## Liquidity and capital resources

The group's cash and cash equivalents increased from R12.1 billion at 31 March 2011 to R19.4 billion at 31 March 2012. The company's cash and cash equivalents grew from R11.5 billion to R18.4 billion in the same period.

Cash and cash equivalents, together with liquid investment in securities, amounted to R40.5 billion (2010/11: R49.9 billion). The group currently carries sufficient funds to cover Eskom comfortably for the next financial year. Based on the latest projections and including the signed and committed facilities per the planned drawdown schedule, Eskom's requirements are covered beyond March 2013.

## Cash flows from operating activities

The group's net cash inflow from operating activities for the year was R38.5 billion (2010/11: R22.7 billion), while the company had a net cash inflow of R38.5 billion (2010/11: R22.1 billion). The free funds from operations at 31 March 2012 stood at 15.15% (2010/11: 9.51%) of gross debt for the group.

The improvement in the cash flows from operating activities and in the free funds from operations as a percentage of gross debt is primarily due to the increased operating profitability of the company.

## Cash flows used in investing activities

Cash flows used for investing for the year under review were R59.9 billion (2010/11: R46.5 billion) for the group and R59.0 billion (2010/11: R44.9 billion) for the company. The group capital expenditure cash flows included in this line item, excluding capitalised interest, amounted to R59.5 billion (2010/11: R45.3 billion) primarily due to the progress of the capital expansion programme.

## Cash flows from financing activities

The net cash inflows from financing activities for the year were R28.7 billion (2010/11: R20.3 billion) for the group and R27.4 billion (2010/11: R19.4 billion) for the company. The raising of borrowings and the issuing of securities per the funding plan have been slowed to match the reduced capital expenditure. The debt-to-equity ratio for the group (including long-term provisions) as at 31 March 2012 was 1.64 (2010/11: 1.61) and for the company 1.69 (2010/11: 1.66).

## Funding update

Eskom maintains healthy cash reserves. The funding progress remains positive and, in line with corporate practice internationally, a portion of the next financial year (ending March 2013) is already prefunded.

The global sovereign credit crisis and the anticipated implications of new global banking regulations (Basel III) have not yet materially affected Eskom's ability to access funding, but have made such funding increasingly expensive.



The Ingula pumped storage scheme near Ladysmith is built mainly underground

During 2011/12 South Africa's sovereign rating outlook was changed to negative by major ratings agencies. Given the close relationship between the sovereign and Eskom ratings, the rating agencies revised Eskom's outlook to negative. While Eskom has not observed any direct impact as a result of the change, it did have an immediate effect on the rand, which consequently affected hedging activities.

From a new funding point of view the major focus over the past year was on the Sere wind farm and the Upington pilot concentrating solar plant, which will be financed by the Clean Technology Fund in conjunction with other developmental finance institutions. Eskom has also secured

export-credit-backed financing from both the US Export and Import Bank (for Kusile power station) and obtained approval by SACE in Italy (for the Ingula underground works contract).

By the end of 2011/12 Eskom had secured more than 77% of the funding required for the capital expansion programme. Of the R23.4 billion allocated as "other" in the funding plan, Eskom has identified and partially secured R13.2 billion from various sources. This includes facilities that have already been signed, primarily related to funding for renewable projects. Eskom continues to explore other sources of funding, including Islamic bond finance (Sukuk), preference shares and retail bonds.

## Financial performance continued

Funds sourced for capacity expansion plan (1 April 2010 to 31 March 2017)

Sources (R billion)	Funding	Secured to date	Draw- downs 1 April 2010 to 31 March 2012	Draw- downs 1 April 2010 to 31 March 2011	Amount supported by govern- ment
Bonds	90.0	32.9	32.9	26.7	20.4
Commercial paper	70.0	70.0	20.0	10.0	—
Export credit agencies	32.9	32.9	15.6	7.5	—
World Bank	27.8	27.8	5.6	2.6	27.8
African Development Bank	20.9	20.9	5.9	3.9	20.9
Development Bank of Southern Africa	15.0	15.0	3.0	1.0	—
Shareholder loan	20.0	20.0	20.0	20.0	20.0
Other sources	23.4	13.2	0.8	0.0	4.9
<b>Totals</b>	<b>300.0</b>	<b>232.7</b>	<b>103.8</b>	<b>71.7</b>	<b>94.0</b>
Percentages		77.6 <sup>1</sup>	44.6 <sup>2</sup>	33.9 <sup>3</sup>	40.4 <sup>2</sup>

During the year, the Department of Energy promulgated its Integrated Resource Plan, the country's 20-year energy strategy. The expected magnitude of the future build programme will require a funding approach that continues to support Eskom's long-term standalone investment credit rating,

and which may include technology and/or equity partners for certain aspects of the strategy. The success of the strategy will require certainty on the tariff trajectory and a flexible approach that allows for potential industry restructuring.

1. As a percentage of the total R300 billion sourced.

2. As a percentage of the secured total of R232.7 billion as at 31 March 2012.

3. As a percentage of the secured total of R211.7 billion as at 31 March 2011.

## Summarised group annual financial statements



Maintenance on the distribution network near Cullinan, Gauteng

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The summarised group annual financial statements have been prepared under the supervision of the finance director, PS O'Flaherty CA(SA).

The audited annual financial statements of the group and company as at and for the year ended 31 March 2012 are available for inspection at the company's registered office and on the Eskom website at [www.eskom.co.za/IR2012/020.html](http://www.eskom.co.za/IR2012/020.html).

# Approval of the summarised group annual financial statements

The summarised group annual financial statements from page 112 to page 137 for the year ended 31 March 2012 have been extracted from the audited annual financial statements and prepared in accordance with the recognition and measurement requirements of International Financial Reporting Standards (IFRS), the presentation and disclosure requirements of IAS 34 *Interim financial reporting*, and in the manner required by the Companies Act of South Africa, 71 of 2008. In the opinion of the directors, based on the information available to date, the financial statements fairly present the financial position of the group at 31 March 2012 and the results of its operations and cashflow information for the year then ended. The summarised group annual financial statements have been approved by the board of directors and signed on its behalf by:



**ZA Tsotsi**  
Chairman

31 May 2012



**BA Dames**  
Chief executive

31 May 2012



**PS O'Flaherty**  
Finance director

31 May 2012

# Report of the independent auditors

The accompanying summarised annual financial statements set out on pages 112 to 137, which comprise the summarised statement of financial position as at 31 March 2012, the summarised statement of comprehensive income, summarised statement of changes in equity and summarised cash flow statement for the year then ended, and related notes, are extracted from the audited group annual financial statements of Eskom Holdings SOC Limited for the year ended 31 March 2012.

In our report dated 31 May 2012, we expressed an unmodified audit opinion on those annual financial statements from which the summarised group annual financial statements were extracted. Those annual financial statements, and the summarised group annual financial statements, do not reflect the effects of events that occurred subsequent to the date of our report on those annual financial statements.

The summarised group annual financial statements do not contain all the disclosures required by International Financial Reporting Standards applied in the preparation of the audited annual financial statements of Eskom Holdings SOC Limited. Reading the summarised group annual financial statements, therefore, is not a substitute for reading the audited annual financial statements of Eskom Holdings SOC Limited.

## **Directors' responsibility for the summarised financial statements**

The board of directors is responsible for the preparation of a summary of the audited annual financial statements described in note 2.

## **Auditors' responsibility**

Our responsibility is to express an opinion on the summarised group annual financial statements based on our procedures, which were conducted in accordance with International Standard on Auditing (ISA) 810 *Engagements to report on summary financial statements*.

### **Opinion**

In our opinion, the summarised group annual financial statements extracted from the audited annual financial statements of Eskom Holdings SOC Limited for the year ended 31 March 2012 are consistent, in all material respects, with the audited financial statements, on the basis described in note 2.



**KPMG Inc**

Per **AH Jaffer**

Chartered Accountant (SA)

Registered auditor

Director

31 May 2012

85 Empire Road

Parktown

2193



**SizweNtsalubaGobodo Inc**

Per **JE Strauss**

Chartered Accountant (SA)

Registered Auditor

Director

31 May 2012

20A Morris Street East

Woodmead

2191

# Summarised group statement of financial position

at 31 March 2012

	2012 Rm	Restated <sup>1</sup> 2011 Rm
<b>Assets</b>		
<b>Non-current assets</b>		
Property, plant and equipment	318 877	265 183
Intangible assets	290 661	236 724
Investments in equity-accounted investees	1 548	1 377
Future fuel supplies	261	220
Deferred tax assets	5 452	4 089
Investment in securities	43	59
Loans receivable	8 749	13 259
Derivatives held for risk management	7 435	5 958
Finance lease receivables	1 780	6
Payments made in advance	555	570
Trade and other receivables	2 060	2 396
	333	525
<b>Current assets</b>	<b>63 050</b>	<b>62 258</b>
Inventories	9 930	8 904
Taxation	43	59
Investment in securities	12 281	24 546
Loans receivable	79	100
Derivatives held for risk management	362	116
Finance lease receivables	15	15
Payments made in advance	1 531	1 651
Trade and other receivables	14 313	10 953
Financial trading assets	5 046	3 827
Cash and cash equivalents	19 450	12 087
<b>Non-current assets held-for-sale</b>	<b>438</b>	<b>704</b>
<b>Total assets</b>	<b>382 365</b>	<b>328 145</b>

<sup>1</sup>. Refer to note 20.

	2012 Rm	Restated <sup>1</sup> 2011 Rm
<b>Equity</b>		
Capital and reserves attributable to owner of the company	103 103	87 259
<b>Liabilities</b>		
<b>Non-current liabilities</b>	<b>222 672</b>	<b>195 841</b>
Debt securities issued	90 732	84 396
Borrowings	76 983	63 380
Embedded derivative liabilities	4 639	5 357
Derivatives held for risk management	1 273	4 576
Deferred tax liabilities	13 807	7 931
Deferred income	9 612	8 395
Employee benefit obligations	8 560	7 748
Provisions	12 740	10 343
Finance lease liabilities	511	521
Trade and other payables	1 971	1 508
Payments received in advance	1 844	1 686
<b>Current liabilities</b>	<b>56 115</b>	<b>44 185</b>
Debt securities issued	7 170	2 880
Borrowings	7 682	9 654
Embedded derivative liabilities	900	516
Derivatives held for risk management	3 590	1 404
Deferred income	657	638
Employee benefit obligations	3 054	2 623
Provisions	4 078	2 553
Finance lease liabilities	10	8
Trade and other payables	23 487	18 384
Payments received in advance	2 653	1 221
Taxation	3	—
Financial trading liabilities	2 831	4 304
<b>Non-current liabilities held-for-sale</b>	<b>475</b>	<b>860</b>
<b>Total liabilities</b>	<b>279 262</b>	<b>240 886</b>
<b>Total equity and liabilities</b>	<b>382 365</b>	<b>328 145</b>

<sup>1</sup>. Refer to note 20.

# Summarised group income statement

for the year ended 31 March 2012

	Note	2012 Rm	Restated <sup>1</sup> 2011 Rm
<b>Continuing operations</b>			
Revenue	17	114 760	91 447
Primary energy <sup>2</sup>		(46 314)	(35 795)
Employee benefit expense	18	(20 132)	(16 695)
Depreciation and amortisation expense		(8 801)	(7 219)
Net impairment loss		(620)	(788)
Other operating expenses		(15 209)	(12 070)
Operating profit before net fair value loss and net finance cost		23 684	18 880
Other income		699	587
Net fair value loss on financial instruments, excluding embedded derivatives		(2 388)	(1 816)
Net fair value gain/(loss) on embedded derivatives		334	(1 261)
Operating profit before net finance cost		22 329	16 390
Net finance cost		(3 963)	(4 741)
– Finance income		3 536	2 436
– Finance cost		(7 499)	(7 177)
Share of profit of equity-accounted investees, net of tax		41	24
<b>Profit before tax</b>		18 407	11 673
Income tax		(5 156)	(3 261)
<b>Profit for the year from continuing operations</b>		13 251	8 412
<b>Discontinued operations</b>			
Loss for the period from discontinued operations		(3)	(56)
<b>Profit for the year</b>		13 248	8 356
<b>Attributable to:</b>			
Owner of the company		13 248	8 356

1. Restated – Refer to note 20.

2. Primary energy relates primarily to the acquisition of coal, uranium, water, gas and diesel that are used in the generation of electricity together with the environmental levy.

# Summarised group statement of comprehensive income

for the year ended 31 March 2012

	2012 Rm	2011 Rm
<b>Profit for the year</b>	<b>13 248</b>	8 356
<b>Other comprehensive income/(loss)</b>	<b>2 502</b>	(2)
Available-for-sale financial assets – net change in fair value	231	(40)
Cash flow hedges	3 552	(1 031)
– Effective portion of changes in fair value	3 538	(1 025)
Changes in fair value	14	(6)
Ineffective portion of changes in fair value reclassified to profit or loss	(459)	246
– Net amount transferred to initial carrying amount of hedged items	74	(33)
Foreign currency translation differences for foreign operations	20	408
Net actuarial gain on post-retirement medical benefits	(916)	448
Income tax on other comprehensive income/(loss)	15 750	8 354
<b>Total comprehensive income for the year</b>	<b>15 750</b>	8 354
<b>Total comprehensive income for the year attributable to:</b>		
Owner of the company	15 750	8 354

# Summarised group statement of changes in equity

for the year ended 31 March 2012

	Attributable to owner of the company	Share capital <sup>1</sup>	Equity reserve <sup>2</sup>	Cash flow hedge reserve <sup>3</sup>
	Rm	Rm	Rm	Rm
<b>Balance at 31 March 2010</b>		–	21 837	(750)
Prior year restatement <sup>9</sup>		–	–	494
<b>Restated balance at 31 March 2010</b>		–	21 837	(256)
Profit for the year		–	–	–
Other comprehensive (loss)/income, net of tax		–	–	(233)
Available-for-sale financial assets		–	–	–
– Net change in fair value		–	–	–
Cash flow hedges		–	–	–
– Effective portion of changes in fair value		–	–	(410)
– Net amount transferred to initial carrying amount of hedged items		–	–	177
Foreign currency translation differences on foreign operations		–	–	–
Net actuarial loss on post-retirement medical benefits		–	–	–
Subordinated loan from shareholder		–	8 683	–
Transfer between reserves		–	–	2
<b>Balance at 31 March 2011</b>		–	30 520	(487)

1. Nominal amount.

2. The equity reserve comprises the day-one gain on initial recognition of the subordinated loan from the shareholder.

3. The cash flow hedge reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments (comprising forward exchange contracts, interest rate swaps and cross-currency swaps) related to hedged transactions that have not yet occurred. The cross-currency swaps hedge foreign exchange rate risk of the future interest payments and the principal repayment on fixed rate bonds and loans (denominated in US dollar, euro and yen).

4. The available-for-sale reserve comprises the cumulative net change in the fair value of available-for-sale financial assets until the investments are derecognised.

Attributable to owner of the company						
Available-for-sale reserve <sup>4</sup>	Unrealised fair value reserve <sup>5</sup>	Insurance reserve <sup>6</sup>	Foreign currency translation reserve <sup>7</sup>	Accumulated profit <sup>8</sup>	Total equity	
Rm	Rm	Rm	Rm	Rm	Rm	
(153)	(1 084)	55	25	50 292 (494)	70 222	
—	—	—	—		—	
(153)	(1 084)	55	25	49 798	70 222	
—	—	—	—	8 356	8 356	
(29)	—	—	(33)	293	(2)	
(29)	—	—	—	—	(29)	
—	—	—	—	—	(410)	
—	—	—	—	—	177	
—	—	—	(33)	—	(33)	
—	—	—	—	293	293	
—	—	—	—	—	8 683	
364	(193)	55	—	(228)	—	
182	(1 277)	110	(8)	58 219	87 259	

5. The cumulative net change in the fair value of derivatives that have not been designated as cash flow hedging instruments is recognised in profit or loss. The unrealised portion of the net change in fair value is not distributable and has been reallocated from a distributable reserve (accumulated profit) to a non-distributable reserve.

6. The insurance reserve is a contingency reserve created in terms of the Short-term Insurance Act, no 53 of 1998.

7. The foreign currency translation reserve comprises exchange differences resulting from the translation of the results and financial position of foreign operations.

8. Accumulated profit is the amount of cumulative profit retained in the business after tax.

9. Refer to note 20.

# Summarised group statement of changes in equity continued

for the year ended 31 March 2012

	Attributable to owner of the company		
	Share capital <sup>1</sup>	Equity reserve <sup>2</sup>	Cash flow hedge reserve <sup>3</sup>
	Rm	Rm	Rm
<b>Balance at 31 March 2011</b>	—	30 520	(487)
Profit for the year	—	—	—
Other comprehensive income, net of tax	—	—	2 248
Available-for-sale financial assets			
– Net change in fair value	—	—	—
Cash flow hedges			
– Effective portion of changes in fair value	—	—	2 578
– Net amount transferred to initial carrying amount of hedged items	—	—	(330)
Foreign currency translation differences on foreign operations	—	—	—
Net actuarial loss on post-retirement medical benefits	—	—	—
Transfer between reserves	—	—	(49)
Common control transaction <sup>9</sup>	—	—	—
<b>Balance at 31 March 2012</b>	—	30 520	1 712

1. Nominal amount.

2. The equity reserve comprises the day-one gain on initial recognition of the subordinated loan from the shareholder.

3. The cash flow hedge reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments (comprising forward exchange contracts, interest rate swaps and cross-currency swaps) related to hedged transactions that have not yet occurred. The cross-currency swaps hedge foreign exchange rate risk of the future interest payments and the principal repayment on fixed rate bonds and loans (denominated in US dollar, euro and yen).

4. The available-for-sale reserve comprises the cumulative net change in the fair value of available-for-sale financial assets until the investments are derecognised.

**Attributable to owner of the company**

<b>Available-for-sale reserve<sup>4</sup></b>	<b>Unrealised fair value reserve<sup>5</sup></b>	<b>Insurance reserve<sup>6</sup></b>	<b>Foreign currency translation reserve<sup>7</sup></b>	<b>Accumulated profit<sup>8</sup></b>	<b>Total equity</b>
Rm	Rm	Rm	Rm	Rm	Rm
182	(1 277)	110	(8)	58 219	87 259
—	—	—	—	13 248	13 248
166	—	—	74	14	2 502
166	—	—	—	—	166
—	—	—	—	—	2 578
—	—	—	—	—	(330)
—	—	—	74	—	74
—	—	—	—	14	14
(58)	(974)	(20)	—	1 101	—
—	—	—	—	94	94
290	(2 251)	90	66	72 676	103 103

5. The cumulative net change in the fair value of derivatives that have not been designated as cash flow hedging instruments is recognised in profit or loss. The unrealised portion of the net change in fair value is not distributable and has been reallocated from a distributable reserve (accumulated profit) to a non-distributable reserve.

6. The insurance reserve is a contingency reserve created in terms of the Short-term Insurance Act, no 53 of 1998.

7. The foreign currency translation reserve comprises exchange differences resulting from the translation of the results and financial position of foreign operations.

8. Accumulated profit is the amount of cumulative profit retained in the business after tax.

9. Refer to note 5.

# Summarised group statement of cash flows

for the year ended 31 March 2012

	Note	2012 Rm	Restated <sup>1</sup> 2011 Rm
<b>Cash flows from operating activities</b>			
Cash generated from operations	19	38 669	28 645
Net cash flows (used in)/from financial trading assets		(1 353)	2 925
Net cash flows from/(used in) financial trading liabilities		1 612	(1 456)
Net cash flows used in current derivatives held for risk management		(280)	(7 212)
Net cash flows from/(used in) non-current assets held-for-sale		42	(4)
Income taxes paid		(161)	(151)
Net cash from operating activities		<u>38 529</u>	<u>22 747</u>
<b>Cash flows used in investing activities</b>			
Proceeds from disposal of property, plant and equipment		351	135
Acquisitions of property, plant and equipment		(56 920)	(43 975)
Acquisitions of intangible assets		(524)	(350)
Expenditure on future fuel supplies		(2 043)	(1 079)
Decrease/(increase) in non-current trade and other receivables		188	(509)
Increase in non-current loans receivable		(1 477)	(1 469)
Decrease/(increase) in finance lease receivables		39	(20)
Net cash flows from non-current assets and liabilities held-for-sale		—	(10)
Dividends received		30	26
Increase in non-current trade and other payables		343	793
Net cash used in investing activities		<u>(60 013)</u>	<u>(46 458)</u>
<b>Cash flows from financing activities</b>			
Debt raised		22 308	69 191
– Debt securities issued		7 111	26 144
– Subordinated loan from shareholder		—	20 000
– Borrowings		15 197	23 047
Debt repaid		(5 769)	(9 189)
– Debt securities issued		(2 268)	(641)
– Borrowings		(3 501)	(8 548)
Net cash flows from non-current assets held-for-sale		20	43
Decrease/(increase) in investment in securities		17 497	(33 693)
Decrease in finance lease liabilities		(46)	(17)
Net cash flows used in non-current derivatives held for risk management		—	(89)
Interest received		3 211	2 353
Interest paid		(8 501)	(8 269)
Net cash from financing activities		<u>28 720</u>	<u>20 330</u>
Net increase/(decrease) in cash and cash equivalents		7 236	(3 381)
Cash and cash equivalents at beginning of the year		12 087	15 541
Cash and cash equivalents resulting from common control transaction <sup>2</sup>		127	—
Cash and cash equivalents at beginning of the year attributable to non-current assets held-for-sale		—	(73)
Cash and cash equivalents at end of the year		<u>19 450</u>	<u>12 087</u>

1. Refer to note 20.

2. Refer to note 5.

	2012 Rm	Restated <sup>1</sup> 2011 Rm
<b>Reconciliation of net cash flow to movement in net debt</b>		
Net increase in debt securities issued	4 843	25 503
Net increase in borrowings	11 696	34 499
Decrease/(increase) in investment in securities	17 497	(33 693)
Increase in loans receivable	(1 468)	(826)
Decrease in finance lease liabilities	(46)	(17)
Net cash flows used in derivatives held for risk management	<u>(280)</u>	<u>(7 301)</u>
Net debt raised	<u>32 242</u>	<u>18 165</u>
Portion on subordinated loan from shareholder allocated to equity	—	(8 683)
Non-cash flow movements	2 189	7 842
Cash and cash equivalents resulting from common control transaction	<u>(127)</u>	—
Cash and cash equivalents at beginning of the year attributable to non-current assets held-for-sale	—	73
Net (increase)/decrease in cash and cash equivalents for the year	<u>(7 236)</u>	<u>3 381</u>
Movement in net debt for the year	<u>27 068</u>	<u>20 778</u>
Net debt at beginning of the year	<u>110 747</u>	<u>89 969</u>
Net debt at end of the year	<u>137 815</u>	<u>110 747</u>
<b>Analysis of net debt</b>		
Debt securities issued	97 902	87 276
Borrowings	84 665	73 034
Finance lease liabilities	521	529
Derivatives held for risk management	2 721	5 858
Cash and cash equivalents	<u>185 809</u>	<u>166 697</u>
Investment in securities	<u>(19 450)</u>	<u>(12 087)</u>
Loans receivable	<u>(21 030)</u>	<u>(37 805)</u>
Net debt at end of the year	<u>137 815</u>	<u>110 747</u>

*1.* Refer to note 20.

# Selected notes to the summarised group financial statements

for the year ended 31 March 2012

## I. General information

Eskom Holdings Limited changed its name to Eskom Holdings SOC Limited (Eskom) in terms of the Companies Act of South Africa, 71 of 2008, which came into operation on 1 May 2011. Eskom, a public company and holding company of the group, is incorporated and domiciled in the Republic of South Africa. Eskom is an integrated operation that generates, transmits and distributes electricity to industrial, mining, commercial, agricultural, municipalities, and residential customers and to international customers in southern Africa.

## 2. Basis of preparation

The summarised group annual financial statements of Eskom as at and for the year ended 31 March 2012 comprise the company and its subsidiaries (together referred to as the group) and the group's interest in associates and joint ventures. The summarised group financial statements do not include all of the information required for full annual financial statements and should be read in conjunction with the Eskom Holdings SOC Limited 31 March 2012 annual financial statements. The audited annual financial statements of the group and company as at and for the year ended 31 March 2012 are available for inspection at the company's registered office and on the Eskom website at [www.eskom.co.za/IR2012/021.html](http://www.eskom.co.za/IR2012/021.html). The summarised group annual financial statements are prepared in accordance with the recognition and measurement principles of International Financial Reporting Standards (IFRS), presentation and disclosure requirements of IAS 34 *Interim Financial Reporting*, and in the manner required by the Companies Act of South Africa, 71 of 2008.

The summarised group annual financial statements are prepared on the historical cost basis except for the following financial instruments which are measured at fair value:

- embedded derivative assets and liabilities
- financial instruments classified under held-for-trading
- financial instruments classified under available-for-sale
- post-retirement medical benefits

### **3. Significant accounting policies**

The accounting policies applied by the group in these summarised financial statements comply with IFRS.

With the exception of the revised IAS 24 *Related party disclosures*, there were no new and revised standards and interpretations effective during the year ended 31 March 2012 that were relevant to the group. The revised IAS 24 *Related party disclosures* provides an exemption for government-related entities. The revised standard still requires disclosures that are important to users of financial statements but eliminates requirements to disclose information that is costly to gather and of less value to users.

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### **4. Income tax expense**

Income tax expense recognised for the full financial year is in accordance with IAS 12 *Income taxes*.

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### **5. Changes to subsidiaries/common control transaction**

The Pebble Bed Modular Reactor SOC Limited (PBMR) was previously not consolidated as it was not considered to be controlled by Eskom Enterprises SOC Limited (Eskom Enterprises) in terms of the shareholder's cooperation agreement. However, with effect from 1 April 2011, Eskom Enterprises obtained control over PBMR due to the termination of the cooperation agreement and consequently consolidated PBMR as per IAS 27 *Consolidated and separate financial statements*. The acquisition of PBMR is considered to be a business combination between entities under common control. Therefore all of the assets and liabilities have been recognised at their book values at the date of acquisition and the excess of the purchase consideration over the net assets of PBMR has been recognised directly in equity.

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### **6. Unusual changes impacting the statements of financial position, income, comprehensive income and cash flows**

There have not been any unusual changes impacting the summarised statement of financial position, income statement, statement of comprehensive income and statement of cash flows during the year ended 31 March 2012.

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# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

## 7. Critical accounting estimates and judgement

Estimates and judgements are evaluated continually and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results.

The significant estimates and judgements made by management in applying the accounting policies and the key sources of estimating uncertainty were substantially the same as those applied to the financial statements for the year ended 31 March 2011 except for the forward pricing curve. The forward electricity price used to value the embedded derivatives at 31 March 2012 is based on the current MYPD 2 approved tariff for 2012/13 of 16%, and a forward tariff path for the next five years (2013/14 to 2017/18) that ultimately achieves cost reflective tariffs.

## 8. Issuances, repurchases and repayments of debt securities

The nature of the group's issuances, repurchases and repayments of debt securities are consistent with those reported previously. The details of the debt raised and repaid by the group are disclosed in the statement of cash flows.

## 9. Dividend paid

No dividend was paid to the shareholder during the year ending 31 March 2012 (2011: nil).

## 10. Segment information

### Segment information for the year ended 31 March 2012

Management has determined the reportable segments, as described below, based on the reports regularly provided, reviewed and used by the executive management committee (Exco) to make strategic decisions and assess performance of the segments. The reportable segments have been aligned with Eskom's new operating structure. The prior year segment report has been restated in line with the new structure.

The following summary describes the operations in each of the group's reportable segments:

<b>Generation</b>	Consists of the generation and primary energy functions. These functions procure primary energy and generate electricity for sale.
<b>Transmission</b>	Consists of the transmission grids, systems operations and the South African Energy (international buyer). These functions operate and maintain the transmission network for transmitting electricity and also sell bulk electricity to international customers.
<b>Distribution</b>	Distribution consists of nine provincial operating units. These units provide, operate and maintain the distribution network for distributing.
<b>Group customer services</b>	Group customer services consists of the customer service and integrated demand management functions and sells electricity to key large, redistributors, large and small customers.
<b>Group capital</b>	Group capital is responsible for the planning, development, monitoring of all capital projects and the execution of capacity expansion projects.
<b>All other segments</b>	Relates to operating segments which are below the quantitative thresholds for determining a reportable segment in terms of IFRS 8 <i>Operating segments</i> . These include the group's subsidiaries.
<b>Corporate and other</b>	Relates to all service and strategic functions which do not qualify as a reportable segment in terms of IFRS 8 <i>Operating segments</i> .

# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

## 10. Segment information (continued)

### Segment information for the year ended 31 March 2012

The segment information provided to Exco for the reportable segments for the year ended 31 March 2012 is as follows:

	Generation	Trans- mission	Distri- bution
	Rm	Rm	Rm
<b>2012</b>			
<b>Continuing operations</b>			
External revenue	—	4 873	354
Inter-segment revenue/recoveries	72 705	7 061	21 858
Total revenue	72 705	11 934	22 212
Primary energy	(38 708)	(5 057)	—
Employee benefit expense	(5 861)	(1 245)	(5 551)
Depreciation and amortisation expense	(4 837)	(800)	(2 215)
Net impairment (loss)/reversal	(5)	3	(5)
Other operating expenses	(11 162)	(2 059)	(8 518)
Operating profit/(loss) before net fair value (loss)/gain and net finance cost	12 132	2 776	5 923
Other income	1 456	344	277
Net fair value (loss)/gain on financial instruments, excluding embedded derivatives	(1 814)	(73)	(16)
Net fair value gain on embedded derivatives	—	—	—
Operating profit/(loss) before net finance cost	11 774	3 047	6 184
Net finance cost	(2 783)	(363)	(196)
Finance income	25	14	136
Finance cost	(2 808)	(377)	(332)
Share of profit of equity-accounted investees	—	—	—
Profit before tax	8 991	2 684	5 988
Income tax	—	—	—
Profit/(loss) for the year from continuing operations	8 991	2 684	5 988
<b>Discontinued operations</b>			
Loss for the year from discontinued operations	—	—	—
<b>Profit/(loss) for the year</b>	<b>8 991</b>	<b>2 684</b>	<b>5 988</b>
<b>Other information</b>			
Segment assets	90 095	24 042	49 934
Investments in equity-accounted investees	—	—	—
Non-current assets held-for-sale	—	—	—
Total assets	90 095	24 042	49 934
Segment liabilities	48 462	5 849	246 906
Capital expenditure (including borrowing costs capitalised)	13 253	4 969	8 805

Group customer services Rm	Group capital Rm	All other segments Rm	Corporate and other Rm	Inter segment transactions Rm	Group Rm
108 260 (101 783)	— —	1 273 6 914	— 123	— (6 878)	114 760 —
6 477 (2 200) (1 284) (17) (587) (1 285)	— (349) (260) (115) — (209)	8 187 — (2 411) (224) (27) (4 937)	123 — (3 520) (698) — 3 836	(6 878) — — 105 9 125	114 760 (46 314) (20 132) (8 801) (620) (15 209)
1 104 313	(932) 132	588 272	(259) 467	2 352 (2 562)	23 684 699
21	(980)	4	470	—	(2 388)
334	—	—	—	—	334
1 772 133	(1 780) (28)	864 (51)	678 (675)	(210) —	22 329 (3 963)
213 (80)	— (28)	369 (420)	3 176 (3 851)	(397) 397	3 536 (7 499)
—	—	6	35	—	41
1 905 —	(1 808) —	819 (184)	38 (5 031)	(210) 59	18 407 (5 156)
1 905	(1 808)	635	(4 993)	(151)	13 251
—	—	(3)	—	—	(3)
1 905	(1 808)	632	(4 993)	(151)	13 248
183 841 — —	144 877 — 438	19 284 25 —	238 841 95 —	(369 248) 141 —	381 666 261 438
183 841	144 877	19 747	238 936	(369 107)	382 365
10 697	148 005	13 394	210 218	(404 269)	279 262
76	34 853	450	1 490	( 542)	63 354

# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

## 10. Segment information (continued)

Segment information for the year ended 31 March 2012

	Generation	Trans- mission	Distri- bu- tion
	Rm	Rm	Rm
<b>2011</b>			
<b>Continuing operations</b>			
External revenue	–	4 125	192
Inter-segment revenue recoveries	60 180	4 318	19 126
Total revenue	60 180	8 443	19 318
Primary energy	(32 531)	(3 042)	–
Employee benefit expense	(5 401)	(1 044)	(4 955)
Depreciation and amortisation expense	(3 751)	(733)	(2 296)
Net impairment (loss)/reversal	(74)	11	4
Other operating expenses	(8 738)	(1 354)	(6 526)
Operating profit/(loss) before net fair value (loss)/gain and net finance cost	9 685	2 281	5 545
Other income	265	93	218
Net fair value (loss)/gain on financial instruments, excluding embedded derivatives	(369)	56	(193)
Net fair value loss on embedded derivatives	–	–	–
Operating profit/(loss) before net finance cost	9 581	2 430	5 570
Net finance cost	(4 070)	(353)	(330)
Finance income	32	28	292
Finance cost	(4 102)	(381)	(622)
Share of profit of equity-accounted investees	–	–	–
Profit/(loss) before tax	5 511	2 077	5 240
Income tax	–	–	–
Profit/(loss) for the year from continuing operations	5 511	2 077	5 240
<b>Discontinued operations</b>			
Loss for the year from discontinued operations	–	–	–
<b>Profit/(loss) for the year</b>			
<b>Other information</b>			
Segment assets	78 685	19 445	44 428
Investments in equity-accounted investees	–	–	–
Non-current assets held-for-sale	–	–	–
Total assets	78 685	19 445	44 428
Segment liabilities	51 146	4 382	182 168
Capital expenditure (including borrowing costs capitalised)	6 512	1 831	8 026

Group customer services Rm	Group capital Rm	All other segments Rm	Corporate and other Rm	Inter segment transactions Rm	Group Rm
86 454 (83 519)	— —	676 6 833	— —	— (6 938)	91 447 —
2 935 (222) (1 124) (15) (669) (440)	— — (784) (136) — 239	7 509 — (1 334) (206) (58) (5 484)	— — (2 053) (130) (2) 2 428	(6 938) — — 48 — 7 805	91 447 — (35 795) (16 695) (7 219) (788) (12 070)
465 52	(681) 682	427 129	243 135	915 (987)	18 880 587
173	(2 873)	70	1 320	—	(1 816)
(1 261)	—	—	—	—	(1 261)
(571) 29	(2 872) (176)	626 27	1 698 132	(72) —	16 390 (4 741)
54 (25)	1 (177)	387 (360)	2 019 (1 887)	(377) 377	2 436 (7 177)
—	—	—	24	—	24
(542)	(3 048)	653 (164)	1 854 (3 117)	(72) 20	11 673 (3 261)
(542)	(3 048)	489	(1 263)	(52)	8 412
—	—	(56)	—	—	(56)
(542)	(3 048)	433	(1 263)	(52)	8 356
162 508	110 151	17 226	212 015	(317 237)	327 221
—	—	19 704	95 —	106 —	220 704
162 508	110 151	17 949	212 110	(317 131)	328 145
8 420	113 701	12 330	183 735	(314 996)	240 886
4	38 120	275	1 142	(453)	55 457

# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

## 10. Segment information (continued)

### Segment information for the year ended 31 March 2012

Inter segment purchases and revenue of electricity are allocated between the Generation, Transmission, Distribution and Customer services segments based on cost recovery plus return on assets.

Exco assesses the performance of the operating segments based on a measure of profit or loss consistent with that of the financial statements.

The amounts provided to Exco with respect to total assets and liabilities are measured in terms of the IFRS. These assets and liabilities are allocated based on the operation of the segment and the physical location of the assets.

### Geographical information

	Group Revenues		Group Non-current assets	
	2012 Rm	2011 Rm	2012 Rm	2011 Rm
South Africa	109 705	87 199	299 910	244 755
Foreign countries	5 055	4 248	72	51
	114 760	91 447	299 982	244 806

The group's reportable segments operate mainly in South Africa, which is Eskom's country of domicile.

Revenue is allocated based on the country in which the customer is located after eliminating inter segment transactions. There are no significant revenues derived from a single external customer by any of the reportable segments.

Non-current assets disclosed for geographical information comprise non-current assets other than deferred tax assets and financial instruments.

## 11. Material events subsequent to 31 March 2012

The board of directors is currently in the process of developing a project plan and strategy for the disposal of Eskom Finance Company SOC Limited, a wholly owned subsidiary in terms of a directive from the shareholder post 31 March 2012.

## 12. Material changes in property, plant and equipment

Property, plant and equipment increased by R53 937 million for the group during the year ended 31 March 2012 as compared to the amount disclosed in the annual financial statements as at and for the year ended 31 March 2011. This expenditure relates mainly to the cost incurred on the capital expansion programme.

## 13. Material changes in contingent liabilities

There were no significant changes in contingent liabilities during the year ended 31 March 2012 from those reported in the annual financial statements as at and for the year ended 31 March 2011.

#### **14. Material changes in capital commitments**

Capital commitments decreased by R79 465 million for the group during the year ended 31 March 2012 as compared to those disclosed in the annual financial statements as at and for the year ended 31 March 2011. This is primarily due to the progress and phasing of the capital expansion programme.

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#### **15. Issued share capital**

There was no change in the issued share capital during the year ended 31 March 2012.

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#### **16. Related-party transactions**

The revised IAS 24 *Related party disclosures* became effective during the current financial year. The group applies the IAS 24 paragraph 26 exemption in respect of its relationship with government related entities at national and local levels of government (refer note 20).

	2012 Rm	2011 Rm
<b>17. Revenue</b>		
Electricity revenue	112 999	90 375
Other revenue, excluding electricity revenue	1 761	1 072
	<b>114 760</b>	<b>91 447</b>
<b>18. Employee benefit expense</b>		
Gross employee benefit expense	24 362	20 380
Employee benefit expense capitalised to property, plant and equipment	(4 230)	(3 685)
	<b>20 132</b>	<b>16 695</b>

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# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

	2012 Rm	2011 Rm
<b>19. Cash generated from operations</b>		
Profit before tax	<b>18 407</b>	11 673
Adjustments for:	<b>19 911</b>	19 265
Depreciation and amortisation expense	<b>8 801</b>	7 219
Depreciation expense – primary energy	13	14
Amortisation and write-off of future fuel	2	10
Net impairment loss (excluding bad debts recovered)	632	798
Net fair value loss on financial instruments, including embedded derivatives	2 054	3 077
Net loss/(surplus) on disposal of property, plant and equipment	3	(52)
Dividend income	(30)	(26)
Increase in provisions	4 791	4 228
Decrease in deferred income	(123)	(108)
Payments made in advance recognised in profit or loss	208	296
Payments received in advance recognised in profit or loss	(228)	(819)
Other non-cash items	12	4
Finance income	(3 536)	(2 436)
Finance cost	7 499	7 177
Share of profit of equity-accounted investees	(41)	(24)
Non-current assets held-for-sale	(146)	(93)
	<b>38 318</b>	30 938
Changes in working capital	351	(2 293)
Increase in payments made in advance	(2 115)	(3 512)
Increase in inventories	(453)	(721)
Increase in trade and other receivables	(3 937)	(2 871)
Decrease in loans receivable	9	643
Increase in trade and other payables	5 708	3 322
Expenditure incurred on provisions	(2 435)	(2 108)
Increase in payments received in advance	3 574	2 954
	<b>38 669</b>	28 645

## **20. Restatement of comparatives and change in accounting policies**

### **Related parties**

The revised IAS 24 *Related party disclosures* became effective during the current financial year. The revised IAS 24 provides government-related entities an exemption which eliminates the requirements to disclose information that is costly to gather and of less value to users. The group applies the IAS 24 paragraph 26 exemption in respect of its relationship with public entities at the national and local levels of government. Related party disclosures were previously not separately provided for municipalities, which are at the local sphere of government, as the specific guidance from SAICA was applied, which allowed that where management deemed this to be appropriate, only related party disclosure at the national sphere needed to be provided. The revised IAS 24 requires that where management elects to use the exemption, transactions that are individually significant or individually insignificant but collectively significant should be quantitatively or qualitatively disclosed. As a result, a quantitative indication of transactions with municipalities and entities in the national government sphere is accordingly disclosed.

IAS 24 contains only disclosure and not measurement requirements. Therefore, the revision to IAS 24 did not have an impact on amounts previously recognised in the group's financial statements.

### **Voluntary change in accounting policy with respect to the presentation of foreign exchange gains and losses**

Previously, the group presented foreign exchange gains and losses that relate to loans and receivables, debt securities issued and borrowings in profit or loss within finance income or finance cost. With effect from 1 April 2011, the group presents foreign gains and losses in profit or loss within net fair value gain/(loss) on financial instruments, excluding embedded derivatives.

This change in accounting policy was considered appropriate to give a fairer presentation of the group's risk management policy of hedging foreign transactions by disclosing the impact on profit or loss of foreign exchange differences in the same line in profit or loss as where gains and losses on derivatives held for risk management are disclosed, which is within net fair value gain/(loss) on financial instruments, excluding embedded derivatives.

### **Restatement of comparative information for the statement of cash flows**

The comparative cash flow statement has been reclassified to enhance disclosure.

### **Restatement of accumulated profit at 31 March 2010**

The amortisation period on the euro bond loan was restated, resulting in an adjustment between cash flow hedge reserve and accumulated profit of R494 million.

# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

## 20. Restatement of comparatives and change in accounting policies (continued)

### Employee benefit obligations

Previously, all employee benefit related obligations recognised in terms of IAS 19 Employee benefits were not presented in the same line item on the statement of financial position. A reclassification was made and all employee-related obligations are now presented in the same line item on the statement of financial position within *Employee benefit obligations*.

The impact of the restatement of comparative information is as follows:

	Previously reported Rm	Adjustments Rm	Restated Rm
<b>Statement of financial position</b>			
as at 31 March 2011			
<b>Liabilities</b>			
<i>Non-current liabilities</i>	18 520	(429)	18 091
Retirement benefit obligations	7 317	(7 317)	–
Provisions	11 203	(860)	10 343
Employee benefit obligations	–	7 748	7 748
<i>Current liabilities</i>	23 131	429	23 560
Retirement benefit obligations	234	(234)	–
Provisions	4 021	(1 468)	2 553
Employee benefit obligations	–	2 623	2 623
Trade and other payables	18 876	(492)	18 384

	Previously reported Rm	Adjust- ments Rm	Restated Rm
<b>Income statement</b>			
for the year ended 31 March 2011			
Operating profit before net fair value loss and net finance cost	18 880	–	18 880
Other income	587	–	587
Net fair value loss on financial instruments, excluding embedded derivatives	(3 691)	1 875	(1 816)
Net fair value loss on embedded derivatives	(1 261)	–	(1 261)
Operating profit before net finance cost	14 515	1 875	16 390
Net finance cost	(2 866)	(1 875)	(4 741)
Finance income	2 436	–	2 436
Finance cost	(5 302)	(1 875)	(7 177)
Share of profit of equity-accounted investees, net of tax	24	–	24
<b>Profit before tax</b>	11 673	–	11 673
Income tax	(3 261)	–	(3 261)
<b>Profit for the year from continuing operations</b>			
Loss for the year from discontinued operations	(56)	–	(56)
<b>Profit for the year</b>	8 356	–	8 356

# Selected notes to the summarised group financial statements continued

for the year ended 31 March 2012

## 20. Restatement of comparatives and change in accounting policies (continued)

### Employee benefit obligations (continued)

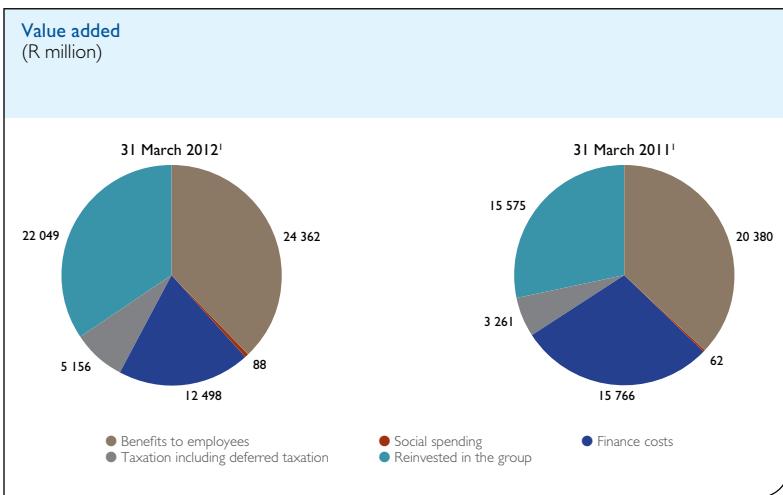
	Previously reported Rm	Adjustments Rm	Restated Rm
<b>Cash flow statement</b>			
for the year ended 31 March 2011			
<b>Cash flows from operating activities</b>			
Cash generated from operations	28 275	370	28 645
Other net cash flows from operating activities	(5 991)	93	(5 898)
Net cash generated from operating activities	22 284	463	22 747
<b>Cash flows from investing activities</b>			
Increase in deferred income	463	(463)	–
Other net cash flows invested in investing activities	(46 458)	–	(46 458)
Net cash used in investing activities	(45 995)	(463)	(46 458)

	Previously reported Rm	Adjust- ments Rm	Restated Rm
<b>Cash flows from financing activities</b>			
Debt raised	78 758	(9 567)	69 191
Borrowings	32 614	(9 567)	23 047
Other debt raised	46 144	—	46 144
Debt repaid	(18 756)	9 567	(9 189)
Borrowings	(18 115)	9 567	(8 548)
Other debt raised	(641)	—	(641)
Other net cash flows from financing activities	(39 672)	—	(39 672)
Net cash from financing activities	20 330	—	20 330
Net decrease in cash and cash equivalents	(3 381)	—	(3 381)
Cash and cash equivalents at beginning of the year	15 541	—	15 541
Cash and cash equivalents attributable to non-current assets held-for-sale	(73)	—	(73)
Cash and cash equivalents at end of the year	12 087	—	12 087

# Group value added statement

	2012 Rm	2011 <sup>1</sup> Rm	2010 <sup>1</sup> Rm
<b>Value created</b>			
Revenue	114 760	91 447	71 130
Other income	740	611	566
Less: primary energy and other operating expenses	(64 112)	(51 724)	(42 589)
<b>Value added</b>	<b>51 388</b>	<b>40 334</b>	<b>29 107</b>
Finance income	3 536	2 436	1 614
<b>Wealth created</b>	<b>54 924</b>	<b>42 770</b>	<b>30 721</b>
<b>Value distributed</b>			
Benefits to employees	32 875	27 195	21 385
Social spending to communities	24 362	20 380	17 868
Finance costs to lenders	88	62	59
Borrowing cost and employee cost capitalised	12 498	15 766	12 786
Dividends to shareholder	(9 229)	(12 274)	(11 408)
Taxation to government (including deferred tax)	—	—	—
<b>Value reinvested in the group to maintain and develop operations</b>	<b>5 156</b>	<b>3 261</b>	<b>2 080</b>
<b>Total value distributed and reinvested</b>	<b>22 049</b>	<b>15 575</b>	<b>9 336</b>
Depreciation and amortisation	8 801	7 219	5 716
Net profit after dividend	13 248	8 356	3 620
<b>Total value distributed and reinvested</b>	<b>54 924</b>	<b>42 770</b>	<b>30 721</b>
Number of employees	43 473	41 778	39 222
Electricity sales (GWh)	224 785	224 446	218 591
<b>Value created per employee (R)</b>			
Revenue per employee (Rm)	2.64	2.19	1.81
Value added per employee (Rm)	1.18	0.97	0.74
Value added per GWh (Rm)	0.23	0.18	0.13
Wealth created per employee (Rm)	1.26	1.02	0.78

<sup>1</sup>. Restated



*I. The value added graphs exclude the effect of capitalised finance and employee costs of R9 229 million (2011: R12 274)*

## Future priorities

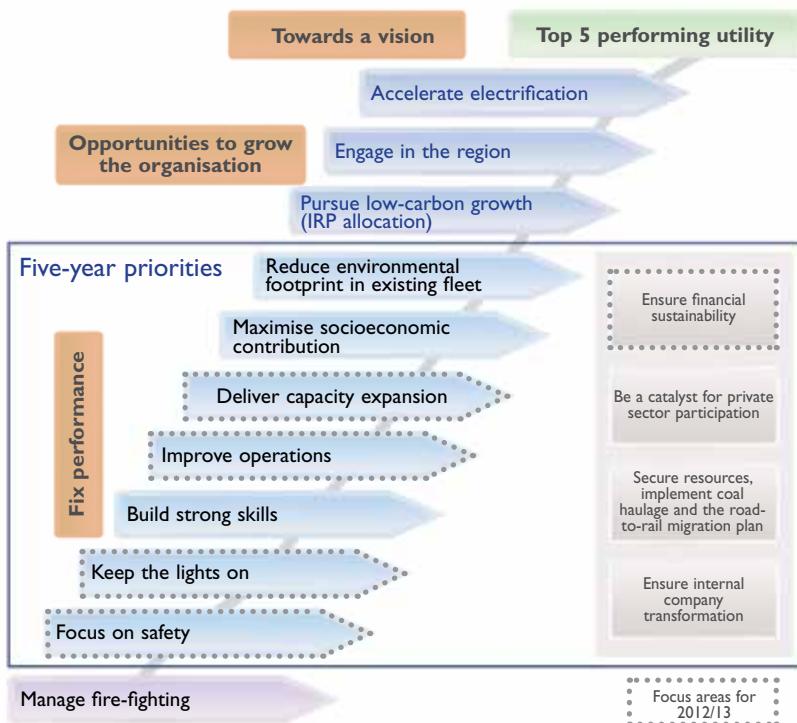


Bruce Ockhuis in his safety gear performs line maintenance in the Western Cape



Eskom's board-approved priorities for 2012/13 through to 2016/17 are set out in the diagram below:

### Five-year planning priorities



## Future priorities continued

Eskom will focus on five areas in 2012/13 that require step changes to shift performance and grow sustainably. These focus areas are:

- **Safety** – no operating condition or urgency of service justifies exposing anyone to safety risks. Eskom must exhibit a safety culture driven by leadership and individual behaviour.
- **Keep the lights on** – Eskom is working to ensure security of supply and demand-side savings by improving coal quality, giving IPPs access to the transmission grid and reducing power demand through programmes such as the Energy Conservation Scheme and the residential mass rollout programme.
- **Ensure financial sustainability** – the MYPD 3 application will be a high priority.
- **Deliver on the capacity expansion programme** – Eskom aims to deliver

high-quality capacity expansion projects on time and within budget, while providing all South Africans with access to electricity.

- **Improve operations** – the focus will be on implementing and embedding the Back2Basics programme (processes, systems and tools) and various division-specific programmes to achieve operational excellence.

Eskom's performance for the past five years and the key performance indicator targets per strategic objectives are on page 144.



New high-voltage lines are erected from the Ingula pumped storage scheme near Ladysmith

## Appendices



Solar panels have been installed at Lethabo power station to supplement auxiliary power consumption

# Appendix A: Key indicators



The performance for the past five years and the target set for Eskom's detailed key indicators per strategic objective as per the Eskom five-year corporate plan are indicated below (Eskom group numbers are indicated unless otherwise stated):

**Key:**

- \* Year-on-year change in performance
- 2011/12 performance improved compared to 2010/11
- 2011/12 performance remained the same as in 2010/11
- 2011/12 performance deteriorated compared to 2010/11
- 2011/12 performance within 2011/12 target but deteriorated compared to 2010/11

Key indicator area	Key indicator and statistics
<b>Becoming a high performance organisation</b>	
<b>Focus on safety</b>	LTIR <sup>1,2</sup> (index) Fatalities (employees and contractors) <sup>1</sup> (number)
<b>Improve operations</b>	UCLF <sup>1,2</sup> (%) EAFL <sup>1,2</sup> (%) SAIDI <sup>1,2</sup> (hours per year) SAIFI <sup>1</sup> (events per year) Total system minutes lost for events <1 minute <sup>1,2</sup> (minutes) Major incidents <sup>1</sup> (number)
<b>Put customer at centre</b>	Customer service index <sup>1,2</sup>
<b>Internal organisational transformation (company)</b>	Employment equity – disability <sup>1</sup> (%) Racial equity in senior management <sup>1</sup> (% of black employees) Racial equity in professionals and middle management <sup>1</sup> (% of black employees) Gender equity in senior management <sup>1</sup> (% of female employees) Gender equity – professionals and middle management <sup>1</sup> (% of female employees)
<b>Build strong skills</b>	Total engineering learners in the system <sup>SC, 1, 2, 3</sup> (number) Total technician learners in the system <sup>SC, 1, 2, 3</sup> (number) Total artisan learners in the system <sup>SC, 1, 2, 3</sup> (number) Total youth programme learners in the system <sup>1, 2, 13</sup> (number)

	Target 2016/17	Actual 2011/12	Year on year*	Actual 2010/11	Actual 2009/10	Actual 2008/09	Actual 2007/08
	0.20	<b>0.41<sup>(a)</sup></b>		0.47 <sup>(a)</sup>	0.54 <sup>(a)</sup>	0.50 <sup>(a)</sup>	0.46
	—	<b>25<sup>(a)</sup></b>		25 <sup>(a)</sup>	17 <sup>(a)</sup>	27 <sup>(a)</sup>	29
	3.50	<b>7.97<sup>(a)</sup></b>		6.14 <sup>(a)</sup>	5.10 <sup>(a)</sup>	4.38 <sup>(a)</sup>	5.13
	85.50	<b>81.99<sup>(a)</sup></b>		84.59 <sup>(a)</sup>	85.21	85.32	84.85
	39.00	<b>45.75<sup>(a)</sup></b>		52.61 <sup>(a)</sup>	54.41 <sup>(a)</sup>	51.51 <sup>(a)</sup>	55.51 <sup>(a)</sup>
	17.00	<b>23.73<sup>(a)</sup></b>		25.31 <sup>(a)</sup>	24.65 <sup>(a)</sup>	24.16 <sup>(a)</sup>	25.36 <sup>(a)</sup>
	3.40	<b>4.73<sup>(a)</sup></b>		2.63 <sup>(a)</sup>	4.09 <sup>(a)</sup>	4.21 <sup>(a)</sup>	3.56 <sup>(a)</sup>
	1	<b>1<sup>(a)</sup></b>		— <sup>(a)</sup>	1 <sup>(a)</sup>	3 <sup>(a)</sup>	5 <sup>(a)</sup>
	89.30	<b>85.55</b>		84.37	85.05	84.74	82.11
	3.00	<b>2.49<sup>(a)</sup></b>		2.53	2.54	3.38	3.30
	71.00	<b>53.90<sup>(a)</sup></b>		52.52	47.31	46.91	n/a
	77.00	<b>65.69</b>		64.05	62.93	62.14	n/a
	36.00	<b>24.31<sup>(a)</sup></b>		23.51	21.55	20.72	n/a
	40.00	<b>32.43</b>		31.56	30.25	29.75	n/a
	2 073	<b>2 273<sup>(a)</sup></b>		1 335	955	968	n/a
	805	<b>844<sup>(a)</sup></b>		692	681	588	n/a
	2 705	<b>2 598<sup>(a)</sup></b>		2 213	2 144	1 979	n/a
	5 000	<b>5 159</b>		n/a	n/a	n/a	n/a

## Appendix A: Key indicators continued

Key indicator area	Key indicator and statistics
<b>Leading and partnering to keep the lights on</b>	
Keep the lights on	Management of the national supply/demand constraints <sup>SC, I, 3</sup> (load shedding) (yes or no)
	DSM demand efficiency <sup>4</sup> (MW)
	DSM energy efficiency <sup>SC, I, 15</sup> (GWh)
	Internal energy efficiency – reduce consumption by 15% by 2015 <sup>SC, I, 3, 16</sup> (annualised GWh)
Deliver capacity expansion	Maintenance backlog <sup>4, 17</sup> (number)
	Generation capacity installed <sup>SC, I, 2, 3</sup> (MW)
	Transmission lines installed <sup>SC, I, 2, 3</sup> (km)
	Transmission capacity installed <sup>SC, I, 2, 3</sup> (MVA)
Total capital expenditure (excluding borrowing costs) <sup>1, 2</sup> (R billion)	
<b>Reducing our environmental footprint and pursuing low carbon growth opportunities</b>	
Reduce environmental footprint in existing fleet	Relative particulate emissions <sup>I, 2</sup> (kg/MWh SO)
	Specific water usage <sup>SC, I, 2</sup> (L/kWh SO)
	Carbon dioxide emissions (relative) <sup>4, 5, 23</sup> (kg/kWh)
	Carbon dioxide emissions <sup>4, 5, 23</sup> (Mt)
	Nitrogen oxide emissions <sup>4, 5, 21</sup> (kt)
	Sulphur dioxide emissions <sup>4, 5</sup> (kt)
	Nitrous oxide emissions <sup>4, 5</sup> (t)
	Environmental legal contraventions <sup>I, 2, 6</sup> (number)

	Target 2016/17	Actual 2011/12	Year on year*	Actual 2010/11	Actual 2009/10	Actual 2008/09	Actual 2007/08
	No	No <sup>®</sup>		No <sup>®</sup>	No <sup>®</sup>	Yes	Yes
2 438 <sup>11</sup>	<b>365<sup>®</sup></b>			354 <sup>®</sup>	372 <sup>®</sup>	916 <sup>®</sup>	650 <sup>®</sup>
11 614 <sup>11</sup>	<b>1 422<sup>®</sup></b>			1 339 <sup>®</sup>	n/a	n/a	n/a
59.00 <sup>11</sup>	<b>44.96<sup>®</sup></b>			26.20 <sup>®</sup>	n/a	n/a	n/a
n/a	<b>26<sup>19</sup></b>			36	n/a	n/a	n/a
8 062 <sup>11</sup>	<b>535<sup>®</sup></b>			315 <sup>®</sup>	452 <sup>®</sup>	1 770 <sup>®</sup>	1 043
6 596 <sup>11</sup>	<b>631<sup>®</sup></b>			443 <sup>®</sup>	600 <sup>®</sup>	418 <sup>®</sup>	480
25 275 <sup>11</sup>	<b>2 525<sup>®</sup></b>			5 940 <sup>®</sup>	1 630 <sup>®</sup>	1 375 <sup>14</sup>	1 355
65.00 <sup>12</sup>	<b>58.82</b>			47.93	48.70	43.66	24.26
	0.21	<b>0.31<sup>®</sup></b>		0.33 <sup>®</sup>	0.39 <sup>®</sup>	0.27 <sup>®</sup>	0.21 <sup>®</sup>
1.20	<b>1.34<sup>®</sup></b>			1.35 <sup>®</sup>	1.34 <sup>®</sup>	1.35 <sup>®</sup>	1.32 <sup>®</sup>
n/a	<b>0.99</b>			0.99	0.98	0.98	0.95
n/a	<b>231.9<sup>®</sup></b>			230.3 <sup>®</sup>	224.7 <sup>®</sup>	221.7 <sup>®</sup>	223.6 <sup>®</sup>
n/a	<b>977<sup>®</sup></b>			977 <sup>®</sup>	959 <sup>®</sup>	957 <sup>®</sup>	984
n/a	<b>1 849<sup>®</sup></b>			1 810 <sup>®</sup>	1 856 <sup>®</sup>	1 874 <sup>®</sup>	1 950 <sup>®</sup>
n/a	<b>2 967</b>			2 906	2 825	2 801	2 872
5	<b>50<sup>®</sup></b>			63 <sup>®</sup>	55 <sup>®</sup>	114 <sup>®</sup>	46

## Appendix A: Key indicators continued

Key indicator area	Key indicator and statistics
<b>Secure our future resource requirements, mandate and the enabling environment</b>	
Maximise socio-economic contribution	% of local content in all new build contracts <sup>SC, I, 2, 3</sup> (%)
	Government electrification connections <sup>1, 2</sup> (number)
	Total number of electrification connections <sup>4</sup> (number)
	B-BBEE attributable spend (company) <sup>1, 2</sup> (% of total spend)
	Black women-owned spend (company) <sup>1</sup> (% of total measured procurement spend)
	Corporate social investment <sup>4</sup> (Rm)
<b>Implementing coal haulage and the road-to-rail migration plan</b>	
Implementing coal road-to-rail migration plan	Coal haulage (road-to-rail) <sup>1</sup> (Mt)
<b>Pursuing private sector participation</b>	
Pursuing private sector participation	IPP installed capacity <sup>1</sup> (MW)
	IPP GWh purchased <sup>4</sup> (GWh)
<b>Ensuring our financial sustainability</b>	
Company: Statistics and ratios	Sales volumes <sup>1</sup> (GWh)
	Net production and import volumes <sup>1</sup> (GWh)
	Cost of electricity (excluding depreciation, including immediate priorities) <sup>SC, I, 3</sup> (R/MWh)
	Interest cover <sup>SC, I, 3</sup> (ratio)
	Debt/equity ratio <sup>SC, I, 3</sup> (ratio)
Group: Income statement	Free funds from operations (FFO) <sup>1</sup> (Rm)
	Electricity revenue per kWh (including environmental levy) <sup>1</sup> (c/kWh)
	Electricity operating cost per kWh (including depreciation) <sup>1, 2</sup> (c/kWh)
	Arrear debts as % of revenue <sup>1</sup> (%)

	Target 2016/17	Actual 2011/12	Year on year*	Actual 2010/11	Actual 2009/10	Actual 2008/09	Actual 2007/08
	52.00	<b>77.2<sup>®</sup></b>		79.7 <sup>®A</sup>	73.9 <sup>®A</sup>	n/a	n/a
567 543 <sup>11</sup>	<b>125 628</b>			129 945	106 603	68 208	125 263
724 636 <sup>11</sup>	<b>155 213</b>			149 914	149 901	112 965	168 538
90.00	<b>73.2<sup>®</sup></b>			52.3 <sup>®A</sup>	28.6 <sup>22</sup>	63.2	n/a
30.00	<b>3.3<sup>®</sup></b>			4.3	12.1 <sup>18</sup>	10.0 <sup>18</sup>	n/a
n/a	<b>87.9<sup>®</sup></b>			62.3 <sup>®A</sup>	58.7 <sup>®A</sup>	79.5 <sup>®A</sup>	69.8
100.8 <sup>11</sup>	<b>8.5</b>			7.1	5.1	4.3	4.2
3 600 <sup>11</sup>	<b>1 008</b>			888	n/a	n/a	n/a
n/a	<b>4 107</b>			1 833	n/a	n/a	n/a
238 715	<b>224 785</b>			224 446	218 591	214 850	224 366
271 351	<b>250 454</b>			248 914	242 871	237 317	246 483
583.2	<b>374.19<sup>®</sup></b>			296.36 <sup>®A</sup>	255.09 <sup>®A</sup>	237.29	197.80
2.19	<b>3.27<sup>®</sup></b>			1.40 <sup>®A</sup>	0.77 <sup>®A</sup> <sup>20</sup>	(4.72)	0.96
1.67	<b>1.69<sup>®</sup></b>			1.66 <sup>®A</sup>	1.68 <sup>®A</sup> <sup>20</sup>	1.32	0.40
77 325 <sup>9</sup>	<b>30 483</b>			16 953	2 356	13 865	8 793
97.51 <sup>9</sup>	<b>50.27</b>			40.27	31.95	24.67	19.40
71.39 <sup>9</sup>	<b>41.28</b>			32.78	28.23	25.94	18.56
0.60 <sup>9</sup>	<b>0.53</b>			0.75	0.83	1.54	1.09

## Appendix A: Key indicators continued

Key indicator area	Key indicator and statistics
Group: Balance sheet	Return on average assets <sup>1</sup> (%)
	Return on average equity <sup>1</sup> (%)
	Customer service (large power users) <sup>1</sup> (average debtors days)
	Customer service (small power users – excluding Soweto debt) <sup>1</sup> (average debtors days)
	Key industrial and international customers <sup>1,10</sup> (average debtors days)
	Average coal stock days <sup>1</sup> (days)
Group: Funding	FFO as % of gross debt <sup>1</sup> (%)
	Gross debt/EBITDA <sup>1</sup> (ratio)
	Working capital ratio <sup>1</sup> (ratio)
	Debt service cover ratio <sup>1</sup> (ratio)

### Notes:

- <sup>1A</sup> Limited assurance provided by the independent assurance provider in previous years.
- <sup>1B</sup> Reasonable assurance provided by the independent assurance provider (refer page 157).
- SC Key indicator forms part of the Shareholder Compact.
- 1. Indicator included in the Corporate Plan.
- 2. This measure is taken into account for short-term performance measurement (in relation to executive remuneration). For further remuneration details see [www.eskom.co.za/IR2012/022.html](http://www.eskom.co.za/IR2012/022.html).
- 3. This measure is taken into account for long-term performance measurement (in relation to executive remuneration). For further remuneration details see [www.eskom.co.za/IR2012/023.html](http://www.eskom.co.za/IR2012/023.html).
- 4. Additional material indicator.
- 5. Calculated figures based on coal characteristics and the power station design parameters. SO<sub>2</sub> and CO<sub>2</sub> emissions are based on coal analysis and using coal burnt tonnages. Includes coal fired power stations and the gas-turbine power stations as well as oil consumed during power station start-ups and for CO<sub>2</sub> the underground coal gasification pilot (flaring).
- 6. Eskom's continued aspiration is for zero environmental violations. In order to achieve this, targets have been set in the Corporate Plan.
- 7. Restatement. One environmental legal contravention was registered in March 2011 and following an investigation was reclassified as an event. This has resulted in the reported number of environmental legal contraventions for 2011 changing from 64 to 63.
- 8. Amended after issuing the 2011 integrated report due to a lost-time injury reported in January 2011 which deteriorated to a fatality in July 2011.

	<b>Target 2016/17</b>	<b>Actual 2011/12</b>	<b>Year on year*</b>	<b>Actual 2010/11</b>	<b>Actual 2009/10</b>	<b>Actual 2008/09</b>	<b>Actual 2007/08</b>
	1.70 <sup>9</sup>	<b>3.73</b>		2.93	1.63	(5.29)	(0.11)
	16.45 <sup>9</sup>	<b>13.92</b>		10.68	5.58	(16.02)	(0.28)
	n/a	<b>21.75</b>		18.89	18.88	16.38	14.26
	n/a	<b>42.88</b>		45.06	40.53	47.54	48.89
	n/a	<b>14.40</b>		15.46	15.37	16.53	12.76
	46	<b>39<sup>10</sup></b>		41 <sup>10</sup>	37 <sup>10</sup>	41 <sup>10</sup>	13
	22.16 <sup>9</sup>	<b>15.15</b>		9.51	1.92	15.89	13.98
	3.73 <sup>9</sup>	<b>6.46</b>		7.55	8.40 <sup>20</sup>	(13.00)	10.81
	1.01 <sup>9</sup>	<b>0.76</b>		0.85	0.89 <sup>20</sup>	0.78	0.85
	2.99 <sup>9</sup>	<b>3.50</b>		1.90	1.43 <sup>20</sup>	0.75	0.68

- 
9. Financial group targets for 2017 are not available hence the Eskom company targets for 2017 have been presented.
10. Top customers' debtors days excluding disputes for 2009/10 onwards. For 2007/08 and 2008/09 a consolidated top customers' debtors days figure is provided.
11. Represents a cumulative target for the five year period: 2012/13 – 2016/17.
12. The R65.0 billion is the average annual capital expenditure (excluding IDC) target to be achieved every year between now and 2016/17.
13. New measure, comparatives not available. Target for 2011/12 met.
14. This includes construction by the Transmission division.
15. The basis of measurement changed during the 2010/11 year; prior to that verified savings of 372MW<sup>10</sup> (2010) and 916MW<sup>10</sup> (2009) were achieved.
16. Reporting basis changed during the 2010/11 year, hence no comparatives are available.
17. Measurement of this key indicator only started as of 31 March 2011, hence comparatives prior to then are not available.
18. For 2008/09 and 2009/10, the BWO % was calculated on the attributable spend.
19. Includes 18 outages of the original 36 maintenance outages identified as at 31 March 2011 and eight additional maintenance outages which have arisen since 1 April 2011.
20. Restatement
21. NO<sub>x</sub> reported as NO<sub>x</sub> is calculated using average station specific emission factors which have been measured intermittently between 1982 and 2006, and tonnages of coal burnt.
22. Attributable spend based on top 295 suppliers.
23. Refer to [www.eskom.co.za/IR2012/024.html](http://www.eskom.co.za/IR2012/024.html) for the climate change fact sheet, giving details of the relative CO<sub>2</sub> emission factor.

## Appendix B: Stakeholder engagement matrix

Eskom's material issues discussed



This report focuses on qualitative and quantitative issues arising in 2011/12 that are material to Eskom's business operations and strategic objectives. Refer to page 43 for indication where objectives are dealt with in the report.

The question of what is "material" has been determined in extensive consultation with the company's stakeholders, while taking into consideration its core objectives and the way in which its value chain operates. The following table details Eskom's interaction with its stakeholders.

Eskom strategic objectives to address concerns raised by stakeholders	Employees and unions	Government, Parliament and regulators	
<b>Becoming a high-performance organisation</b>			
Safety of staff, contractors, public	■	■	
Quality service to customers, suppliers and other stakeholders	■	■	
Transformation	■	■	
Skills and job opportunities	■	■	
Education and training	■	■	
Regulatory compliance and governance	■	■	
Stakeholder engagement, management and communication	■	■	
Research and innovation			
<b>Leading and partnering to keep the lights on</b>			
Quality and reliability of supply			■
Capital expansion, including project execution, quality control, fairness			■
<b>Reducing Eskom's carbon footprint and pursuing low-carbon growth opportunities</b>			
Reducing environmental footprint			■
Energy efficiency and advice			■
Renewables			■

	Lenders, analysts and investors	Customers	Industry experts, academics, media	Business groups, civil society and NGOs	Suppliers and contractors
		■	■	■	
	■	■	■	■	■
				■	
			■	■	■
	■				■
	■	■	■	■	■
			■	■	
				■	
				■	
					■
		■		■	■
	■				■
		■			■
			■		
				■	
	■	■	■	■	■
	■	■			
	■				

## Appendix B: Stakeholder engagement matrix

continued

Eskom strategic imperatives to address concerns raised by stakeholders	Employees and unions	Government, Parliament and regulators	
<b>Secure Eskom's future resource requirements, mandate and the required enabling environment</b>			
Health and wellness	■	■	
Remuneration and employment conditions	■	■	
Corporate social investment		■	
B-BBEE and local procurement		■	
Electrification		■	
<b>Implement coal haulage and the road-to-rail migration plan</b>			
Coal road-to-rail migration plan			■
<b>Pursuing private sector participation</b>			
Access for IPPs			■
<b>Ensuring financial sustainability</b>			
Financial sustainability			■
Affordable tariffs			■
Transparent reporting			

Method of interaction	
Employees and unions	Provincial employee engagement, policies, collective bargaining practices, pre and post interim and annual results, regular meetings.
Government, Parliament and regulators	One-on-one meetings, website, monthly, quarterly and annual reports, annual general meeting, industry associations and task teams, site visits, public hearings.
Lenders, analysts, and investors	Road shows, meetings, annual and interim reports, results presentations, webcast sessions, annual general meetings, site visits, internet sites, teleconferences.
Customers	Formal presentation website, road shows, company announcements and reports, site visits, quarterly forums.

	Lenders, analysts and investors	Customers	Industry experts, academics, media	Business groups, civil society and NGOs	Suppliers and contractors
				■	■
	■	■		■	■
	■	■	■	■	■
	■				
	■	■		■	
				■	
	■		■		
	■			■	
	■	■	■	■	

#### Method of interaction

Industry experts, academics, media	Industry associations and task teams, forums and committees, e-mails and internet, interviews, website, road shows, quarterly briefings, company reports, interviews, articles.
Business groups, civil society and NGOs	Road shows and presentation at annual general meeting, community forums, stakeholder forums, peer educators, industry partnership, wellness campaigns and HIV/Aids awareness, skills development programmes, advertising in local newspapers.
Suppliers and contractors	Roadshows, one-on-one meetings, preferential procurement programmes, open days, contracts and service agreements, workshops, presentations, training, project steering.

## Appendix C: Sustainability responsibilities, approval and assurance

### Sustainability responsibilities and approval

Sustainability key indicators, set out in Appendix A, on page 144, report performance on issues material to Eskom's stakeholders. These key indicators have been prepared in accordance with the GRI G3 Guidelines, supported by Eskom's internal reporting guidelines. Eskom's declaration on its GRI B+ Application Level is located on page 9. The King Code advocates that sustainability reporting and disclosure should be independently assured. KPMG Services (Pty) Limited provided reasonable assurance on selected sustainability key indicators marked with an in this report and limited assurance on Eskom's self-declaration of a GRI B+ application level. KPMG's assurance report is presented in Eskom's Divisional report.

For a more comprehensive understanding of Eskom's sustainability performance and its assurance, please refer to the Divisional report at [www.eskom.co.za/IR2012/025.html](http://www.eskom.co.za/IR2012/025.html).

The board acknowledges its responsibility to ensure the integrity of the integrated report. The directors have collectively reviewed the content of the integrated report and believe it addresses the material issues and is a fair presentation of the integrated performance of the group.

**BA Dames**  
Chief executive  
31 May 2012

**PS O'Flaherty**  
Finance director  
31 May 2012

## **Assurance provider's report on extracted sustainability information To the directors of Eskom Holdings SOC Limited**

We have conducted an engagement to agree the extracted key indicators marked with an <sup>RA</sup> (indicators), presented in Appendix A (the Appendix) starting on page 144 with the assured key indicators presented in the Divisional Report of Eskom Holdings SOC Limited for the year ended 31 March 2012 (the Eskom Divisional Report), and report thereon. The extracted key indicators presented in the Appendix are in support of the Material Issues presented in the Integrated Report. The assured key indicators presented in the Eskom Divisional Report were selected by the directors for assurance. In our report dated 31 May 2012 on the sustainability information presented in the Eskom Divisional Report, we expressed unmodified conclusions inter alia on the selected key indicators, prepared in accordance with the GRI G3 Guidelines.

The directors are responsible for identifying the material issues and extracting the appropriate key indicators.

We report that we have agreed the extracted key indicators presented in the Appendix, marked with an <sup>RA</sup>, with the assured key indicators presented in the Eskom Divisional Report, also marked with an <sup>RA</sup>.

The extracted key indicators presented in the Appendix are not intended as a complete summary of the assured indicators presented in the Eskom Divisional Report. For a better understanding of the sustainability information reported in the Eskom Divisional Report, the scope of our assurance engagement, the respective responsibilities of the directors and assurance provider, a summary of our work performed in the context of the assurance provided and our independent assurance opinions on identified subject matters, users are referred to the Eskom Divisional Report which may be accessed at [www.eskom.co.za/IR2012/026.html](http://www.eskom.co.za/IR2012/026.html).

KPMG Services (Pty) Limited  
Per PD Naidoo  
Director

Johannesburg  
31 May 2012

AH Jaffer  
Director

Johannesburg  
31 May 2012

## Appendix D: Glossary

<b>Back2Basics programme</b>	Getting the basics right by simplifying, standardising and optimising our processes, systems and data, together with comprehensive process documentation.
<b>Billion</b>	A thousand million (1 000 000 000).
<b>Decommission</b>	To remove a facility (e.g. reactor) from service and store it safely.
<b>Demand-side management</b>	Planning, implementing and monitoring activities to encourage consumers to use electricity more efficiently, including both the timing and level of demand.
<b>Electricity revenue per kWh</b>	Electricity revenue including environmental levy/kWh sales total.
<b>Electricity operating costs per kWh</b>	(Electricity-related costs: Primary energy costs, net transfer pricing, employee benefit cost, depreciation and amortisation plus impairment loss and other operating expenses)/external sales in kWh.
<b>Embedded derivative</b>	Financial instrument that causes cash flows that would otherwise be required by a contract to be modified according to a specified variable such as currency.
<b>Energy availability factor (EAF)</b>	Measure of power station availability, taking account of energy losses not under the control of plant management and internal non-engineering constraints.
<b>Energy efficiency</b>	Programmes to reduce energy used by specific end-use devices and systems, typically without affecting services provided.
<b>Forced outage</b>	Shutdown of a generating unit, transmission line or other facility for emergency reasons or a condition in which generating equipment is unavailable for load due to unanticipated breakdown.
<b>Free basic electricity</b>	Amount of electricity deemed sufficient to provide basic electricity services to a poor household (predominantly 50kWh/month).
<b>Funds from operations</b>	Cash generated from operations adjusted for working capital (excluding provisions) and net interest paid/received and non-current assets held for risk management.

<b>Funds from operations as a percentage of gross debt</b>	Funds from operations/gross debt multiplied by 100.
<b>Gross debt</b>	Debt securities issued, borrowings, finance lease liabilities and financial trading liabilities plus the after tax effect of retirement benefit obligations and provisions for power station-related environmental restoration and mine-related closures.
<b>Independent non-executive director</b>	<ul style="list-style-type: none"> <li>■ Not a full-time salaried employee of the company or its subsidiary</li> <li>■ Not a shareholder representative</li> <li>■ Has not been employed by the company and is not a member of the immediate family of an individual who is, or has been in any of the past three financial years, employed by the company in any executive capacity</li> <li>■ Not a professional adviser to the company</li> <li>■ Not a significant supplier or customer.</li> </ul>
<b>International financial reporting standards</b>	Global accounting standards issued by the International Accounting Standards Board that require transparent and comparable information.
<b>Independent power producer (IPP)</b>	Any entity, other than Eskom, that owns or operates, in whole or in part, one or more independent power production facilities.
<b>Interest cover</b>	Operating profit before net finance cost/(net finance cost but before unwinding of discount on provisions, change in discount rate and borrowing cost capitalised).
<b>Kilowatt hour (kWh)</b>	Basic unit of electric energy equal to one kilowatt of power supplied to or taken from an electric circuit steadily for one hour; one kilowatt hour is 1 000 watt hours.
<b>Load</b>	Amount of electric power delivered or required at any specific point on a system.
<b>Load management</b>	Activities to influence the level and shape of demand for electricity so that demand conforms to the present supply situation, long-term objectives and constraints.

## Appendix D: Glossary continued

<b>Load shedding</b>	Scheduled and controlled power cuts by rotating available capacity between all customers when demand is greater than supply to avoid blackouts.
<b>Lost-time incident rate (LTIR)</b>	Proportional representation of the occurrence of lost-time injuries over 12 months.
<b>Megawatt</b>	One million watts.
<b>Megawatt-hour (MWh)</b>	One thousand kilowatt-hours or 1 million watt-hours.
<b>Outage</b>	Period in which a generating unit, transmission line, or other facility is out of service.
<b>Off-peak</b>	Period of relatively low system demand.
<b>Peak demand</b>	Maximum power used in a given period, traditionally between 07:00 – 10:00 and 18:00 – 21:00.
<b>Peaking capacity</b>	Generating equipment normally operated only during hours of highest daily, weekly or seasonal loads.
<b>Peak-load plant</b>	Gas turbines or a pumped-storage scheme used during peak-load periods.
<b>Planned capability loss factor</b>	Ratio of the energy that was not produced during a given period of time (because of planned shutdowns or load reductions due to causes under management control) to the maximum amount of energy which could be produced over the same time period, expressed as a percentage.
<b>Primary energy</b>	Energy in natural resources (e.g. coal, liquid fuels, sunlight, wind, uranium).
<b>Pumped-storage scheme</b>	A lower and an upper reservoir with a power station/pumping plant between the two. During off-peak periods the reversible pump/turbines use electricity to pump water from the lower to the upper reservoir. During peak demand, water runs back into the lower reservoir through the turbines, generating electricity.
<b>Reserve margin</b>	Difference between net system capability and the system's maximum load requirements (peak load or peak demand).
<b>Return on average equity</b>	Profit or loss for the year after tax/average total equity.

<b>Return on average total assets</b>	Profit or loss for the year after tax/average total assets.
<b>System minutes</b>	Global benchmark for measuring the severity of interruptions to customers. One system minute is equivalent to the loss of the entire system for one minute at annual peak. A major incident is an interruption with a severity ≥ one system minute.
<b>Technical losses</b>	Naturally occurring losses that depend on the power systems used.
<b>Torrefied wood chips</b>	Wood chips with all the moisture extracted, used as fuel for biomass burning.
<b>Unit capability factor (UCF)</b>	Measure of power station availability indicating how well plant is operated and maintained.
<b>Unplanned capability loss factor (UCLF)</b>	Ratio of the energy that was not produced during a given period of time (because of unplanned shutdowns, outage extensions, or unplanned load reductions due to causes under management control) to the maximum amount of energy which could be produced over the same time period, expressed as a percentage.
<b>Used nuclear fuel</b>	Nuclear fuel irradiated in, and permanently removed from, a nuclear reactor. Used nuclear fuel is stored on site in spent fuel pools or storage casks.
<b>Working capital ratio</b>	(Total current assets less financial instruments with group companies less investments in securities less embedded derivative assets less derivatives held for risk management less financial trading assets less cash and cash equivalents)/(Total current liabilities less financial instruments with group companies less debt securities issued less borrowings less embedded derivative liabilities less derivatives held for risk management less financial trading liabilities).

## Appendix E: Abbreviations and acronyms

<b>B-BBEE</b>	Broad-based black economic empowerment
<b>CFL</b>	Compact fluorescent lamp
<b>COP 17</b>	17th Conference of the Parties to the United Nations Convention on Climate Change
<b>EAF</b>	Energy availability factor
<b>EBITDA</b>	Earnings before interest, tax, depreciation and amortisation
<b>FFO</b>	Free funds from operations
<b>GRI</b>	Global Reporting Initiative
<b>GW</b>	Gigawatt
<b>GWh</b>	Gigawatt hour (1 000MWh)
<b>IPP</b>	Independent power producer
<b>ISMO</b>	Independent System and Market Operator
<b>IT</b>	Information technology
<b>k</b>	kilo
<b>King III</b>	The third King Commission Code of Corporate Governance
<b>km</b>	Kilometre
<b>kt</b>	Kiloton (1 000 tons)
<b>kV</b>	Kilovolt
<b>kWh</b>	Kilowatt hour
<b>LCOE</b>	Levelised cost of electricity
<b>LTIR</b>	Lost-time incident rate
<b>MJ</b>	Megajoule
<b>ML</b>	Megalitre (1 000 000 litres)
<b>mSv</b>	milliSievert
<b>Mt</b>	Million tons
<b>MVA</b>	Megavolt ampere
<b>MW</b>	Megawatt
<b>MWh</b>	Megawatt-hour (1 000kWh)
<b>MYPD</b>	Multi-year price determination
<b>NERSA</b>	National Energy Regulator of South Africa
<b>NGO</b>	Non-governmental organisation
<b>OHSAS</b>	Occupational health and safety standards
<b>PCLF</b>	Planned capability loss factor
<b>PFMA</b>	Public Finance Management Act
<b>SADC</b>	Southern African Development Community
<b>SAIDI</b>	System average interruption duration index
<b>SAIFI</b>	System average interruption frequency index
<b>t</b>	ton
<b>UCF</b>	Unit capability factor
<b>UCLF</b>	Unplanned capability loss factor
<b>UN</b>	United Nations
<b>USD</b>	United States dollar
<b>W</b>	Watt
<b>Wh</b>	Watt-hour

## Appendix F: Contact details

<b>Telephone</b> <b>Eskom head office</b> +27 11 800 8111	<b>Websites and email</b> <b>Eskom environmental:</b> envhelp@eskom.co.za
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