



Western Cape Corporate Affairs Division, 60 Voortrekker Road, Bellville

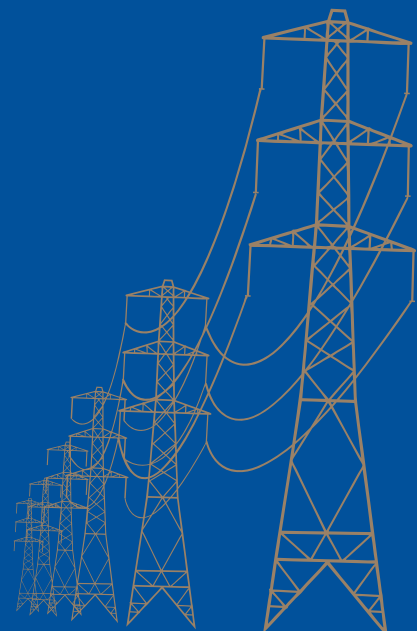


Eskom
Western Cape Province
Celebrating our journey of 90 years



One Province,
One Eskom

Eskom | Powering your world



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ACKNOWLEDGEMENT

We would like to acknowledge the Guardians from all the Eskom Divisions in the Province for sharing information and contributing to this publication. Your passion for our organisation is eminent across the pages.

Thank you to Eskom Heritage for providing information relevant to the Western Cape Province.

We would like to extend gratitude to the Western Cape Corporate Affairs Division team for co-ordinating this project for Eskom in the Province.

Zero Harm

Integrity

Innovation

Sinobuntu

Customer Satisfaction

Excellence

OUR VALUES

Our values are the principles that we believe must guide our conduct, the way we work and the nature of our relationship with all stakeholders, internal and external

FOREWORD

I am truly proud and delighted to be a part of this momentous occasion whereby Eskom celebrates 90 years of existence.

Sharing the history of Eskom in the Western Cape Province made me reflect on what an amazing and influential company Eskom is.

As Eskom Guardians in this province, we are fortunate to be part of such an inspiring company and must continue to fly Eskom's flag with pride. Our efforts to keep the lights on and to contribute towards the growth and development of our country always remain fundamental to the province.

The Guardians in this province are our most valuable asset. It is vital that we support our workforce and ensure that we have skilled, motivated and loyal employees that live the Eskom Values. I have no doubt that we have the calibre of employees to grow Eskom in both our province and our country to even greater heights.

Through careful planning and good skills, this province has managed the electricity network in a responsible manner. We continually strive to improve and maintain our plant and network performance to make our operations more efficient and effective.

Safety forms a vital part of our core business and is the priority of every Guardian at work and at home. Our Safety culture is equivalent to our ability to improve performance. The province will therefore look at the value chain and remove any obstacles impairing our ability to improve performance safely.

Eskom brings light to so many lives. Through the electrification programme, since 2004 the province has powered close to 100 000 households!



The experience of working so closely with the communities is a milestone that reflects our focus on universal access and Customer Centricity.

Eskom's financial performance has been commendable. For two consecutive years, we have made a surplus, and the province will continue its efforts in driving efficiencies.

The Western Cape Operating Unit models itself around a stakeholder engagement strategy that aims to achieve its objectives of improving service delivery and sustaining our customer centricity focus. Our common Stakeholder Engagement approach allows for more focus on strategic partnerships and relationships with all provincial stakeholders to ensure Eskom's vision of becoming a top performing utility.

Beyond the 90 years, the Western Cape Operating Unit's vision is to remain dedicated, inspired and proficient in driving our Eskom Strategic Imperatives.

Happy 90th Birthday Eskom!

Alwie Lester
General Manager



Message from Western Cape Provincial Head,
Mr. Alwie Lester

INTRODUCTION

Share our evolutionary and revolutionary journey...

Our Eskom journey in the Western Cape Province began in 1923, and we are proud to share this with you, right up until 2012.

Here, we will encapsulate the rich heritage and history of Eskom in the Western Cape Province and will explain in detail the different divisions and our various power stations in the province.

The booklet will also focus on significant features in the Province throughout the time-lines.

We will also share what we do in this province to Keep the Lights on.

The Guardians in the Province are our most important resource and we will be telling you more about them.

We also value the importance of our Stakeholders in the province and will share how we pave the road ahead in our Stakeholder Engagement Strategy, as they are critical and must be included in our plans.

Various focus areas in the province, such as our Zero Harm campaign, 49M campaign and Operation Khanyisa will also be covered.

We will also detail the Eskom Leadership in the province.

Looking back over the past 90 years, Eskom in the province has managed to strategically position itself for the benefit of all, not only in the province, but also in the country.

We hope that you will enjoy reading this booklet, just as much as we did compiling it!

Timelines in

1923

Dr H J van der Bijl, the first Chairman of Eskom, was also one of the first truly great South African scientists.



1928

In 1928 the new Salt River Power Station went into production with an initial capacity of 30MW which was later increased to 90MW.



1948

Worcester Diesel Power Station was built by Eskom in September 1948 to supplement electrical power supply to the town of Worcester.



1952

In 1952 the Hex River Power Station at Worcester was commissioned with a final capacity of 140MW.



Western Cape

1954

The increasing demand for electricity in the Cape Town area resulted in the commissioning of Salt River No 2 with a capacity of 240 MW in 1954.



1976

In 1976 three gas turbine units were commissioned at Acacia Power Station in the Goodwood area in the Western Cape.



1984

In 1984 Eskom launched the first Nuclear Power Station in Africa namely Koeberg Nuclear Power Station situated in the Western Cape.



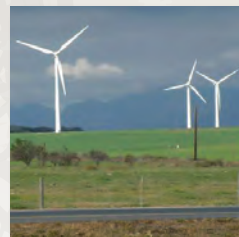
1988

Palmiet: Full commercial operation by July 1988



2003

In 2002/03, Eskom's Resources and Strategy Division erected three wind turbines at an experimental wind energy farm at Klipheuvel on the West Coast near Cape Town.



2007

Ankerlig Gas Power Station (total capacity 1 332MW) Construction began in January of 2006 and was completed in record time by June 2007.



2008

Gourikwa Gas Turbine Power Station. The first phase comprised of 3 x 148MW units with a total sent-out capacity of 444MW, completed in record time in 2007. The second phase started in September 2007 and comprised of 2 additional units with a combined capacity of 296MW. The first unit was synchronised to the grid in September 2008



DID YOU KNOW?
A spark of static electricity can measure up to three thousand (3000) volts

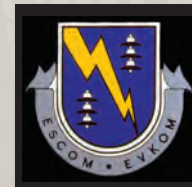
1923

The logo that was introduced in 1923.



1962

The logo that was introduced in 1962.



1987

The logo that was introduced in 1987.



2002

The logo that was introduced in 2002.



Significant Features of the Western Cape

Proud to have been there when it happened

1860

Electricity was used publicly in South Africa for the first time with the **opening of the electric telegraph line** between Cape Town and Simon's Town on 25 April 1860. It was built for the benefit of shipping and commerce.



1881

The **first public electric lighting** occurred in October 1881 when six 2000 candle-power "Brush" arc lamps had been strung up to the dome of the Cape Town Railway Station. The Cape Argus reported, "The Station was thronged with citizens of both sexes, curious to witness the illumination of the building for the first time with the electric light".



1896

The **first electric tram** service in Cape Town ran from Adderley Street to Mowbray in 1896.



1860

Charlton Wollaston, Engineer and Manager of the Telegraph Company, demonstrated an early arc light in 1860 in Cape Town at a ball held at the **Castle of Good Hope**. Newspapers reported, "The first electric light which has ever been publicly exhibited in this colony makes everything as visible as in clear daylight". Quite by coincidence, there was an eclipse of the Moon at the same time, which greatly enhanced the effect.



1882

The Banqueting Hall of the Good Hope Lodge, the official venue of **Parliament**, was first lit up by electricity in 1882, using the 'Edison' incandescent lights (a prototype of our household globes)



1926

Cango Caves (Oudtshoorn). In 1926 the electrification scheme is switched on. Before that, candles, flaming torches and magnesium ribbons were used.



1929

In 1929, the **Cableway**, one of Cape Town's first major tourist attractions was launched. Since then, Eskom power has helped over 20 million people take the unforgettable trip to the top and enjoy breathtaking, panoramic views of the Mother City.



1961

From the 17th century, **Robben Island** served as a place of banishment, isolation and imprisonment. In 1961 it also became a Maximum security prison for political prisoners. Today it is a World Heritage Site and museum, a poignant reminder to the newly democratic South Africa of the price paid for freedom.



1988

In November 1988, **Victoria and Alfred Waterfront** was redeveloped as a mixed-use area with a focus on retail, tourism and residential development, with the continued operation of a working harbour.



1947

Table Mountain (voted New7Wonders of Nature) lit up for the first time in 1947 to commemorate the Royal visit, and again in 1952 for the Van Riebeeck Festival.



1998

The R6,8bn **Saldanha Steel** facilities, situated on the Cape west coast, was commissioned in 1998.



1958

First main building of La Concord, **KWV's headoffice** in Paarl was erected.



1956

Red Cross War Memorial Children's Hospital was opened in 1956 through subscription by the South African Red Cross Society that the children's hospital should serve as a living memory to soldiers who contributed to the allied victory in the Second World War.



1975

The Taalmonument or Afrikaans Language Monument, at Paarl, Western Cape, South Africa, was officially unveiled on 10 October 1975

2010

Eskom was proud to power up the new, magnificent **Cape Town Stadium** in 2010 for the inaugural soccer match between Ajax Cape Town and Santos, prior to the 2010 FIFA World Cup.



ESKOM IN THE PROVINCE

HERITAGE

Eskom was established in South Africa in 1923 as the Electricity Supply Commission (Escom) and was responsible for establishing and maintaining electricity supply undertakings on a regional basis. Electricity was to be supplied efficiently, cheaply and abundantly to government departments, railways and harbours, local authorities and industry. The Commission met for the first time on 20 March 1923 in Cape Town.

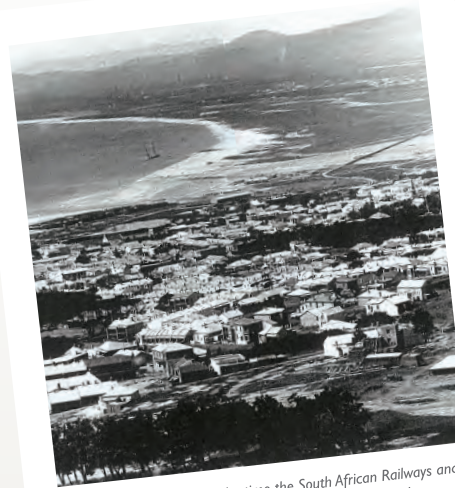
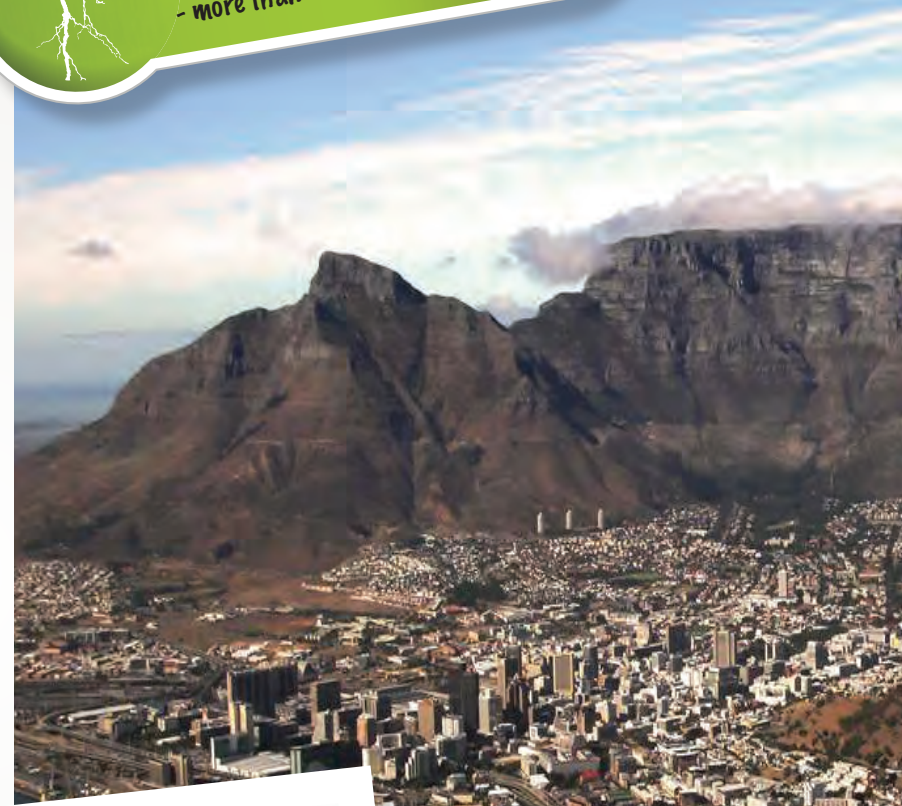
Eskom Western Cape Operating Unit was first known as Cape Western Undertaking or Cape Town Undertaking. A clash of interests between the municipality and the railways led to the proposal that the new Salt River Power Station should belong to Eskom and the existing municipal power station and Salt River should be interconnected and managed by one authority. This resulted in an agreement that a manager should be appointed in 1924. The first Manager at the time was then known as City Electrical Engineer of Cape Town, Mr G.H Swingler with Eskom hardly more than an embryo and the distance between the Undertaking and Head Office was awkward due to the transport facilities of those days. The Undertaking grew along the lines of the well-established Cape Town Electricity Department. The Cape Western Undertaking was granted licence in 1925.

In 1948 the Cape Western Undertaking and the Undertaking commenced supplying power purchased from the municipality in March 1926. In 1928, the new Salt River Power Station went into production with an initial capacity of 30MW, which was later increased, to 90MW. At the end of 1929, Eskom's total annual sales amounted to almost 800 million units compared to 162 million units in 1926.

In 1952, the Hex River Power Station at Worcester was commissioned with a final capacity of 140MW. The purpose of this station was to augment the supply to the Western Cape and particularly to provide for the electrification of the railway line from Bellville to Touws River.



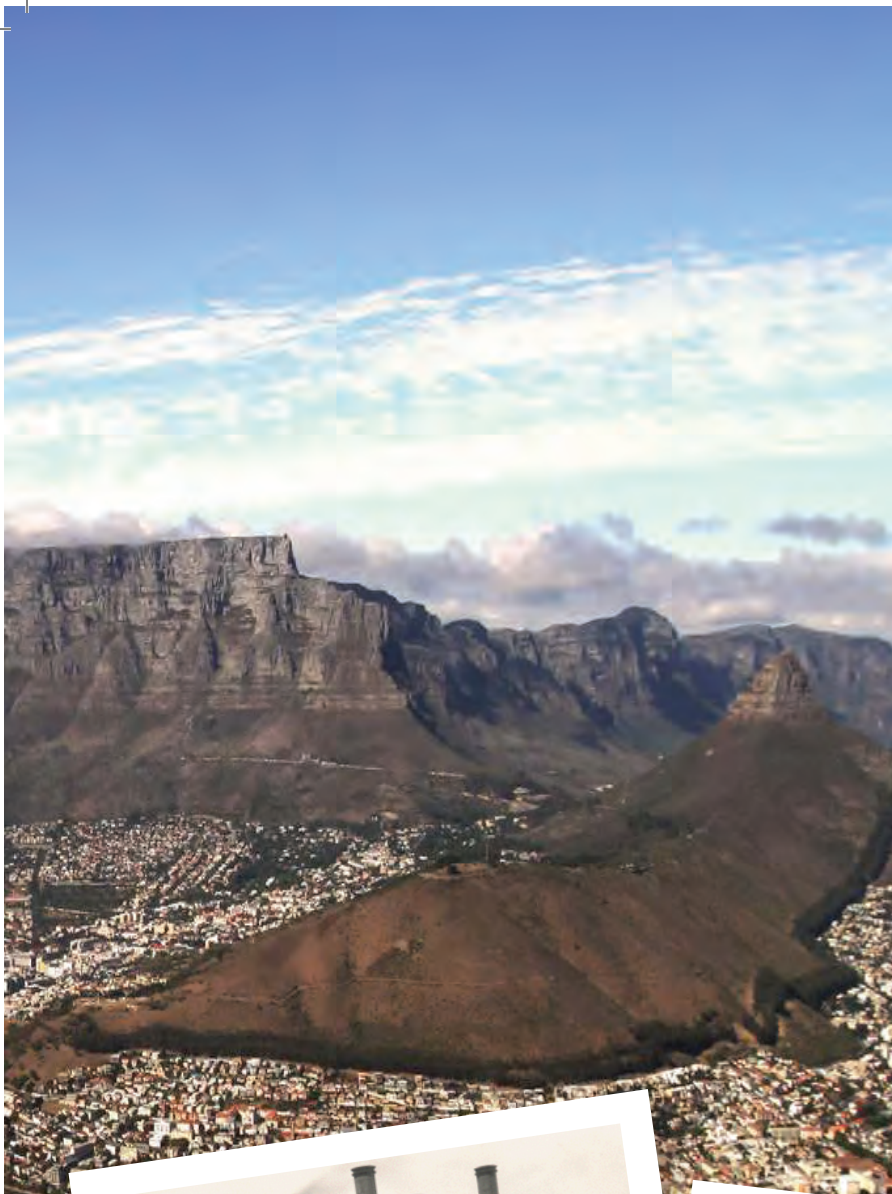
DID YOU KNOW?
Electricity travels at the speed of light
- more than 186,000 miles per second



The Salt River mouth at the time the South African Railways and Harbours selected the site to build the power station



Inside the turbine house at Salt River 1 showing sets 1 to 3. These were the first steam-driven sets ordered and commissioned by Eskom.



The increasing demand for electricity in the Cape Town area resulted in the commissioning of Salt River No 2 with capacity of 240MW in 1954. The Western Cape was first connected to the grid in October 1969 at Beaufort West, which at that stage was the northern terminus of two 132kV lines from Hex River Power Station.

Salt River 1 was decommissioned in November 1979 after nearly 52 years of operation.

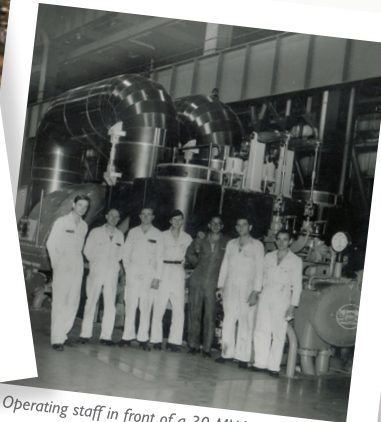
Although the Undertaking was founded primarily to supply the Cape Suburban Electric Railways, the drive of Mr Swingler soon led to the establishment of rural supplies, which in the adjacent of municipalities (then Village Management Boards) of Goodwood, Parow, Bellville, Durbanville and Kuils River took the form of a house-to-house reticulation. In 1946, Mr Swingler retired and a new Manager was appointed Mr H.H Jagger.

HISTORICAL HIGHLIGHTS

- Salt River 1 was the first coal-fired power station to be both built and operated by Eskom.
- At the time of commissioning Salt River 2 in 1955, the boiler steam temperature of 915°F [491°C] was again the highest of any power station in South Africa.
- During a period of almost 67 years, from February 1928 to August 1994, Salt River 1 and 2 stations sent out 29 693GWh (gigawatt hours) or 29 693 million units of electricity and burnt 16,5 million metric tons of coal.



A view of Salt River 1 (1935) from the position where Salt River 2 was later built. The stores building on the right was demolished to make way for Salt River 2. The boiler house is completed with 4 chimney stacks.



Operating staff in front of a 30 MW generator at Salt River 2.



Closing ceremony for Salt River 1 on 12 November 1979.

KEEPING THE LIGHTS BURNING

WESTERN CAPE OPERATING UNIT

Distribution Western Cape Operating Unit is one of nine provincially based operating units established within the regulated and mandated Eskom Distribution business by Eskom Holdings SOC Limited to service the customer through the provision of reliable electricity by building, operating and maintaining distribution assets, while also acting in the national interest by actively partnering with the wider industry in resolving distribution industry issues and enhancing stakeholder relations.

Western Cape Operating Unit's role in achieving its goals is to align with all related strategies developed by Eskom Holdings SOC Limited through setting direction in its business operations through an Operational Plan.

The need for an Operational Plan is critical if the Operating Unit is to effectively shift performance and grow sustainably. The plan focuses on the Operating Unit responding to Eskom's eight strategic imperatives. The Strategic Imperatives are underpinned by eleven priorities over a five year period. From the eleven priorities, five are the focus areas for 2012/13 financial year.

The Operational Plan is updated annually by the Operating Unit and should be used as a decision support and planning tool as part of the business performance monitoring process.

The Western Cape Operating Unit aligns largely to the Western Cape Provincial boundaries, and is divided into two zones namely Protea and Atlantic. These zones are supported by seven sectors. Protea zone is supported by the Garden Route, Overberg, Khayelitsha and Helderberg sectors. Atlantic zone is supported by the Tableview, Boland and West Coast sectors.

The Western Cape Operating Unit adopted an integrated approach and strives towards One Province, One Eskom. All Service Departments are therefore integrated and key to the operations of the Operating Unit.



Capital expenditure, renewables & electrification in Western Cape at November 2012

Capital expansion and refurbishment

- Generation R1.6 billion planned for 2011/12 with a further R16 billion planned over a five year period
- Distribution R918 million planned for 2012/13 with a further R6,5 billion planned over a five year period.
- Transmission R2.5 billion planned for 2011/12 with a further R14 billion planned over a five year period

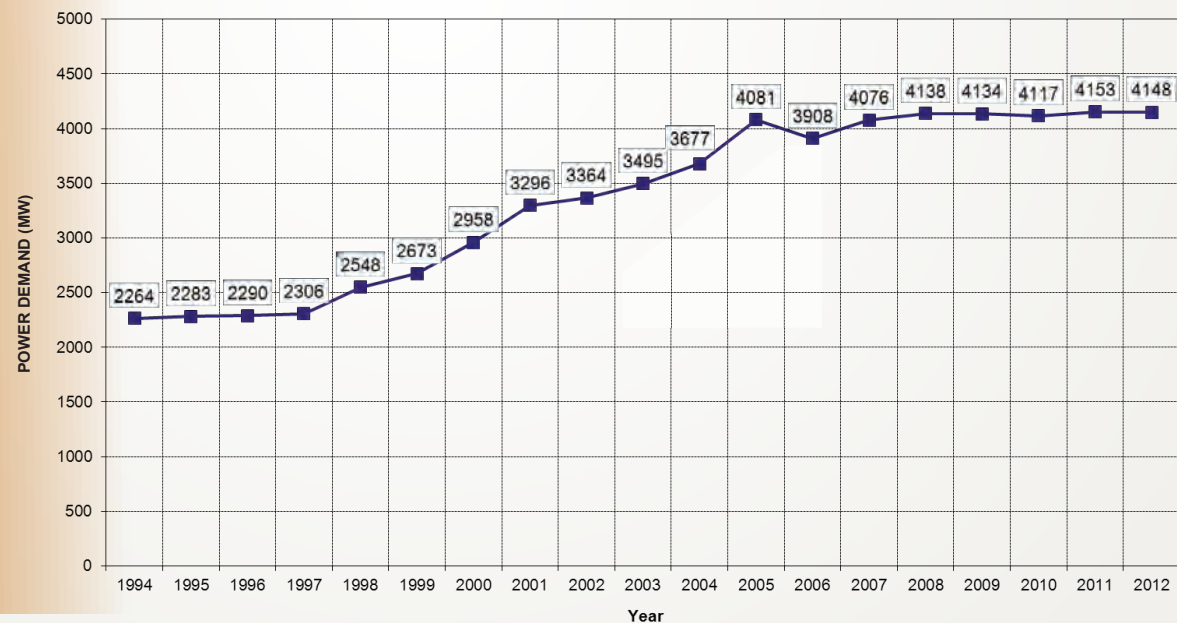
Renewable Energy

- 84 applications with potential of generating 6 504MW in initial phase
- Wind energy accounts for 96% of renewable energy generating potential
- Sufficient proposals received to support more than 20 years of development
- R375 Million Sere Wind farm approved project to be completed in 2012 with total output of 100 MW

Electrification

- Inception to date 186 222 connections.
- 7 723 connections for 2011/12 at R48.3 million
- 11 191 connections in 2010/11 at R42.9 million
- 6 979 connections planned for 2012/2013 at R57.9million

20 year power demand growth in the Western Cape



- Over the last twenty years, the Western Cape power demand has doubled
- In the last five years the power demand growth has stabilised, mainly due to power capacity management, aggressive demand side management initiatives (power saving) and global economic slump

GROUP CUSTOMER SERVICE DIVISION

With single accountability for all Eskom customers, the Group Customer Service Division (GCS) aims to be the catalyst that will transform the organisation into a world class customer service organisation. To do this, the focus is on achieving a customer centric culture and behaviour throughout the entire business.

One of Eskom's core values is customer satisfaction, and therefore we expect all our staff to live this value as we strive to become a high performance, world class organisation.

Recently GCS launched a School of Customer Service. This will see all staff undergoing training and development on how to deliver an excellent customer experience.

We have embarked on a Customer Centricity Programme that will focus on putting the necessary systems, processes and people in place to put the customer at the centre of the way we operate as a business.

“Putting the customer at the centre of our business and guide Eskom towards the overall objective of achieving fully satisfied and serviced customers who consistently rate us in the top quartile and promote Eskom as a company”

We intend to change the lives of ordinary South Africans with our transformation journey through....

- Providing a professional and pleasant customer interface experience
- Have competent and skilled staff on the front line of our business
- Providing easy access to a range of service channels
- Convenient self service options
- Fit for purpose products and services that meet the specific needs of different customer segments
- Empowerment of our customers and communities with information
- Create a sense to our Customers that “Eskom knows me, and Eskom Cares”
- Instil confidence in Eskom, its services, its commitments and its credibility

Customer service overview at November 2012

Customers

- Total Western Cape = 335 528
- Residential = 93.21% (SPU res + Prepaid)
- Agriculture = 3.97%
- Industrial, Mining and Commercial = 2.82%

Revenues

- R10.3 billion
- Municipalities 57.6%
- Industrial 14.9%
- Residential (Conventional & Prepaid) 8.4%
- Agricultural 6.6%
- Commercial 5.9%
- Other 6.6%

Demand-side management

- Money spent YTD R47m
- 27 projects
- CFL – 212,944 units
- Geyser timers – 685 units
- Heat pumps – 20 units
- LED lights – 61,531 units
- Shower heads – 2579 units
- SWH – 9,188 units

Free Basic Electricity (FBE)

- 108 800 indigents identified by municipalities
- 99.8% of indigent customers configured to collect FBE
- 88.2% of customers collecting FBE as at January 2013

Customer service – Key objectives

**MANAGE
SERVICE-
OFFERING**

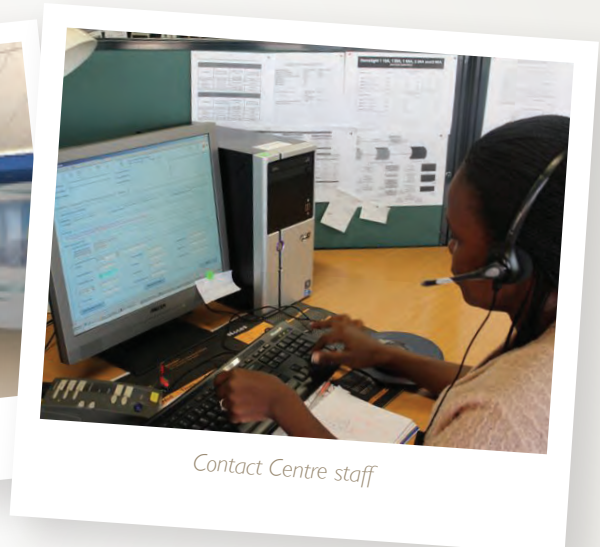
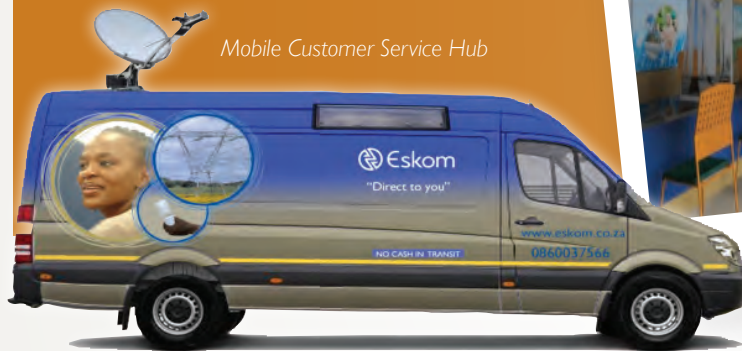
**MANAGING
REVENUES**

**MANAGING
COST-TO-
SERVE**

**MANAGING
DEMAND**

**MANAGING
GROWTH OF
OUR PEOPLE**

Structured Operating Units



Employee Open Forums



Bellville Head Office

Built in the early 1980's, the Bellville Head Office serves as the Headquarters for Eskom in the Western Province.

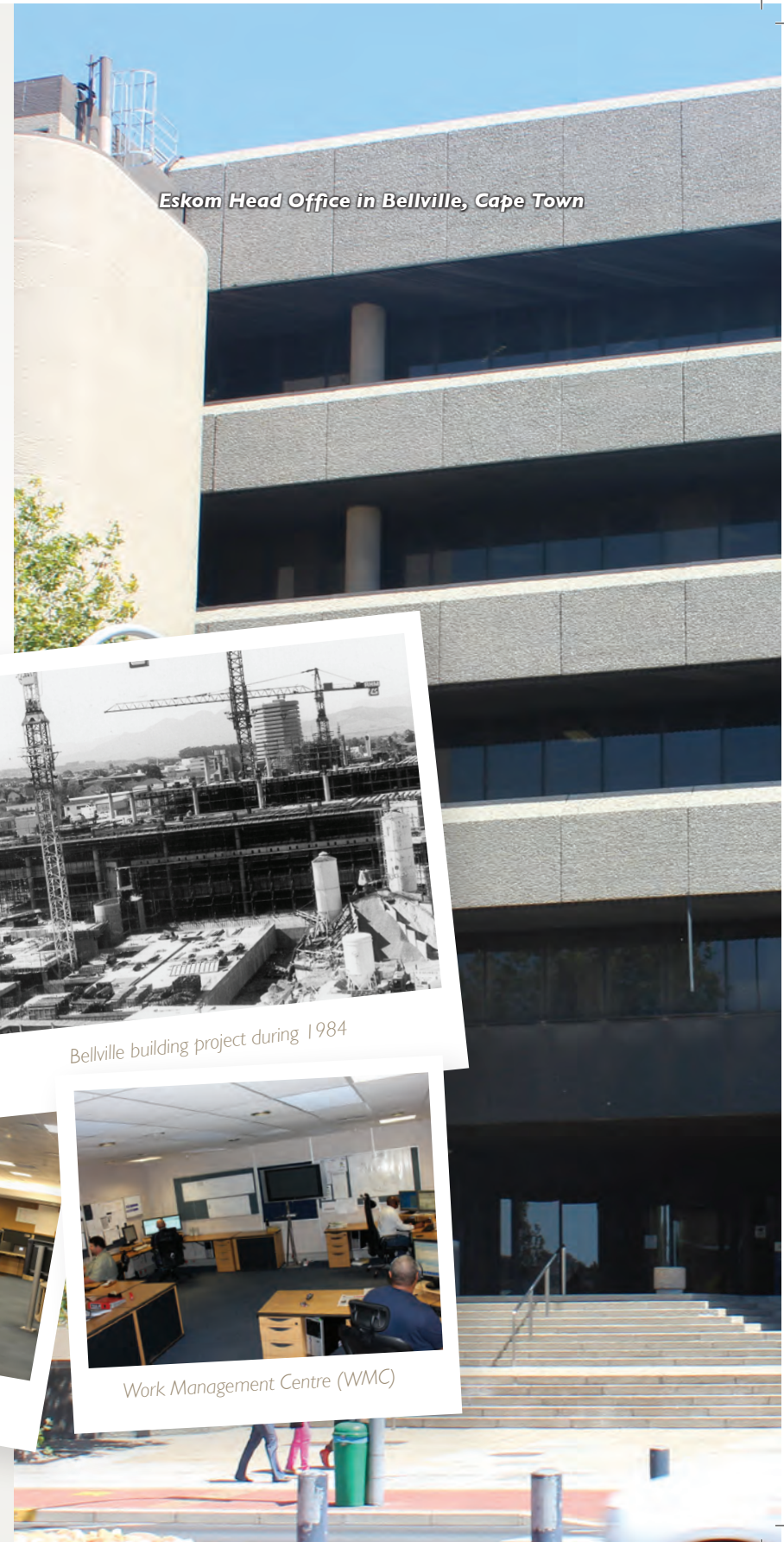
The modern cubic-shaped six-storey building which covers over 16 000m², overlooks the busy Bellville central business district.

The building was first occupied in 1986 with a staff compliment of approximately 400 as well as a number of tenants external to Eskom. The staff compliment has since increased to 705 as at December 2012 with no external tenants.

Western Grid Transmission is also located in this building. The building features a Visitors Centre which, apart from being utilized for staff meetings, also offers educational programmes to schools in and around the greater Cape Town area. During these programmes pupils are given the opportunity to roam around the Visitors Centre which is filled with interactive science apparatus to enhance their understanding of the electricity supply chain.

On the second floor, behind controlled access glass doors, is the Network Control Centre which controls the entire Western Cape Network.

To continue improving on our promise of customer centricity, part of the fourth floor was transformed into a functional Customer Contact Centre with state-of-the-art communication facilities, a Work Management Centre, as well as a Provincial Joint Command Centre which are activated in the event of an emergency.



Eskom Head Office in Bellville, Cape Town



Bellville building project during 1984



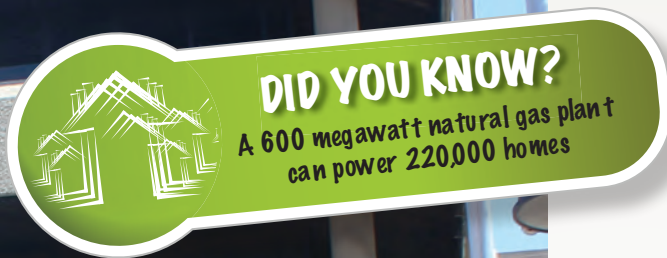
Holiday programme at Visitors Centre



Control room



Work Management Centre (WMC)



Brackenfell Complex

Built in 1978, Eskom Brackenfell Complex is situated on a site measuring over 20 hectares. The first occupants moved onto the premises in 1981 and since then the complex has become a place filled with diversity of skills and cultures. Today the property is occupied mostly by Eskom and home to approximately 1400 employees.

It is considered the engineering hub in the Western Cape Operating Unit with exceptional technical facilities designed for the construction and maintenance of engineering structures and material.

Brackenfell boasts with an 11kV simulator which aids in developing and equipping students to become knowledgeable and preferred employees and step into their desired engineering field with ease. A Training Centre is currently being completed with the intention of becoming an Engineering Centre of Excellence where employees as well as prospective employees will be taught the necessary skills needed in the industry.

The Services Departments which perform an assisting function are based at the complex and include Commercial Services, Human Resources, Finance and Corporate Affairs, among others.

The unified and cohesive manner of work at the complex compliments the General Manager's vision which reflects the *One Province, One Eskom* goal.



Brackenfell complex



Brackenfell complex Training Simulator

GENERATION

Eskom's Generation Division is the powerhouse of the South African economy. The Division currently maintains and operates 23 power stations throughout South Africa, with an installed capacity of 41 871 MW.

The Division operates the largest dry-cooled coal-fired stations in the world as well as Africa's only nuclear power station. Our nuclear and coal-fired power stations provide base-load capacity for the national grid. The conventional hydroelectric, pumped storage and gas turbine stations provide additional electricity during peak demand periods and when unforeseen shortages of capacity occur.

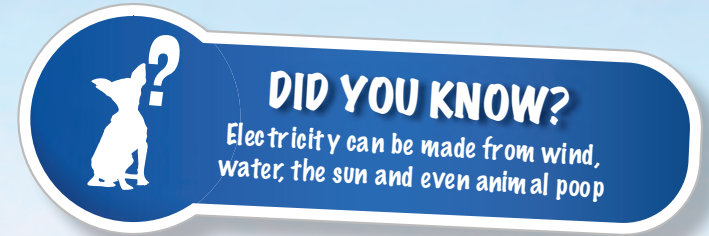
Five of the 23 power stations as well as a wind turbine facility are situated in the Western Cape Province. These are Koeberg Nuclear Power Station, Acacia Power Station, Ankerlig Power Station, Gourikwa Power Station, Palmiet Pumped Storage Scheme and Klipheuvel Windfarm with a total capacity of 4 611.2 MW.

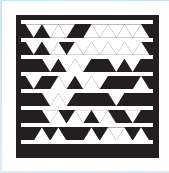


Palmiet Pumped Storage Scheme



Klipheuvel Windfarm





View clip taken at
Koeberg Nuclear Power Station

Koeberg Nuclear Power Station (intake basin)

Koeberg Nuclear Power Station

Today nuclear energy provides approximately 16% of the world's electricity needs. Koeberg supplies slightly more than 1800MW to the national grid, which is approximately 4.4% of South Africa's total electricity needs.

The station started operating in 1984 and is the only commercial nuclear power station on African soil. It has operated safely for almost 30 years without any significant nuclear incidents.

Why Nuclear?

South Africa is a water-scarce country, and its coal reserves are only expected to last until the middle of this century. An alternative had to be found. The answer lay in the exploitation of nuclear fission, which not only provides safe, clean, and relatively cheap power; but minimises pollution. A nuclear power station can use sea or river water for cooling, rather than scarce inland water resources.

The fuel used in a nuclear power station is uranium dioxide. South Africa has the third largest resources of uranium and is one of the top uranium-producing nations in the world. Uranium naturally occurs in the gold-bearing rocks of the Witwatersrand and the copper-bearing ores of the Phalaborwa complex. Minor deposits of uranium are found at Pilanesberg in the Karoo and North-Western Cape. One kilogram of uranium supplies the same amount of energy as three million kilograms of coal.

While South Africa's major energy source will remain coal for some time, Eskom plans to reduce coal's current 88% share of the primary energy mix to 70% by 2025. The gap in energy supply will be filled by nuclear energy. The current Integrated Resource Plan projects that nuclear energy will contribute 11600MW of new nuclear capacity, of which Eskom has been accredited as a building agent for 9600MW.

How Koeberg works

Koeberg operates on three separate water systems and the water is also known as the coolant. It is important to note that the three systems are separate because this means that the water in the reactor, which is radioactive but is in a closed system, does not come into contact with

the other two systems and therefore does not contaminate the water in these systems. Koeberg uses a three-loop system (primary loop, secondary loop and tertiary loop) which is kept under pressure, hence the term Pressurized Water Reactor (PWR).

Why is Koeberg located 30 km north of Cape Town?

The station is situated in Duynefontein, 30km north of Cape town on the Atlantic coast because:

- The economic and industrial development of the surrounding area caused an increased demand for electricity
- The Duynefontein area is geologically stable
- The cold water of the Atlantic Ocean is ideal for cooling
- Eskom's national grid is easily accessible
- Koeberg supplies a large part of the Western Cape with electricity, making it less dependent on Mpumalanga's power stations, which are approximately 1500km away

Our Staff Profile

Koeberg Nuclear Power Station boasts with highly skilled, trained and qualified staff. In order to ensure that staff at Koeberg are trained and aware of the importance of safety and their actions, the Koeberg Training Centre is home to a Radiation Protection simulator, as well as several Maintenance simulators, a Human Performance simulator, and an Operating Control Room simulator.

Koeberg is also the first and only nuclear power station outside the United States of America (USA) to have their operator training programme accredited by the Institute of Nuclear Plant Operations (INPO) organisation, based in Atlanta, USA.

Monthly Open Forums are held at the station to update staff on developments within the business and share safety and wellness information.

Koeberg staff are committed to and are actively involved in community development projects, which run on a continuous basis. These projects range from tutoring learners in Maths and Science, to donating clothing, blankets, stationery, food, or money to worthy projects.



Koeberg's General Manager, Mr Clive Le Roux conducting a Nuclear Safety Awareness Seminar



The Turbine Hall houses the biggest turbines in the southern hemisphere



The Power Station Manager taking up his role during an emergency exercise



Reactor Operators during training for the annual Operator Challenge

Koeberg Emergency Plan

The station regularly runs training exercises in order to ensure that the Koeberg Emergency Plan is both effective and appropriate, and that personnel are capable of performing their function as emergency personnel. The Power Station Manager is one of several authorised Emergency Controllers who advise the City of Cape Town on which measures to take should an emergency/accident occur at Koeberg.

We also have regular engagement sessions with members of the public and key stakeholders to ensure that there is an understanding and awareness of the Koeberg Emergency Plan and to address any concerns.

Visiting Africa's first nuclear power station

Discover how nuclear pressurized water reactor technology works at the Koeberg Visitors Centre and learn more about this safe and clean source of energy.

The Koeberg Visitors Centre boasts a state-of-the-art auditorium and exhibition area, which enthralls and enlightens thousands of visitors every year. Visitors are given the opportunity to discover first-hand how the power station works and the measures taken to protect the environment around it.

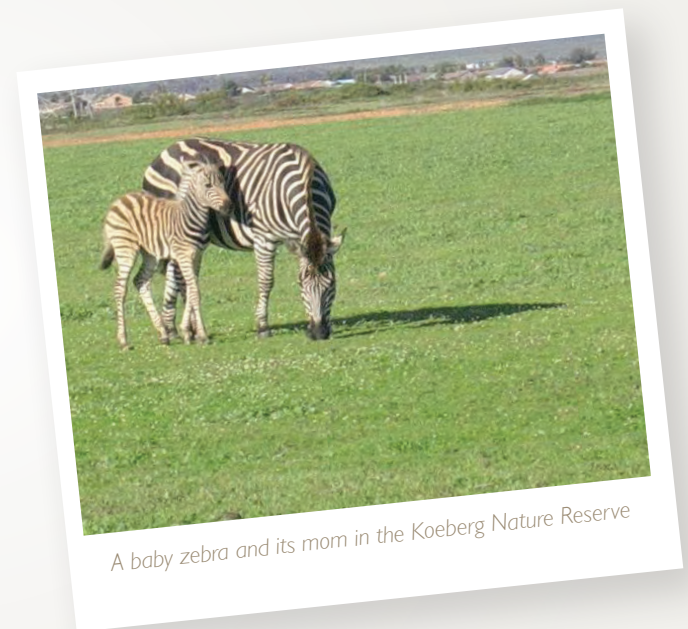
From the deck of the centre, visitors can enjoy a panoramic view of Table Mountain, Robben Island and a fair stretch of the pristine West Coast coastline. Closer to home, the two domes of the power station's reactor buildings are clearly visible. The adjacent turbine hall houses the largest turbines in the Southern Hemisphere.

Koeberg Nuclear Power Station cares for the environment

Eskom constantly strives to minimise the impact of its operations on the environment. Continued internal and external audits are conducted to ensure compliance. Samples of fish, meat, vegetables, milk, water and grass are regularly collected from the area around Koeberg and analysed to determine any possible effects on the food chain.

The Eskom Koeberg Nature Reserve

Within Koeberg's private nature reserve of 3000ha, great care has been taken to conserve and restore the coastal landforms, wetlands and different vegetation of the area, as well as the animal life. The Reserve is home to a diverse number of animal species, reptiles and fynbos. Among the animals in the reserve are eland, zebra, duiker, grysbok, steenbok, African wild cat, genet and rooikat or caracal. There is a biking trail and several hiking trails through the reserve, which visitors are welcome to explore. Socio-economic factors have been incorporated into the management strategy of the reserve, so that the local and wider community derives a number of benefits from its existence.



A baby zebra and its mom in the Koeberg Nature Reserve

Stakeholder Engagement

Numerous public engagement sessions are held, including the quarterly Public Safety Information Forum (PSIF), where nuclear safety feedback is provided and nuclear concerns and issues are raised and addressed. At grassroots level, the Schools Nuclear Debate encourages research and discussion around nuclear matters.

PEAKING POWER STATIONS IN THE WESTERN PROVINCE

Our Peaking Generation is a business unit within the Generation Division. The Peak load stations can generate electricity within three minutes of start-up, making them ideally suited to supply power during peak periods. They also assist in regulating the system voltage and frequency to ensure stability of the national transmission network.

Peaks in demand are normally between 06H00 and 08H00 in the morning and 17H00 and 20H00 in the evening. The total installed generating capacity of the Peaking stations in the Western Province is 4639.2MW (including 3.16MW generated by Klipheuwel Windfarm).

The overall management and co-ordination of the business is centralized at the Durbanville offices in the Western Cape. Key service functions, including engineering, power trading and primary energy management, financial, commercial and organizational behaviour are based here.

Caring for the environment

As an organization, we fully embrace the need for environmental considerations as an integral part of our daily activities.

Empowering our people

Peaking management is committed to developing the full potential of its employees by encouraging a culture of learning and creating opportunities for training and development. The on-going development of skills and knowledge will enable optimal business results in an ever-changing environment.

Developing our communities

The primary focus of our Peaking community development programmes is to improve the skills base of the communities in which we operate. By doing this we aim to increase the future human resource pool and strengthen the community's potential for economic activity.

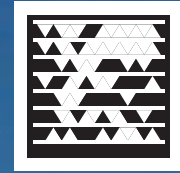
Acacia Power Station

In 1976, three gas turbine units were commissioned at Acacia Power Station in the Goodwood area in the Western Cape. The gas turbines were developed from the Pratt & Whitney JT4 turbo-jet engines, which first powered the Boeing 707 and Douglas DC-8 airliners. The three units are capable of producing 171MW at very short notice and are remote-controlled, thus eliminating the need for operating personnel.

Jet engines such as these are ideal at coastal sites due to their capability of developing maximum output at sea level. They have proved ideal not only for improving the security of local power supply and for meeting short peaks in load demand, but also as synchronous condensers for voltage regulation and as emergency plant supplement to the national grid.



Acacia Power Station, the early days



View clip taken at
Acacia Power Station



DID YOU KNOW?

Thomas Edison invented more than 2,000 new products, including almost everything needed for us to use electricity in our homes: switches, fuses, sockets and meters

Acacia Power Station

Ankerlig and Gourikwa Open Cycle Gas Turbine (OCGT) Power Stations

History

During 2004 Eskom required a solution with a very short lead time, in order to meet the winter peaks of 2007. An intense investigation to identify the most viable project led to the construction of the Open Cycle Gas Turbines at Ankerlig. There are a number of reasons for this:

- The technology has been used extensively world-wide and is readily available
- Stations can be erected, depending on required capacity, in a lead time of one to three years as opposed to the larger coal and nuclear stations that require eight to ten years lead time.
- This type of technology has a proven track record
- There are numerous gas turbine suppliers in the world

Construction phases

Sites were selected at Atlantis, near Cape Town and in Mossel Bay. After consultation with local communities, the power stations were named Ankerlig and Gourikwa. Construction, in each case, was carried out in two phases – on adjacent sites.

Ankerlig Power Station (total capacity 1 332MW)

The first phase comprised of four x 148MW units with a total sent-out capacity of 592MW. Construction began in January of 2006 and was completed in record time by June 2007.

The second phase started in August 2007 and comprised of five additional units with a total capacity of 740MW. As each machine was completed during late 2008 and early 2009, it was handed over to Generation Division for commercial operation.

Ankerlig operates as two separate power stations, each with its own control room.

DID YOU KNOW?

An Electric eel can produce an electric shock of up to 600 volts



Ankerlig Power Station



Ankerlig information Centre

Thanks to Peaking Generation generously providing a building and facilities, an information centre has been set up at Ankerlig Power Station. This extraordinary technology has been a magnet for visits which are arranged via the Koeberg Visitors Centre.

The “Western Cape Energy Route”

A visit to Ankerlig can be part of a tour of the “Western Cape Energy Route” in which visitors experience the diversity of Eskom’s nuclear, gas, wind and pumped storage technology. Arrangements can be made via the Koeberg or Palmiet Visitors Centres.

Gourikwa Power Station

The first phase comprised of three x 148MW units with a total sent-out capacity of 444MW, completed in record time in 2007.

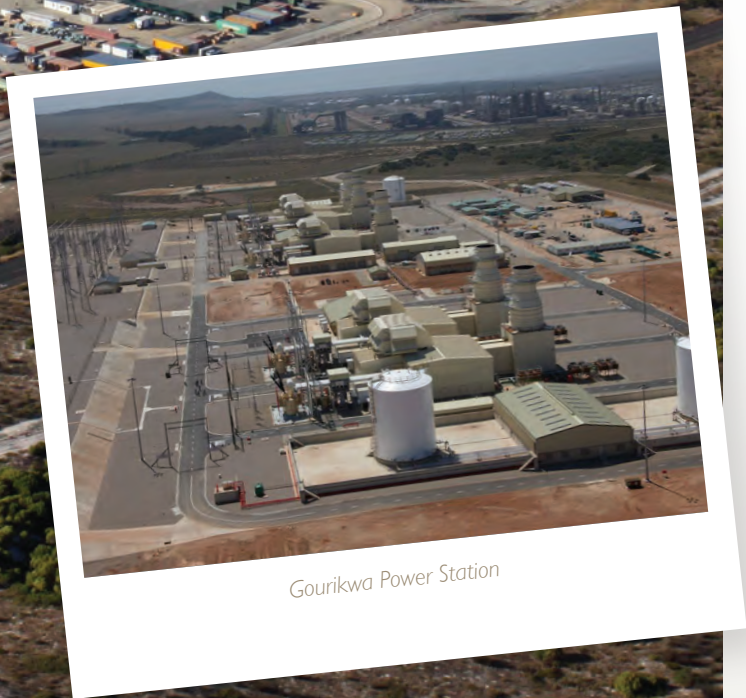
The second phase started in September 2007 and comprised of two additional units with a combined capacity of 296MW. The first unit was synchronised to the grid in September 2008, ahead of time and exactly one year to the day after the turning of the first sod of soil. Phases one and two operate as one power station.

Ankerlig and Gourikwa Power stations’ role as Peaking Power Stations

These OCGT (Open Cycle Gas Turbine) power stations are powered by liquid fuel (diesel). They are intended to be used during peak periods and emergency situations to supply electricity into the national grid.

In addition to generating electricity (Generating Mode), the machines installed during the initial phases of both stations are able to regulate fluctuations in network voltage (SCO – Synchronous Condenser Mode).

Both Ankerlig and Gourikwa are part of Peaking Generation, a business unit in the Generation Division. Peaks in demand are normally between 06H00 and 08H00 in the morning and 17H00 and 20H00 in the evening. Provision has been made for them to run up to fifteen hours a day should this be necessary, albeit at extreme costs.



Gourikwa Power Station

Palmiet Pumped Storage Scheme

The Palmiet Pumped Storage Scheme is situated in one of the spurs of the Hottentots Holland Mountains in the Western Cape. It is largely located within the Kogelberg Nature Reserve which is a conservation area for mountain and riverine fynbos.

Owing to the ecologic sensitivity of the area, environmental consultants were appointed to assess the impact of the scheme on every aspect of natural and human environment. This resulted in the environmental impact control requirements being included in the civil engineering contracts.

The scheme is one of the few major engineering undertakings in South Africa where a total integration of both technical and environmental principles has been achieved.

In December 1998, The Kogelberg Biosphere Reserve was registered by UNESCO. It was the first biosphere to be registered in South Africa and Eskom was a signatory to the application for Biosphere Reserve status.


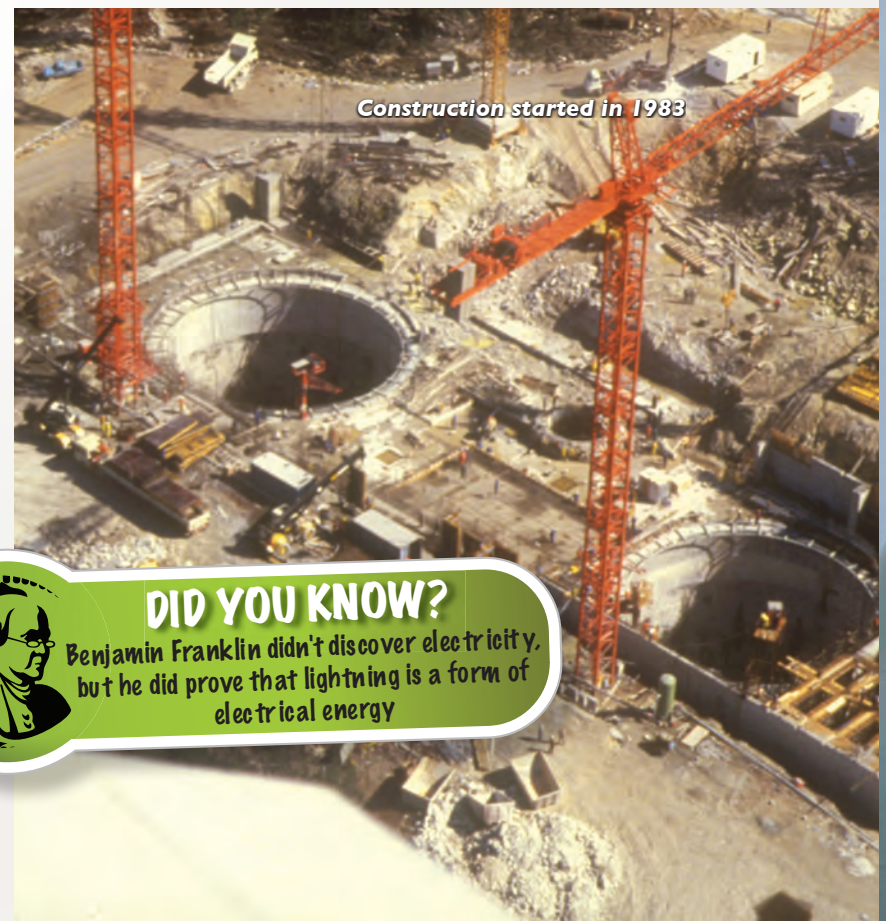
Generation and water transfer

The scheme comprises of two dams, the lower Kogelberg Dam on the Palmiet River and the upper Rockview Dam on the watershed between the Palmiet and Steenbras rivers. During peak periods or emergencies, water is allowed to run into the lower reservoir through the turbines to generate electricity. During off-peak periods, when customer demand for electricity has decreased, the reversible pump/turbines use electricity from the national grid to pump the water back up to the upper reservoir. The power station generates 400MW into the national grid.

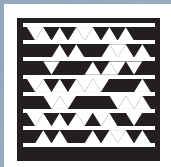
The Palmiet Pumped Storage Scheme is a joint venture between Eskom and the Department of Water Affairs. The reversible pump/turbines are components of an inter-catchment water transfer scheme, transferring water to the Steenbras Dam during off-peak periods.

Palmiet Visitors Centre

Visits can be arranged to the power station which is located in the heart of the fynbos plant kingdom. Contact 021 859 2690.



DID YOU KNOW?
Benjamin Franklin didn't discover electricity, but he did prove that lightning is a form of electrical energy



View clip taken at
Klipheuwel Wind Farm

RENEWABLE ENERGY IN THE PROVINCE

Eskom and renewable energy

In line with global trends towards increasing the proportion of renewable energy in the overall primary energy mix, Eskom is at the forefront in the development of economical, efficient and safe methods of using renewable energy. Eskom is committed to protecting the environment and is continually seeking new and innovative energy solutions.

Recognising that coal, gas and oil are finite resources, Eskom embarked upon a research programme, managed by the research department of its Resources and Strategy Division, to investigate South Africa's sources of renewable energy.

Klipheuwel Wind Energy Research Facility

In 2002/03, Eskom's Resources and Strategy Division erected three wind turbines at an experimental wind energy farm at Klipheuwel on the West Coast near Cape Town. Research on the potential of wind energy as an electricity generating option has been carried out as well as an evaluation of different wind-based technologies and their economic viability.

In 2006 the ownership of Klipheuwel Wind Facility was transferred to Peaking Generation (Eskom's Generation Division), for on-going operation and maintenance. The electricity generated by the wind facility is fed directly into the regional distribution network.

The three wind turbines at Klipheuwel have a total output of 3.2MW and at the time of construction in 2002, were the first wind turbines in Sub-Saharan Africa.

The three units were given Khoisan names: Koebaha Sousa (father of the nation at the time of transformation), Kamisoa (the wind goddess) and Krotoa (one who overcomes adversity).



Klipheuwel wind energy facility

Sere Windfarm

“The Winds of Change”

Eskom's intention is to diversify the energy mix by embarking on building renewable plants. One such plant is the Sere Windfarm situated in Koekenaap, near Vredendal in the Western Cape. Sere means “cool breeze” in local Nama language.

The site establishment process is currently underway with plans in place to have the plant operational by the end of 2014 thus providing clean energy to the national grid.

It is also Eskom's intention to build a highly skilled team of employees in order to perform operations and maintenance in-house. Current resources have been recruited from the local community because support thereof is of utmost importance. The project demonstrates Eskom's commitment to sustainable development.

To further its commitment to develop the local community, the Sere project took part in the Eskom National Bursary campaign, giving candidates from the local community an opportunity to further their careers. Eskom believes that this initiative will lead to empowered communities, improved lifestyles and a competent workforce.

The project will be fully commissioned (in 2014) in support of the Government and Eskom's renewable energy time targets and it is hoped to be a transformational catalyst for the development of renewable energy in South Africa and across the rest of Africa.



DID YOU KNOW?

If you had a light bulb on the moon connected to a switch in your house, it would take only 1.26 seconds for that bulb to light up, 238,857 miles away



Sere Windfarm site – August 2012



Sere Windfarm civil works



Sere Windfarm site establishment

Candidates doing the highly complex self-rescue exercise

Sere Windfarm Guardians

Set to go...

On 22 November 2012 eight candidates from the local community and surrounds successfully completed their physical climb and rescue assessment at Klipheuvel Windfarm as part of the recruitment process for Sere Windfarm. They are set to go and have been appointed to start as soon as Sere is fully operational.



Rescue training from top of the wind turbine tower



Guardians rescue each other from the access ladder inside the wind turbine

TRANSMISSION

A brief history

Transmission was established as a fully-fledged Division in 1991 incorporating all Substations and Power Lines rated 200kV and above. In the Western Cape, an Area Office was established with two Section Offices namely Cape Town Section and Port Elizabeth Section.

The Area Office staff could not be accommodated within the normal office space of the Eskom Bellville Building at that stage and had to use floor space in the basement as their temporary offices. The offices were later relocated to Parc du Cap, Oakdale Complex, Soekor Building in Frans Conradie Drive before finally moving to the Bellville Building in 2003 where they are currently still located.

The original Substations which became part of the Cape Town Section were:

- | | | |
|---------------|--------------|------------|
| - Muldersvlei | - Acacia | - Philippi |
| - Koeberg | - Droërivier | - Komsberg |
| - Bacchus | - Palmiet | - Aurora |
| - Helios | - Juno | - Kleinsee |
| - Nama | - Oranjemund | - Aggeneys |
| - Aries | | |

The building of the Moss gas (Fuel-from-Gas) refinery near Mosselbay in 1990/1991 necessitated the building of the new Proteus 400kV Substation and it too became part of the Cape Town Section.

Other key customers supplied directly from the Transmission network at that stage included:

- Caltex Refinery (Now Chevron)
- Cape Town City Council
- Alexcor and De Beers
- The Sishen – Saldanha railway line
- As well as Namibia

Transmission also ensures a reliable supply to Koeberg Nuclear Power Station.

Several Capacitor Banks, Reactors and an SVC at Muldersvlei were installed during the period 1991 to 2005 to improve the quality of supply to the Western Cape.

The Transmission Grids were formally established in 2000 and the Cape Town Section, together with some of the Area Office functions, were combined to form the Western Grid.

Paulputs Substation, near Pofadder was commissioned in October 2000 and it became the 18th substation of the Grid, established to improve the quality of supply to the customers in the Namaqualand area.

By 2006 the demand for electricity in the Western Cape had grown to such an extent that the network could no longer cope and had to be strengthened. This was achieved by upgrading Stikland Substation to 400kV and transferring it from Distribution to Transmission in May that year.

The need for local generation saw the commissioning of two Open Cycle Gas Turbine (OCGT) generation stations, Gouriqua Substation situated near Mosselbay and Ankerlig Substation near Atlantis, which joined the Transmission fold in 2006.

The Lines were not neglected and during this time glass insulators were replaced with composite polymer ones and servitudes were improved. Bird guards were installed to reduce trips as a result of bird streamers, bird pollution and also bird contact incidents.

The Western Grid currently boasts with 21 Substations and a total of 3300 kilometres of Transmission Lines.

Future Plans

To ensure a sustainable and reliable supply of electricity to all our customers in the Western Cape, several plans have been put in place. These include the building of a 765kV Transmission line as well as two new 765kV substations (Sterrekus and Kappa) to be included in the Western Cape Grid.

DID YOU KNOW?

The first power plant - owned by Thomas Edison - opened in New York City in 1882



Challenges

The geographical size of the Grid remains one of our major challenges as it takes the better part of three weeks for a short visit to all the substations. The Grid stretches from Alexander Bay just south of the Namibian border all the way to Mosselbay and up the N1 all the way past Beaufort West.

The environmental diversity of the Grid also presents its own challenges as it ranges from forests to wetlands to fynbos and arid desert-like areas. At Oranjemund Substation in particular, the combination of dust during the day and evening mist from the ocean was causing equipment to flash-over and trip. To combat this, trees were planted next to the road to act as a windbreak and sprayers were installed to wet the road.

Achievements

The Western Grid won the prestigious "Mampodi Grid of the Year" award in 2007, which is awarded to the best performing Grid at the end of every year. In the Western Grid we care about all our employees. Safety is therefore of paramount importance to us, so much so that working safely has become an entrenched practice amongst most of our employees. As evidence of this, no less than four of our Substations have achieved in excess of 9000 disabling injury free days. They are:

Aggeneys : 9000 days
 Gromis : 9000 days
 Droërivier: 9000 days
 Bacchus : 9500 days

In addition, the complete grid has worked over 1.5 million hours injury free.



The sheer size of the high voltage equipment that Transmission staff have to maintain also presents its own challenges as can be seen from these porcelain insulators of Voltage Transformers (VTs) being spray-washed



Faults can occur at any time during the day or night. Here, employees are repairing a breaker at 4 o'clock in the morning at Bacchus Substation.

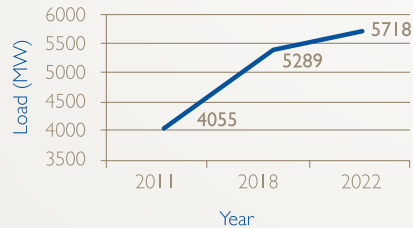


Although the Western Cape is not normally associated with thunderstorms, they do occur and can also wreak havoc as far as "dips" and "trips" are concerned.

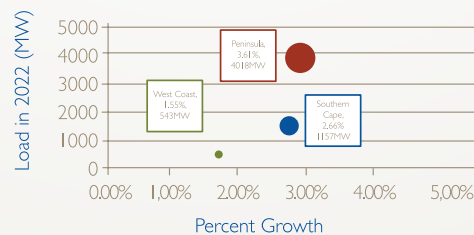


As far as our Lines and Servitudes are concerned, pylon theft and the very dry summer season and high winds in most parts of the Western Cape often result in fires raging out of control. These fires or the smoke they generate can cause power lines to trip.

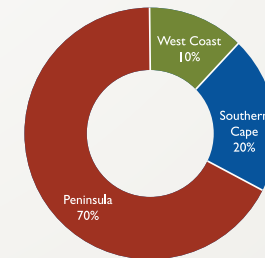
Grid Demand Growth Graph



CLN % Load Growth and 2022 Loads



CLN % Contribution to 2022 Load



ESKOM GUARDIANS

In the Western Cape Province we have close to 5000 permanent employees across all Eskom Divisions in the province. Our employees are our most valuable asset. Employee satisfaction is essential to the success of our business and it is therefore important that we continuously provide opportunities in which they grow, develop, empower and motivate themselves, in order to perform their duties.

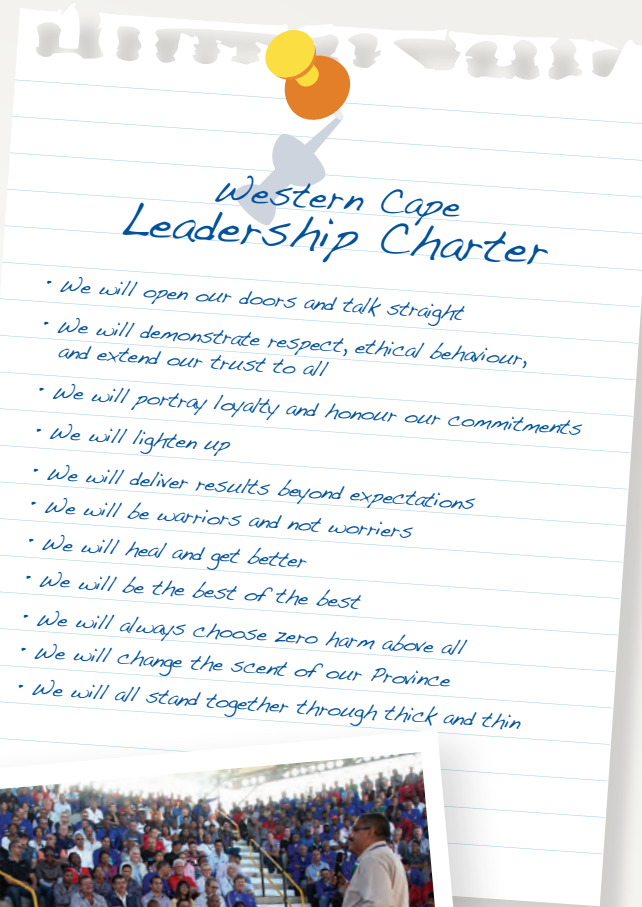
Open, transparent and regular employee engagement is essential. It gives our employees a feeling that their opinions are respected and that they hold a place of importance in the workplace.

We also acknowledge the role of our trade unions in the province and together seek to demonstrate effective employee relations.

Our recruitment policy is based on employment equity and we strive to reflect the demographics of our province and nation.

In the province we also focus on rewarding our staff, recognising, acknowledging and celebrating our employee achievements.

Our Eskom value of "Sinobuntu" reflects that we are a caring company, and in the province, we live this value towards our employees and continuously strive to build and maintain a high performance workforce culture.



- We will open our doors and talk straight
- We will demonstrate respect, ethical behaviour, and extend our trust to all
- We will portray loyalty and honour our commitments
- We will lighten up
- We will deliver results beyond expectations
- We will be warriors and not worriers
- We will heal and get better
- We will be the best of the best
- We will always choose zero harm above all
- We will change the scent of our Province
- We will all stand together through thick and thin



Koeberg Open Forum - focusing on nuclear safety



Transmission Grid employee reward event



Peaking staff completing Klipheuwel Windfarm climbing exercise



Western Operating Unit, Manager's Awards Ceremony

STAKEHOLDER ENGAGEMENTS

Mapping the road towards effective Stakeholder Engagement

The Western Cape Operating Unit models itself around a stakeholder engagement strategy that aims to achieve its objectives of improving service delivery and sustain our customer centricity focus.

Our approach allows for more focus on building strategic partnerships and maintaining sound relationships with all our stakeholders in the province.

Our main objective is to supply electricity to our customers and to develop the province in order to contribute towards the economic growth of this country.

It is therefore important that stakeholder engagement forms an integral part of our decision making process in the province and is based on principles such as trust, transparency and accountability. This allows for an open dialogue with our stakeholders and is built on a foundation of mutual understanding.

Through effective negotiation and issue management, the feedback and input from all our stakeholders is acknowledged in the processes of relooking current strategic directives for improvement.

We continuously strive to satisfy the needs of all our stakeholders, so that the journey to a brighter South Africa can be achieved together.



Électricité de France visit to Koeberg



Eskom's 2012 Interim Results Announcement



Stakeholder session at Koeberg



MYPD3 Engagement

SINOBUNTU

“We are a caring Province”

Social & Economic Development is a Department that serves as a vehicle in identifying, processing and executing the Corporate Social Responsibility projects to the various communities, especially the previously disadvantaged ones. These donations and grant programmes include philanthropic and strategic donations, asset donations, disaster relief, contractor academies, small micro and medium entrepreneurs, incubators, FET Colleges, whole school development, agricultural projects and Eskom initiated flagship projects such as the newly introduced i-Volunteer programme, where Eskom employees come together to assist organizations in various ways.

The Eskom Corporate Social Responsibility programmes are considered as a return on investment, where the business ploughs back into the community in order to develop and build them towards a better future in South Africa, thus enhancing and promoting the image of the organization, particularly in strategic sites, where Eskom has electricity capacity expansion build programmes.

In terms of the qualifying criteria, it is only the officially constituted/registered organizations that benefit from our programmes. These would include Trusts, Non Profit Organizations, Public Benefit Organizations, Cooperatives and Businesses. The Sectors that are covered involve Welfare, which includes HIV/Aids and Hospices, Health, Agriculture, Education, Arts and Culture, Physically and Mentally challenged, Nutrition, Environment, Food Security, Women and Children and Old Age Homes. Requests that are not considered include franchisees, events, individuals, vehicles, churches/religious organizations, Eskom employees and their families, political organizations, sports events, Government Departments' inaugurations and launches, award ceremonies, local and international trips.

Since 1999, the Western Cape Operating Unit has spent about R30 720 281 on social and economic development. This amount includes all the sectors mentioned above both in rural and urban areas. The bulk of this expenditure went into Computer Laboratories, Science

Mini Laboratories, industrial machinery, infrastructure development, Early Childhood Development, food security, state of the art hospital equipment and capacity building programmes.

The Western Cape Operating Unit has embarked on a number of charity and outreach campaigns and has formed valuable partnerships with various institutions in making a difference to people's lives and enriching so many communities.

Partnerships such as with Radio Good Hope FM's Toy-Toy Campaign has become an annual event, outreach programmes with Red Cross Children's Hospital, SANCO's, shelters and frail care facilities, schools and various community projects throughout the province.

We will continue to represent Eskom's image in the province as a company that cares!



Mpho Nkotsoe, Bellville Customer Services Area Manager and Thandi Nkonzo Eskom Social and Economic Development Manager handing over a funding plate to Khayelitsha hospital management



Imekhaya Primary School sewing project



Ruiterbos Primary School



GoodHope FM Toy Toy Campaign



Nceduluntu Sanctuary Trust



Soete Uurtjies Dagsorgsentrum



Cape Kidney Association monitoring patients

Funds from Eskom give hospitals a shot in arm

HEALTH WRITER

TWO PUBLIC sector hospitals in the city are to receive a major financial boost, thanks to funding from Eskom to the tune of almost R1 million.

Last week the electricity giant donated R500 000 to the Khayelitsha Community Health Centre and R491 000 to Somerset Hospital, for much-needed lifesaving medical equipment.

Donated by Eskom's social and economic development department, the funds will be used to buy equipment ranging from vital-signs monitors, such as heart machines, to ear, nose and throat sets, trauma equipment and paediatric equipment.

Thandi Nkondo, social and economic development manager for Eskom, said it had donated the funds after being approached by the SA Medical Foundation, which works with the provincial Department of Health.

"Through this donation, the 400 000 patients that visit the (Khayelitsha) hospital annually will benefit from the life-saving equipment," she said.

Nkondo said the growing numbers of patients, and strained resources at the health centre, meant it was in dire need of new and updated equipment.

One of the oldest hospitals in the country, Somerset Hospital serves mostly disadvantaged areas such as Dunoon, Atlantis and Langa.

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ESKOM MAKING A
DIFFERENCE...



We Dare





to Care!





Pensioners Tribute



*“May we follow in their footsteps
and serve Eskom with the same
loyalty and dedication”.*

A legacy left behind...

This section features only some of our treasured Eskom pensioners' stories but we wish to acknowledge every single Eskom pensioner for their contribution and loyal Eskom service. Our pensioners have left us so much richer as they have shared their knowledge and experience with us. As you read through these heart-warming stories, we hope it strikes a chord within us as Guardians who are now leading the Eskom heritage and future. A sincere thank you to all our stalwarts!

Georg Hellstrom started working at Eskom in 1957 and retired in 1987.



After completing his studies at the University of Stellenbosch, he went overseas to complete his scholarship apprentice training in England in the town of Manchester. When he returned to Cape Town he applied for a position at Eskom in November 1957 and was employed as a junior engineer at the Eskom Bellville office. The Bellville office was only a small building back then.

He was transferred to the substation construction department, working on substations and overhead lines.

He also worked in the Karoo, for two years electrifying the railway in Beaufort West, and again was transferred to the Eskom Heerengracht Cape Town office as a Consumer Engineer. During this time Mr. Hellstrom was dealing with challenges and engaging with large consumers. In 1967 he obtained his B.Com degree through extra mural studies at University of Stellenbosch.

He became a system Planning Engineer, then Senior Planning Engineer and then Planning Engineer. He became an Assistant Regional Manager for the Administration side after which he became Regional Manager for Eskom Western Cape in 1981.

Mr Hellstrom rendered 30 years of loyal and devoted service to Eskom and retired in November 1987.



Andrew Jacobs, affectionately known as AJ, joined Eskom in 1983 as a general worker tending to the gardens of the Eskom homes in the Strand, which, at the time, was reserved for Eskom contractors.

Taking great pride in his duties such as planting grass and trees and caring for the environment, gave Andrew immense pleasure. After that he moved to Palmiet Pumped Storage Scheme where he worked as an electrical utility man on the transformer and generator among other things. A very proud Andrew further reiterated that he worked on various hydro stations within Peaking Generation. One such station, Drakensberg, stands out in his memory. He proudly recalls working with a designated team on the Drakensberg stator rewinding - a first in Africa at the time. The successful cable upgrading at Drakensberg is another Peaking achievement Andrew prides himself in being a part of.

"The highlight of my career has to be the proud moment when the first unit at Palmiet, unit 2, started up for the very first time in May 1988." said Andrew. An emotional Andrew referred to the managers he reported to during his time with Eskom, making special mention of John Berry, Rob Lines and Mark Holmes. "They were just fantastic and real people's persons, and I can only say good things about them," said Andrew. Andrew retired in 2008 due to ill health, after devoting 25 year service to Eskom.



Robert Benson started working for Eskom in February 1970 as an Assistant Engineer for the Planning Department. He obtained his education and training in the United Kingdom (UK) with the UK Electricity Board. Shortly thereafter he was transferred to the Distribution section as Assistant Distribution Superintendent responsible for High Voltage maintenance. In his career at Eskom he was also responsible for creating the Live Line in Cape Town in the early 1970s. Following another transformation of the organisation he was appointed as District Manager during the time of John Mare. One of his highlights at Eskom was when he was selected as a finalist in the management section of the Chairman Awards.

Eskom created the three divisions at the time which were Generation, Distribution and Transmission. In 1991 he was appointed as Transmission Section Manager with the responsibility of Operation and Maintenance of High Voltage for Transmission network in the western part of the country up to Namibia.

Mr Benson retired in 1995 after 25 years of loyal and dedicated Eskom service. Mr Benson would like to tell the young Guardians that every day is a learning opportunity, so one should never be too scared to ask questions.



Stephen Marupane Stephen Marupane started his career with Eskom as a Truck driver in July 1963. He worked with MEW doing mostly construction work and building HV lines. He has many fond memories of working for Eskom in those years. Between 2005 till he retired in 2008 he moved from Brackenfell MEW department and joined Polkadraai CNC. Mr Marupane worked with the Pre-paid Technicians.

He would like to encourage young students who want to work for Eskom and all our young Guardians, to have respect for each other, to be responsible and abide by Eskom's Life-saving rules. He is very passionate about Eskom and would like to encourage employees to take care of each other in the field. Mr Marupane has made his mark by giving Eskom 45 years of loyal service.



Dries Van Schalkwyk, also known as the “Blue Bull” because he is such a big Bulls supporter; was an Eskom bursar back in the day, and started his career with Eskom on 1 January 1969 at Camden Power Station. In the same year he moved to Komati Power Station, and in 1970 he started working at Hendrina Power Station. 1971 saw him moving to Ingangane Power Station in what is now Kwazulu-Natal. In 1974 he moved to Grootvlei Power Station, and on 1 April 1977 he started his nuclear career at Koeberg Power Station as the Head of Chemistry. He obtained his Senior Reactor Operator licence in 1984, whereafter he moved into Middle Management. He was appointed as the head of Nuclear Engineering in 1993 and held the position until 2003 when he became a Corporate Nuclear Consultant.

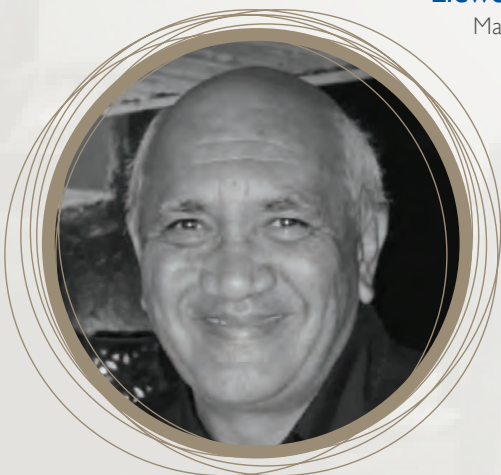
“I enjoyed every day. There was a variety of work and a lot of opportunities. I liked nuclear for the discipline of approach – it fitted with my character; I never had a conflict with my personal aims and what is expected in nuclear,” says Dries. “This is one of the best and most rewarding jobs in the world. Take the opportunities that are available,” he encourages. Dries retired in January 2012 after 43 years of service with Eskom.



Alice George, fondly known as “Aunty Alice” started her Eskom career in June 1981, as a cleaner and tea girl at the Eskom Cape Town offices, she briefly resigned from Eskom to have her first born, and then re-applied and came back that same year. In 1987 she moved to Bellville and was given the opportunity to go onto a Learner Clerk programme, she successfully completed it was sent to various departments for training. She worked in the Buying Department, moved to various departments in the business such as Billing Department, EFC department and then, ended up in the Corporate Affairs Department back then known as the Communications Department.

“I will be forever grateful to Eskom for the life it has given me and my family” concluded Alice.

Alice retired from Eskom in December 2012, after an innings of 31 years of loyal service to Eskom. We commend Alice for her hard work and for all her dedication and contribution towards Eskom.



Llewelyn Okkers started his career at Koeberg Power Station in October 1980 as a Storeman within Materials Management, and retired as a Materials Manager in July 2011.

During his career with Eskom he worked at Majuba and Matla Power Stations and finally returned to Koeberg in 2000. He remained with Eskom for all of 31 years because “I found them to be a company that creates opportunities for their employees to enhance their education... also a company who shows interest in their employees’ social and family lives. Eskom also strives to make the working condition for their employees as comfortable as they possibly can.” What he would like to share with his colleagues and friends is, “Always try to be positive, face your work challenges with an open mind and as a team player. Always be there for the other team members. Remember a chain is only as strong as its weakest link.”

It would appear he just couldn’t stay away because he returned to Eskom as a fixed term contractor in June 2012, and has been working at Koeberg ever since. Llewelyn is a true Guardian, and we wish to salute him for being such a great example and for fulfilling his role in our business with aplomb.

CAN YOU FEEL IT, IT WAS HERE...

2010 FIFA World Cup



Western Cape Province as Host City

The 2010 FIFA World Cup took place in South Africa between June 11 and July 11, 2010, with eight matches held in Cape Town, including a quarter-final and a semi-final.

During that time, Cape Town Tourism was at the forefront of capturing and sharing the moments and magic of this tournament in every possible medium whether online, with blogs, print, photographs and videos.

Eskom established a joint forum to share information and help coordinate requirements to ensure that the 2010 FIFA Soccer World Cup is hosted successfully without major problems with electrical infrastructure.

During the period of 2007 and 2010, a number of projects were identified on the Distribution and Transmission side to ensure adequate supply to each Host City.

Transmission

The Acacia Foreshore 132kV feeder bay was established with the intention of strengthening supply in the Province.

The Acacia 3rd 500 MVA transformer project which started in 2007 and completed in 2009 also forms part of Eskom milestone towards the contribution of the 2010 FIFA World Cup. This project consist of different dimensions like Acacia 400 kV transformer bay, Acacia 400kV bus-section, Acacia 400/132kV transformer (3rd), Acacia 132 kV transformer bay, Acacia 132kV cable to allow connection to 132kV busbar and Acacia 132kV bus section.

The Province spent approximately R80.5 million in Transmission strengthening.



Distribution

Eskom in the Western Cape Province established the Tafelbaai substation to replace the Salt River substation. This project cost close to R275 million. Eskom completed an indoor 132kV GIS, 4x132kV feeder bays, 132kV buscoupler, 2x80MVA 132/33kV transformers for the Traction Loads, 3x40MVA 132/11kV Portnet loads, 11kV and 33kV transformer and feeder bays.

The 132kV Tafelbaai substation with state of the art indoor switchgear was specifically built for 2010 strengthening and power supply to the Western Cape. The key customers that benefit from the commissioning of the substation is Metrorail, Spoornet, Transnet and Portnet our international harbour. These key customers form the backbone of the Western Cape's economy.

The Tafelbaai substation ensured secure grid supply for the 2010 Cape Town Stadium. The total installed transformation capacity is 280 Mega Voltage-Amperes (MVA).

Generation

All Eskom Power Stations in the province played their part towards powering the Soccer World Cup. Readiness assessments and plant maintenance were done with no impact to ensure a sustainable, reliable and safe production of electricity during the 2010 Soccer World Cup and beyond.

Waka Waka

The spirit of true excitement and togetherness swept through the province during the 2010 Soccer World Cup period. Soccer fever struck the Western Cape Province with the launch of the 2010 Soccer World Cup Activation Campaign during the month of March 2010.

A sense of pride and excitement was awakened in the hearts of the Eskom Guardians when they were requested to sing the national anthem from any platform in the 100 day count down to the World Cup. South Africa was hosting a world class event and the eyes of the international and national communities were fixed on Eskom to ensure reliability of electricity supply. Eskom's contribution was vital to ensure a successful tournament.

Football Fridays and Activation Events

The first regional activity event was on Friday, 5 March 2010. The purpose of this initiative was to remind employees to save electricity during the build up to the World cup and beyond. 'Together we can power team South Africa', was the theme of the day.

Employees were encouraged to wear their Eskom United or any other football T-shirt every Friday until the kick off of the 2010 FIFA Soccer World Cup to show their support for the team. This they wore with pride every Football Friday. Different activation events took place in the province at Eskom offices and Power Stations as the build up to the world cup started.

Employees were taught how to do the diskidance, play mini football as well as test their knowledge by participating in a soccer trivia quizzes and competitions.

2010 Soccer World Cup success

Eskom delivered on its promise to ensure a secure and reliable electricity supply during the 2010 Soccer World Cup. The Western Cape had no supply interruption that impacted any of the 2010 World Cup matches or events.

Fond and unforgettable memories will live long in the hearts and minds of the Eskom Guardians.



ORGANOGRAMS

WESTERN CAPE Executive Committee



Alwie Lester
General Manager



Atika Brey
Senior Manager
Finance Business Centre



Sikelela Mkhabela
Maintenance and Operations
Management Manager



Philip Wahl
Asset Creation Manager



René Darby
Customer Services
Operating Unit Manager



Mbulelo Yedwa
Senior Human Resources
Business Partner



Trish da Silva
Business Integration and
Performance Management
Manager



Mark Ganger
Middle Manager Materials
Management



Sipokazi Potelwa
SHEQS Manager



André du Plessis
Information Management
Manager



Jolene Henn
Communication and
Stakeholder Manager



Jannie Ehlers
Senior Manager
Key Accounts

PEAKING

Operating Unit



Avi Singh
Power Station Manager



Riaan Mouton
Acting Snr Manager
Engineering Support



Patrick Mhlongo
Ingula Middle Manager
Plant Management



Rodney Booth
Ankerlig 1 and 2
Middle Manager
Plant Management



Abedah Wilson
Acaia, Port Rex and
Gourikwa
Middle Manager
Plant Management



Elias Mokwena
Drakensberg
Middle Manager
Plant Management



Maremane Tsotetsi
Palmiet, Gariep and
Vanderkloof
Middle Manager
Plant Management



Henry Ulster
Middle Manager
Risk Assurance



Raju Ooka
Middle Manager
Business Integration and
Performance Management

WESTERN GRID

Transmission Management Team



Marius van Rensburg
Western Grid Manager - Transmission Division



Lester Geldenhuis
Chief Engineer
HV Plant



Lynn Appollis-Laurent
HV Plant Manager



Anré Swart
Secondary Plant Manager



Dot Huisamen
Performance and Works
Planning Senior Advisor



Siyamthanda Maya
Lines and Servitude Manager



Helena Lesch
Finance and Business
Support Services Manager



Caroline Reddy
Human Resources Manager



Adrian Francis
Environmental Advisor



Brando Cupido
Safety and Risk Advisor



Sheinaz Baccus
Security Manager



Andile Njobe
Programme Manager
Project Execution

KOEBERG
Operating Unit



Clive Le Roux
Senior General Manager (Koeberg)

**HUMAN
PERFORMANCE**



Elsa Kleinschmidt
Assistant Officer



Johann Kritzinger
Corporate Consultant

**NUCLEAR
SUPPORT**



Keith Featherstone
Senior Manager

**NUCLEAR COMMERCIAL and
ACTING CLIENT OFFICE**



Barry Culligan
Senior Manager
Acting: Client Office

**KOEBERG
POWER STATION**



Riedewaan Bakardien
Power Station Manager

**NUCLEAR
ENGINEERING**



Dave Nicholls
General Manager

**NUCLEAR PROJECT
MANAGEMENT**



Sedick Davis
Senior Manager

**NUCLEAR
FUEL**



Hans Lensink
Senior Manager

**KOEBERG and PEAKING
OPERATING UNIT**



Michael Richardson
Senior Manager: Finance

**KOEBERG
OPERATING UNIT**



Lionel Henn
Area Business Partner
Human Resources

**KOEBERG
OPERATING UNIT**



Lewis Phidza
Middle Manager
Stakeholder Management
and Communication

CAMPAIGNING THE WAY FORWARD



www.operationkhanyisa.co.za



Operation Khanyisa is a national partnership campaign that aims to mobilise all sectors of South African society to stand for legal power use and stop electricity theft.

Operation Khanyisa creates awareness to the communities of the Western Cape on the Electricity Safety and Theft.



ZeroHarm
We make it happen!



DID YOU KNOW?

The most powerful power station is the Itaipu power station on the Paraná River near the Brazil/Paraguay border with a capacity of 13,320 MW

ZeroHarm
We make it happen!

Life-saving Rules (Cardinal Rules)

1. Open, isolate, test, earth, bond and/or insulate before touch

No person may work on any electrical network unless trained and authorised to do so. Furthermore all hazards and risks must be identified and the apparatus must also be proven safe to work on



2. Hook up at heights

Where there is potential for a fall, a risk assessment must be conducted and suitable control measures must be implemented



3. Buckle up

No person may drive any vehicle on Eskom business unless he or she and all passengers are wearing seat belts



4. Be sober

No person is allowed to work whilst under the influence of drugs and/or alcohol



5. Permit to work

No person is allowed to work without the required Permit to Work (PTW)



Zero fatalities

Zero injuries

Zero environmental incidents

Zero tolerance

 Eskom

ENERGY EFFICIENCY & DEMAND SIDE MANAGEMENT, A MATCH MADE IN HEAVEN

Energy Efficiency (EE) and Integrated Demand Management (IDM) became involved at a Provincial level in 2005, in response to the energy challenges facing South Africa. The current focus of the relationship is to identify and promote more efficient electricity usage through technology enhancements as well as behavioural change.

The Cape Town electricity crisis in 2006, called for serious collaboration and co-operation of human capital within the business and also with stakeholders such as City of Cape Town and Provincial Government. A cross-functional project team was established to encourage energy saving initiatives in the province. The team, based in Cape Town during the crisis, worked around the clock in order to run an extensive media and communication campaign to implement demand-side management procedures to deter the rolling black-outs which resulted from peak time demands which could not be met. Consumers were alerted via television and radio when power consumption in the region was about to reach critical levels and the risk of a black-out increased. The success of the campaign was largely due to consumers who heeded the call to save energy when they were asked to reduce power consumption. The television notifications, used during the crisis, laid the foundation for the world class real-time method we use today, namely "Power Alert" notifications.

The EE IDM collaboration has seen various interactions and activities with stakeholders. These include strategic partnerships with the Association of Municipal Electricity Utilities (AMEU), Fedhasa, South African Property Owners Association (SAPOA), the City of Cape Town and various other role players in the province. Through relationships with these stakeholders, Eskom has been able to spread a unified message of energy efficiency where forums, interventions and messaging are concerned.

The City of Cape Town launched their Electricity Savings Campaign project in March 2011, and in conjunction with partners like Eskom, they have made it a very successful campaign. Other projects are

the Commercial Building Energy Efficiency Forum, where Eskom is one of the co-founders of the forum together with the City of Cape Town and SAPOA. Important milestones are the fact that the collaboration in 2006, to keep the lights on, saved 400MW over the peak period; the development of DSM e-learning training material and roll out of material to front line staff (2007/08), the successful roll out of 7.2 million CFLs from 2006; as well as the first renewable standard offer project at Vrede en Lust farm, near Paarl.

The stumbling blocks over the years have taught us to work hard and implement ideas which are beneficial to the business at present and in years to come.

THE POWER ALERT SYSTEM ON SABC AND ETV NOW ALSO ON DSTV

With South Africa experiencing energy challenges, we hereby invite you to partner in saving electricity and achieving an energy-efficient South Africa. Luckily, the user-friendly Power Alert programme has been developed to enable you to do just that.

Already a familiar presence on your TV screens (SABC, eTV, DSTV: Mnet, Action, Series, Supersport, VUZU, Kyknet and Mzansi Magic), the Power Alert system is a critical source of real time information about what is happening on the national grid on any particular night throughout the seasons.

Late afternoon to mid-evening between 5pm and 9pm is the period of peak electricity demand in South Africa. People arrive home from work and start their evening routines by taking a bath and switching on everything: the lights, climate control systems, televisions, microwave ovens, stoves, dishwashers and tumble dryers. Working quietly out of sight are the two hungriest appliances in the home: the hot water geyser and the swimming pool pump. These two notorious energy-guzzlers add greatly to the huge demand for electricity during the big evening switch-on and should be used sparingly.

The Power Alert message boards will use colour-coded messages to clearly communicate the electricity status as well as remind you of the steps to take whenever a message appears on your TV.



GREEN - A green Power Alert message with full electricity status bars, means electricity usage is stable but increasing. Please switch off lights in unoccupied rooms.



ORANGE - An orange Power Alert message with only three full electricity status bars means electricity usage is increasing rapidly. Please switch off lights, the geyser as well as the swimming pool pump.



RED - A red Power Alert message with just one full electricity status bar warns that electricity usage is too high. Please switch off lights, the geyser, the swimming pool pump and all non-essential appliances.



BLACK - A black Power Alert message means the situation is critical as demand exceeds supply. Switch off everything, except the TV and one light.

So be "Power Alert" and remember to switch off, this includes every member of the family – mom, dad, the children, grandma and grandpa. Together let us keep SA powered up.

For more information and regular updates go to www.poweralert.co.za



The 49M initiative aims to inspire and rally all South Africans behind a common goal - save electricity and create a better economic, social and environmental future for all.

Saving power is really about changing our attitudes. By simply making small changes in our everyday life, collectively we can make a massive difference.

Who is 49M? It is government, Eskom, big players in industry and commerce, and it is you – all 49 million of you South African citizens. Be a part of the solution, make a difference and take the 10% pledge.



Eskom CE, Mr. Brian Dames putting up a bulb in one of the houses in the community of Gugulethu.

Every little bit helps.

It doesn't matter who you are, where you live or what you earn. You have the power to make a big difference. All you have to do is to switch off what you don't need. To find out more, visit www.49m.co.za



CONCLUSION

Eskom is celebrating its 90th Birthday on 1 March 2013.

This is truly a memorable occasion in the history of our organisation and the Guardians in this province are proud to be part of it.

Eskom in the Western Cape Province is renowned for performance excellence and will strive to retain this reputation for generations to come.

We have had a number of Executive Members, Senior Management and Employees who have started their Eskom careers in this province and moved on into different roles and environments within Eskom. They have all contributed in building this province and have made their mark.

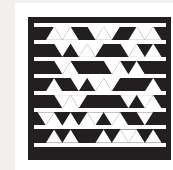
The two smart tags on the right, feature Distribution Group Executive, **Ms Ayanda Noah**, who started her Eskom career in the Western Cape Province as an Engineer In Training. We are also proud to announce that our very own, Chief Executive, **Mr Brian Dames**, started his Eskom career at Koeberg Nuclear Power Station as a Graduate in Training Physicist.

Lastly, we will continuously strive to improve performance and create a culture whereby employees put safety at the core of their operations and leave behind a legacy for the next 90 years.

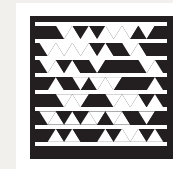
Together, we will realise our vision of being one of the top five utilities in the world.

DID YOU KNOW?

The electricity needed to illuminate just the lights on the Las Vegas strip could power a town of 25000 people



Message from Distribution Group Executive,
Ms. Ayanda Noah



Message from Eskom Chief Executive,
Mr. Brian Dames

