

# POWERING A SUSTAINABLE ENERGY FUTURE



CENTRAL ELECTRICITY BOARD

ANNUAL REPORT 2011



## OUR VISION

A world-class commercial electricity utility enabling the social and economic development of the region

## OUR MISSION

We meet the expectations of our customers and stakeholders by:

- Delivering prompt and efficient customer services
- Developing our employees and providing them with incentives
- Providing an affordable, safe, and reliable electricity supply
- Undertaking our business in an environmentally responsible manner
- Being the preferred employer in the region

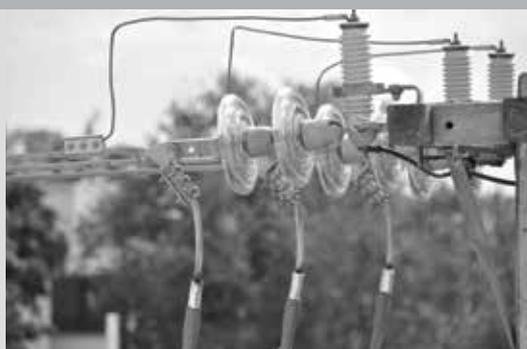


## OUR CORPORATE VALUES

- Respect, Honesty and Loyalty
- Pride and Ownership
- Courteous, Excellent Service
- Superior Performance
- Team Culture

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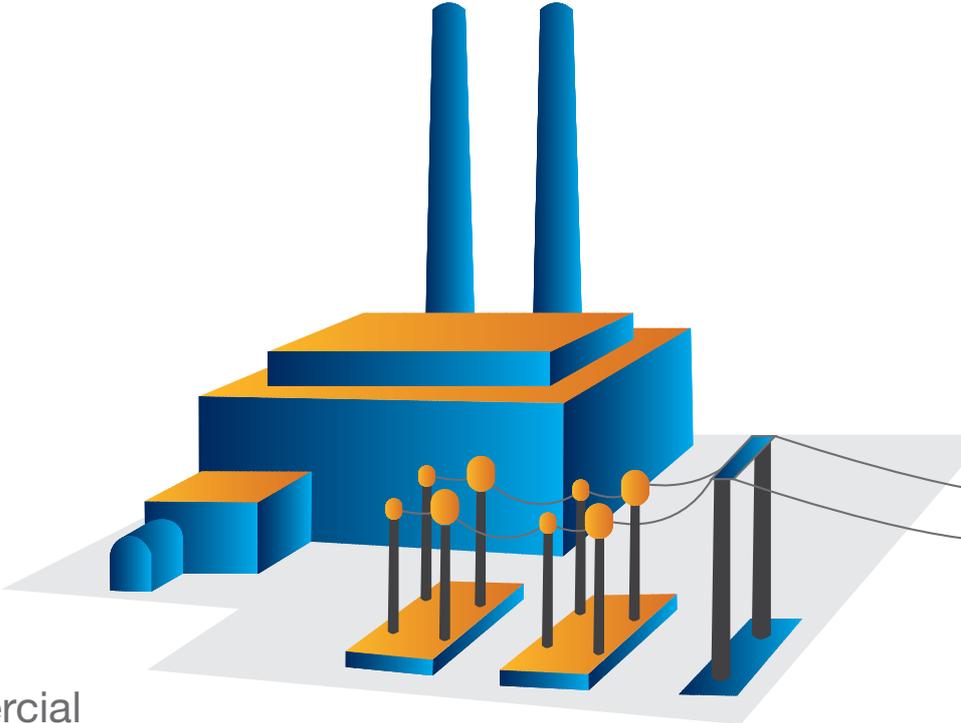
# Electricity

(from Power Station to Customer\*)

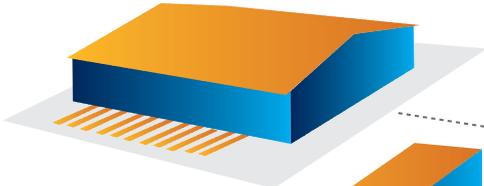
## Power Stations

- Fuel oil
- Coal
- Bagasse
- Hydro
- Landfill Gas

Generation 2011:  
2,433 GWh



## Commercial



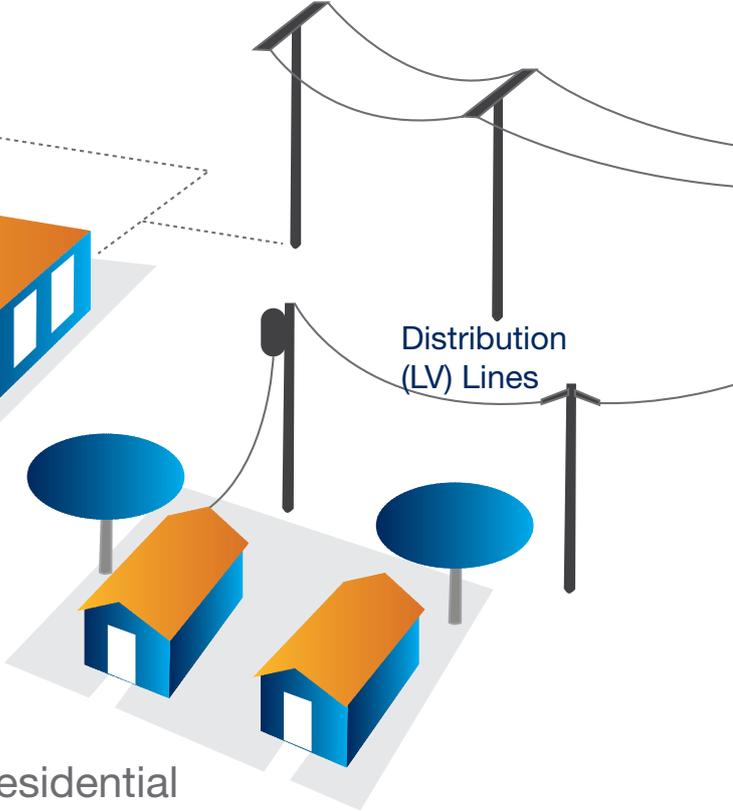
## Customers

Customers 2011: 404,751  
Sales 2011: 2,204 GWh

## Industrial



## Residential



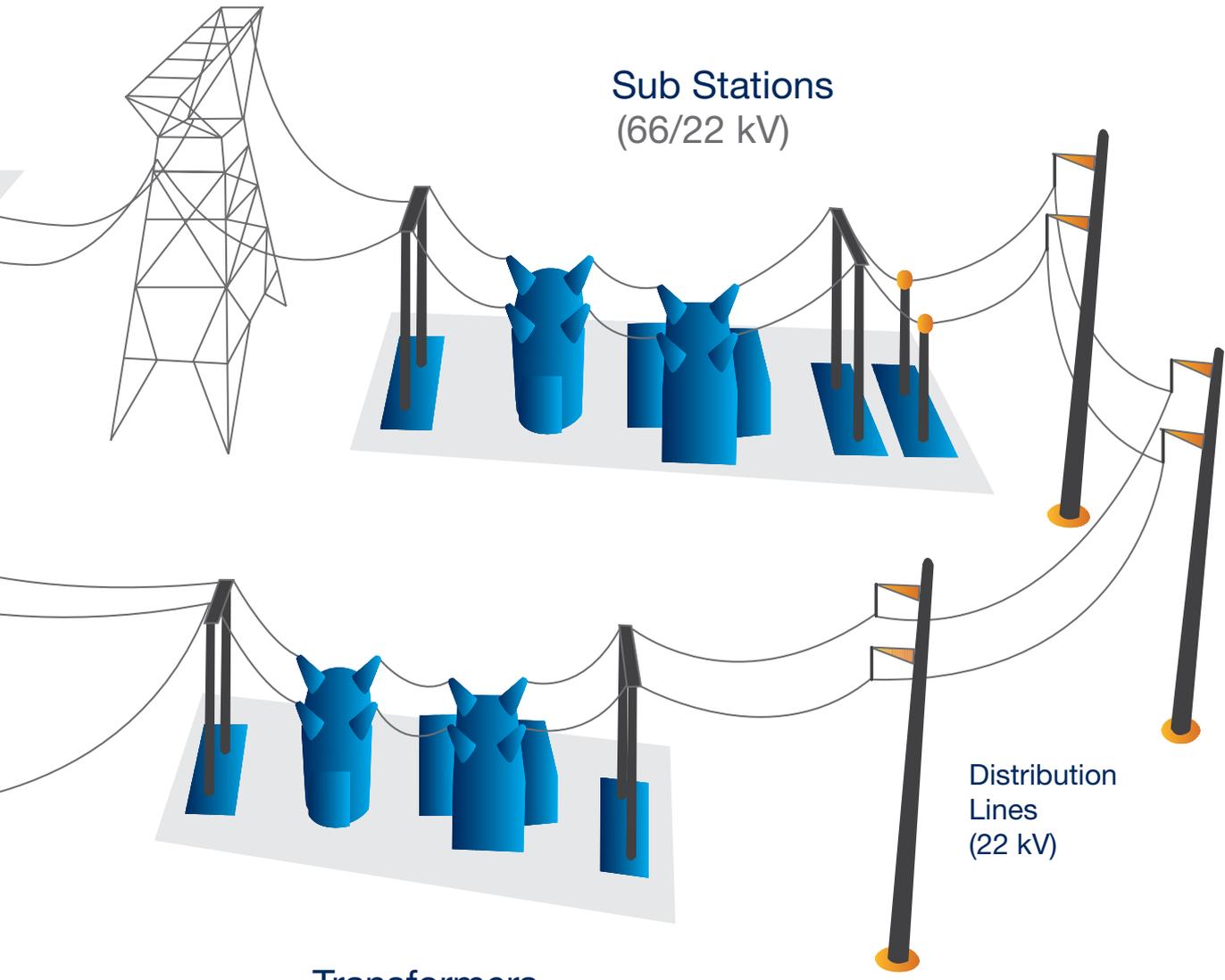
\*Mauritius

High-Voltage  
Transmission Lines (66 kV)

Sub Stations  
(66/22 kV)

Distribution  
Lines  
(22 kV)

Transformers  
(22 kV > 230 V)



# Corporate Profile

The Central Electricity Board (CEB) is a parastatal body wholly owned by the Government of Mauritius and reporting to the Ministry of Energy and Public Utilities. Established in 1952 and empowered by the Central Electricity Board Act of 25 January 1964, the CEB's business is to "prepare and carry out development schemes with the general object of promoting, coordinating and improving the generation, transmission, distribution and sale of electricity" in Mauritius and Rodrigues Island.

## History

The CEB was constituted on 8 December 1952 in accordance with the provisions of the first Central Electricity Board Ordinance 1951. It took over the functions and assets of the individual electricity undertakings operated by the Department of Electricity and Telephones, and the Electric Generating Power Company.

At the time of Independence in 1968, the national rural electrification program got under way. As the population increased and habitations cropped up all over the island, the CEB had to expand its networks to connect schools, water pumping stations, housing estates and allotments, as well as various industries.

As from the early 1970s, further network extension took place to supply new sectors such as tourism and textile. By 1981, the national rural electrification programme was completed, with about 153 villages and housing estates connected to the grid.

Over the years, the CEB has set a proven record of providing reliable, safe and affordable electricity supply to the country, through massive capital investment in new generation capacity and development of the electricity infrastructure. Today, Mauritius enjoys a more diversified economy, an extensive network of electricity supply facilities, and the benefits of a stable and continuous electricity supply.

## Mission, Vision and Strategic Objectives

The CEB's overall mission is to provide affordable, safe, reliable, and quality electricity supply to the nation.

Its vision is to become a world-class commercial electricity utility enabling the social and economic development of Mauritius, and ensuring that sustainable growth becomes a reality.

The utility's main strategic objectives are:

- To ensure the sustainability of the business through balanced financial, social and environmental decision-making;

- To optimise the use of assets, resources and skills;
- To balance supply and demand of energy for security of supply;
- To exploit alternative and renewable sources of energy;
- To promote energy conservation; and
- To enhance customer service delivery.

## Outlook

The needs of Mauritius in terms of energy will inevitably increase in the coming years, as the country strives to embark on a higher growth trajectory in a harshly competitive world economy. With the escalating prices of primary energy on the world market, resulting in higher costs of production, the CEB will be faced with the difficult task of maintaining a fair balance between financial sustainability of the utility and price affordability to its customers.

The key for a secure and sustainable energy future is to create a sufficiently broad energy portfolio, with more emphasis laid on renewable sources and the exploitation of alternative sources, while being sensitive to energy conservation and environmental protection.



# Chairman's Statement



**“Within the framework of the “Maurice Ile Durable” vision, the CEB is lending full support to the Government in its endeavour to shape a sustainable energy future for the country”**

**Balraj NARROO, MSK**  
**Chairman**

On behalf of the Board of Directors and on my own behalf, I am pleased to present the Annual Report and Financial Statements of the Central Electricity Board for the financial year ended 31 December 2011.

## Review of Performance

I wish to report that the CEB ended the year 2011 with a surplus of Rs 936 M, compared to a surplus of Rs 873 M for the year 2010.

Besides this good financial performance, the CEB was, as well, successful in fulfilling its public service mission by responding to its customers' and stakeholders' foremost concern – the reliability and quality of supply at the lowest possible cost. It was, also, very heartening to witness the progress achieved in such important areas as renewable energy, revenue management, customer service delivery, and modernisation of the energy infrastructure.

## Securing the Security of Supply

A reliable, quality and affordable electricity supply is an important policy objective in all modern economies – and Mauritius is no exception. Any failure to achieve enough supply will leave the population stranded in energy poverty and unable to progress, as the many uses of electricity are essential components of modern life. In a similar vein, Government's plan for economic development relies on investments by energy-intensive industries. Continued pressure on supply is therefore inevitable.

As the organisation responsible for implementing the energy policy of the Government, the CEB has, as prime mission, to ensure that it can provide sufficient power in a timely

manner to meet the rising demand, which on average, has been increasing by around 4% annually. In this respect, we have to continually plan for additional generating capacity to ascertain that there is no risk, whatsoever, of any power shortage in the near future.

The Phase II of Fort Victoria Power Station redevelopment, which is under way and which will be commissioned in 2012, is, no doubt, a significant step towards ensuring a secure and sufficient supply of energy in the short to medium term. In view of the rapidly increasing demand and its imperatives, and also owing to the delay in the implementation of generation projects by private promoters, the need for new generation had become particularly urgent. With this second phase redevelopment, the total capacity of the new power plant at Fort Victoria will rise to 90 MW. This project is a clear demonstration of CEB's commitment to remain a major player in electricity generation.

## Reinventing the Energy Future

In pursuance of the supply imperative, one main challenge remains the diversification of the energy mix with a view to reducing our reliance on fossil fuels, given its price volatility and negative environmental impacts.

Within the framework of the “Maurice Ile Durable” vision, the CEB is lending full support to the Government in its endeavour to shape a sustainable energy future for the country. In 2011, out of the total electricity generated, some 20% were from renewable sources, namely, bagasse and hydro. In Rodrigues, five wind energy units are already operational at Grenade and Tréfles, with a contribution of around 9% of the total energy production.

However, we intend to go much further and step up our renewable energy usage. To this end, a number of important renewable energy projects, both from the CEB and private promoters, are either in the pipeline or under way. In a similar vein, and in line with the Government's policy to democratise the power sector, we have come forward with the Small Scale Distributed Generation (SSDG) scheme whereby Small Independent Power Producers (SIPPs) have been given the opportunity to generate electricity from renewable energy sources for their own use and sell any surplus to the CEB.

We have to, however, be realistic about how much renewable energy can actually contribute to our overall electricity production. Its share will certainly increase in future but a small island state, like ours, cannot, from one day to the next, anticipate that renewable energy will replace fossil fuels. Given the present state of technological development, in the years to come, we shall, unfortunately, continue to depend for the most part on fossil fuels for our energy mix. This is, alas, an inescapable fact, but we must do our very best to reduce its negative effects on the environment, while bearing in mind the limited means at our disposal.

### **Moving Towards Service Excellence**

Today, more than ever before, excellence in customer service has become the key to corporate success. And we tend to overlook that this is one of the few areas where a utility has complete control over.

Building on the initiatives undertaken over the past few years, several projects were implemented to enhance our customer service delivery and further improve our relationships with the growing customer base.

In a similar vein, we were very active in providing support and special attention to needy customers. Electricity is, no doubt, an essential commodity and we believe that promoting access to electricity for those who are "energy poor" is an integral part of our corporate social responsibility. At the same time, we came forward with various awareness campaigns to sensitise the population at large on the need to use energy more judiciously and in a safe manner.

### **Valuing our Employees**

Our success rests on the skill, dedication and commitment shown, day in and day out, by our employees. Not only do they constitute the most important link with our customers, but their value-added contribution is indispensable in

driving every aspect of our business performance and in fostering the CEB's corporate image as a quality service provider. I personally want to take this opportunity to thank each and every one of them for their valuable contribution, professionalism and commitment.

In future, we will continue to make significant investments in human resource development while fostering a culture of mutual respect and trust. Our goal is to be recognised as the preferred employer and create a working environment where all CEB employees feel that their contributions are recognised and valued, and where everyone has the opportunity to grow professionally.

### **Looking to the Future**

Despite numerous challenges, I am confident that we will succeed in effectively fulfilling our public service duties and ensuring that the demand for reliable, high quality, affordable, and environmentally sound energy is met.

As we move forward, our objectives are clear. Working together, and through constructive partnerships with all stakeholders, we take a renewed commitment to be the privileged partner in moving the country into its new phase of development.



**Balraj Narroo, MSK**  
**Chairman**

# Corporate Governance



In compliance with the Code of Corporate Governance for Mauritius, this section delineates, inter-alia, the corporate governance structures in place at the CEB and describes the organisation of the Board's business. It also sets out the systems and processes established for maintaining and monitoring internal controls, as well as identifying and managing risks. Moreover, it outlines the efforts made for enhancing corporate social responsibility and communication with stakeholders.

The CEB views good corporate governance practices as integral to good performance. As a parastatal body wholly owned by the Government, the utility is committed to fulfilling its mandate in a manner which is consistent with good governance practices and, in particular, with regard to accountability, transparency, responsibility and ethics.

The year 2011 was a particularly challenging one for the CEB, due to the numerous and the variety of issues which had to be dealt with. The existing systems, structures and governance processes had to stand up to this juncture and take on these challenges in a coherent and effective manner.

Forty-nine meetings of the Board of Directors and Sub-Committees were held during the review period and numerous matters were discussed and resolved. A number of joint task teams, for instance the Enlarged Committee, were also established to assist with the resolution of specific issues such as the Pension Scheme. One of the main tasks of the Board in 2011 was the planning for additional generating capacities to meet the ever increasing demand. In this respect, the Board had to examine various projects, in line with the utility's capacity expansion programme. The approval of Phase II of the Fort Victoria Redevelopment Project was a major stride towards this endeavour. At the

same time, the strategy to increase our renewable energy usage was maintained through the approval of a number of solar photovoltaic projects falling under the Small Scale Distributed Generation (SSDG) scheme. Other larger scale projects in the renewable energy field, from private promoters, were also examined. On another front, the Board gave much consideration to the implementation of a new Performance Management System for all employees, both staff and manual, with a view to monitoring performance and addressing developmental needs.

## Governing Bodies

The direction, control and accountability of the business of the CEB are vested in the Board. The fulfilling of these responsibilities is facilitated by a well-developed governance structure comprising various Board Sub-Committees. Management is accountable and subject to the control of the Board and operates within the policy framework laid down by the latter.

Business is conducted in accordance with the CEB Act, other relevant statutory provisions, and the principles of good corporate governance. All functions are exercised honestly, in good faith, with due care and diligence and in the best interests of the CEB and its stakeholders.

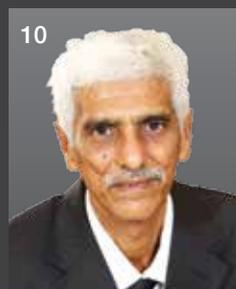


# The Board

The Board is ultimately responsible and accountable for the performance and affairs of the organisation. It subscribes to sound corporate governance principles and ensures that the highest standards of business ethics, honesty and integrity are maintained.

The role and functions of the Board include:

- Providing strategic direction and leadership;
- Reviewing objectives, strategies and structures with a view to satisfying stakeholders' interests;
- Ensuring that the CEB complies with all relevant laws, regulations, codes of best business practice, and guidelines laid down in the Code of Corporate Governance;
- Ensuring greater levels of fairness, transparency and accountability in the decisions and acts of the CEB;
- Ensuring the integrity of CEB's accounting and financial reporting systems, including the independence of audit, control systems, systems for monitoring and managing of risks, financial control, and compliance with law and relevant accounting standards;
- Overseeing the process of disclosure and communication; and
- Ensuring that the utility develop a succession plan, both for its executive directors and senior management.



## Composition of the Board

In accordance with the CEB Act, the Board is constituted of a Chairman, the General Manager and nine other members. The latter are drawn from diverse backgrounds and they bring a wide range of experience and professional skills to the Board.

The Chairman and members of the Board are appointed by the Minister to whom responsibility of the Board is assigned in accordance with Section 2 of the CEB Act. The General Manager is appointed by the Board.

The profiles of the directors for the year 2011 are given hereunder. None of the Directors, who held office at the end of the financial year, had any interest in the affairs of the CEB.

### 1) Nirmala Devi NABABSING (Mrs)

*Ag. Chairperson (up to August), Age: 58*

**Position:** Permanent Secretary,  
Ministry of Energy and Public Utilities

### 2) Balraj NARROO, MSK

*Chairman (as from October), Age: 50*

### 3) Shiam Krisht THANNOO

*Officer-in-Charge (up to September)*

*General Manager (as from October), Age: 45*

**Qualifications:** B. Tech (Hons), MBA, CRPE

### 4) Dr. P. M. K. SOONARANE

*Representative of the*

*Minister of Energy and Public Utilities, Age: 54*

**Qualifications:**

BSc (Hons) Mechanical Engineering; MSc Advanced  
Mechanical Engineering; PhD Renewable Energy

**Position:** Deputy Director, Technical Services, Ministry of  
Energy and Public Utilities

### 5) Kresh SEEBUNDHUN

*Representative of the*

*Ministry of Finance and Economic Development, Age: 52*

**Qualifications:** FCCA

**Position:** Principal Financial & Management Analyst, Ministry of  
Finance & Economic Development; Member National Savings Fund  
Technical Committee; Company Secretary Mauritius Post Ltd

### 6) Abdool Feroze ACHARAUZ

*Member with experience in Agricultural, Industrial, Commercial,  
Financial, Scientific or Administrative Matters, Age: 47*

**Qualifications:** Dip. Personnel Management; Cert. Safety Mgt;  
Fellow Chartered Institute of Mgt UK; Associate of International  
Institute of Risk & Safety Mgt

**Position:** HR Manager, Panache & Co Ltd

### 7) Rohit MUNGRA

*Representative of the*

*Central Water Authority, Age: 62*

**Qualifications:** B. Tech (Civil); Dipl. In Public Health Engineering;  
Dipl. In Water Quality Control

**Position:** Senior Advisor, Central Water Authority

### 8) Sarupanand KINNOO

*Representative of the*

*Institution of Engineers , Age: 57*

**Qualifications:** MSc Radio Engineering; M.I.E.M; M.I.E.T (UK)

**Position:** Deputy Director, Civil Aviation; Vice-Chairperson,  
Institution of Engineers, Mauritius

### 9) Shivdutt BHEECHOOK

*Member with experience in Agricultural, Industrial, Commercial,  
Financial, Scientific or Administrative Matters, Age: 66*

**Qualifications:** M.A Economics

**Position:** Chairman Irrigation Authority

### 10) Dhinnesh RAMDUNY

*Representative of the*

*Electricity Advisory Committee, Age: 59*

**Qualifications:** D.M.E.E. (U.O.M); Cert. Design Principles,  
Building & Civil Engineering (U.O.M)

**Position:** Engineering Assistant; Municipal Council of Curepipe

### 11) Balrajsanee NARAYEN

*Representative of the*

*Electricity Advisory Committee , Age: 53*

**Qualifications:** Cert. in Design Principles for Draughtsman (UOM)

**Position:** Chief Inspector of Works, Black River District Council

Board meetings are scheduled annually in advance. Special meetings are convened as necessary to address specific issues. The attendance of members at the 21 Board meetings (including 9 special meetings) held during the reporting period is shown hereunder.

BOARD MEETINGS 2011	No. of Meetings Attended	Overall Percentage (%)
Nirmala Devi Nababsing (Mrs) (Ag. Chairperson)	13 of 13	100
Balraj Narroo, MSK (Chairman)	5 of 5	100
Shiam Krisht Thannoo	20	95
Dr. P. M. K. Soonarane	17	81
S. Kinnoo	14	67
K. Seebundhun	14	67
S. Bheechook	20	95
F.A. Acharauz	17	81
R. Mungra	20	95
D. Ramduny	14	67
B. Narayen	21	100

#### Directors' Remuneration

During the year 2011, the fees paid to Directors amounted to Rs 557,683 (excluding the Chairman and General Manager).

The Acting Chairperson was paid a monthly fee of Rs 48,252. The Chairman, who was appointed in October, was paid a monthly fee of Rs 80,420. The gross monthly salary of the General Manager amounted to Rs 140,420.

All other Board Members were entitled to a monthly fee of Rs 2,500 in respect of attendance to the main Board meetings. No fee was payable if a Board Member absented himself during a calendar month. Likewise, the fee was not payable if there was no Board meeting in a calendar month.

In regard to attendance at Sub-Committee meetings, the monthly fee was Rs 1,500 and was payable only if a Sub-Committee member attended a meeting during one calendar month. No fee was payable in case of absence or non-holding of meeting during a calendar month.

The Chairman of the Audit Committee was paid a monthly fee of Rs 5,000.

#### BOARD COMMITTEES

In the conduct of its duties, the Board is assisted by three Committees, namely, the Finance Committee, the Staff Committee, and the Audit and Risk Committee. Each Committee operates within its defined terms of reference that sets out the composition, role, responsibilities and delegated authority. Matters are discussed in advance at the level of these committees before they are presented to the Board.

#### Finance Committee

The Finance Committee is made up of four Non-Executive Directors and the General Manager. The committee reviews and makes recommendations to the Board on the financial situation, the budget and the evaluation of tenders.

The functions of the Committee include the:

- Examination of tender evaluation reports prepared by Management in respect of tenders whose value exceeds Rs 10 million and submitting recommendations to the Board for their award;
- Examination of Capital and Revenue Budgets, Cash flow Statements, Management Accounts and Financial Statements; and
- Analysis of proposals for tariff review.

Thirteen Finance Committee meetings were held during the year 2011.

FINANCE COMMITTEE MEETINGS 2011	No. of Meetings Attended	Overall Percentage (%)
K. Seebundhun (Chairman up to February)	6	46
R. Mungra (Chairman as from March)	13	100
Dr. P. M. K. Soonarane	9	69
S. Kinnoo	11	85
S.K. Thannoo	11	85

### **Audit and Risk Committee**

The Audit and Risk Committee is made up of four Non-Executive Directors and ensures that risks, audit and internal control are properly addressed. Furthermore, the committee examines the annual financial statements and reviews the financial aspect of transactions which are considered as significant.

The functions of the Audit Committee include:

- Monitoring of important risk areas and ensuring that these are being effectively addressed by Management;
- Monitoring the effectiveness of the system of internal control, accounting practices, information systems and internal audit;
- Evaluation of the financial management and auditing policies of the CEB;
- Review of the financial reporting process to ensure CEB's compliance with the applicable laws and regulations;
- Examination and review of the annual financial statements;
- Examination of accounting and auditing concerns identified by internal and external audit;
- Ensuring integration of internal control and risk management;
- Making recommendations to the Board on risk policies;
- Examination of risk reports on the cash flow position of the CEB, market changes, the current situation in terms of interest rate, exchange rate and commodity prices, and forecasts; and
- Providing advice on financing arrangement and structure.

In 2011, the Audit and Risk committee met on three occasions.

<b>AUDIT AND RISK COMMITTEE MEETINGS 2011</b>	<b>No. of Meetings Attended</b>	<b>Overall Percentage (%)</b>
K. Seebundhun (Chairman)	3	100
S. Bheechook	3	100
D. Ramduny	3	100
F.A. Acharauz	1	33

### **Staff Committee**

The Staff Committee consists of four Non-Executive Directors and the General Manager. Its specific terms of reference include direct authority for, or consideration of and recommendations to the Board on matters relating to, inter-alia:

- Human resource strategies;
- Selection and appointment;
- Remuneration and performance management;
- Training and development;
- Industrial relations; and
- Succession planning.

Twelve meetings of the Staff Committee were held during the review period.

<b>STAFF COMMITTEE MEETINGS 2011</b>	<b>No. of Meetings Attended</b>	<b>Overall Percentage (%)</b>
F. Acharauz (Chairman)	12	100
Dr. P. M. K. Soonarane	10	83
B. Narayen	12	100
S. Bheechook	12	100
S.K. Thanoo	11	92

### **Other Committees**

Six Enlarged Committee meetings were also held during 2011 to address specific issues regarding the Pension Scheme.

### Major Decisions of the Board during 2011

- Approval for the award of the contract for Fort Victoria Redevelopment Phase 2, regarding the installation of four additional engines of 15 MW each, to Burmeister and Wain Scandinavian Contractor A/S (BWSC);
- Approval for the implementation of an organisation-wide Performance Management System (e-PMS) to evaluate employee performance;
- Approval for the signature of the Contract Agreement between the CEB and Exmont Ltd for the supply, installation and commissioning of a 350 kW Hydro Turbine at Midlands Dam;
- Approval to award a contract to BHEL-GE Gas Turbine Services Limited (BGGTS) for the upgrading of Nicolay Unit No. 1 Turbine Controller from Speedtronic Mark IV to Speedtronic Mark VIe;
- Approval for the signature of Energy Supply and Purchase Agreement (ESPA) between the CEB and Sotravic Ltd, in relation to the Landfill Gas to Energy Project at Mare Chicose;
- Approval to register Small Scale Distributed Generators which are connected to the Electrical Grid without any permit, subject to their complying to the Grid Code and without the application of Feed-in-Tariffs;
- Approval for the grant of a total capacity of 2 MW to Public, Educational, Religious, and Charitable (PERC) institutions in relation to the Small Scale Distributed Generation (SSDG) Project ;
- Approval for the upgrading of the Domain Controller and related Applications/Services;
- Extension of the Small Scale Distributed Generation (SSDG) Project for an additional capacity of 1 MW, and to allocate 100 kW to Rodrigues;
- Approval to award the contract for “SAP Upgrade, Servers, Support and Maintenance” to State Informatics Ltd / Enteg Infotech Pvt Ltd.
- Approval to proceed with the Infrastructure Leasing Partnership with Bharat Telecom Ltd in regard to the Fibre to the Home Project.

### Other Governance Structures

#### *Tender Committee*

The Tender Committee assists the Board in making procurement decisions, approves procurement policies, and ensures that CEB's procurement system and processes

are fair, transparent, competitive and cost effective. It examines evaluation reports in respect of tenders and makes recommendations for their approval to the General Manager or the Finance Committee, as appropriate.

#### *Internal Audit*

The CEB's internal audit function provides the Audit Committee and Management with assurances that the internal controls are appropriate and effective. This is achieved by means of an independent and objective appraisal and evaluation of internal controls and other governance processes.

The Audit Department is fully supported by the Board and the Audit Committee, and has unrestricted access to all organisational activities, records, property and staff.

#### *Technical Audit*

The Technical Audit Unit provides assurance to the Executive Management, through the audit function, on the technical, environmental, quality and safety performance of the CEB. The Unit is responsible for technical audits as well as for quality assurance and incident investigation.



# Management

Management is accountable and subject to the control of the Board and operates within the policy framework laid down by the latter. The profiles of members of the CEB Top Management team are given hereafter.



**1) Shiam Krisht THANNOO**

*Officer-in-Charge (up to September)*

*General Manager (as from October), Age: 45*

**Qualifications:** B. Tech (Hons), MBA, CRPE

**Experience:** Joined CEB in 1985 as Clerical Assistant; Appointed Engineer in 1996; Appointed Non-Utility Generation Planner in 2002; Appointed Secretary/Non-Utility Generation Manager in 2007; Nominated Officer-in-Charge in November 2010; Appointed General Manager in October 2011

**2) Gérard Hébrard, O.B.E.**

*Deputy General Manager, Age: 62*

**Qualifications:** Ing. EEMI, AMI. MechE., C. Eng., MIEE.

**Experience:** Joined CEB in 1966 as Apprentice; Appointed Asst Head of Department (Production) in 1984; Appointed Production Manager in 1989; Appointed Deputy General Manager in 2006

**3) Hassen Fakim, O.S.K.**

*Production Manager / Ag. Secretary, Age: 58*

**Qualifications:** B.Sc (Hons.); DOSH

**Experience:** Joined CEB as Cadet Engineer in 1977; Appointed Principal Engineer in 1993; Appointed Production Manager in 2006

**4) Prabhakar Sembhoo**

*Transmission & Distribution Manager, Age: 59*

**Qualifications:** B.E. (Elec.), MIEEE

**Experience:** Joined CEB in 1976 as Cadet Engineer; Appointed Principal Engineer in 1998; Appointed Area Manager in 2002, Appointed Transmission & Distribution Manager in 2004

**5) Jadoonundun Charitar**

*Chief Internal Auditor, Age: 62*

**Qualifications:** FCCA., MBA

**Experience:** Joined CEB in 1969 as Meter Reader; 1984: Chief Internal Auditor/Financial Controller, 1985: Financial Manager, 2003 to-date: Chief Internal Auditor

**6) Darma Veragoo**

*Chief Financial Officer (up to February), Age: 59*

**Qualifications:** FCCA

**Experience:** Joined CEB in 1986, 1986-1990: Chief Internal Auditor/ Financial Controller, 1990-1992- Human Resources Manager, 1992-2003- Chief Internal Auditor/Financial Controller, 2003-2008- Management Accountant Appointed Chief Financial Officer in March 2008



**7) Ibrahim Nobeebux**

Human Resources Manager, Age: 50

Qualifications: DPM, DOSH, BSc (Hons) Mgt, MBA

Experience: Personnel Administration Manager Besix SA 1993-2000; Human Resources Manager Hilton Mauritius Resort 2000-2002; Human Resources Manager Mauritiuis Stationery Manufacturers 2003; Human Resources Manager Paradise Cove Hotel 2003-2004; Human Resources Executive CEB 2005-2007; Appointed Human Resources Manager CEB in 2007

**8) Jayram Luximon**

Customer Services Manager, Age: 42

Qualifications: DEUG-Sciences Economiques; Diplôme des Hautes Etudes Commerciales et Financières (ESC Pau, France)

Experience: Shop Manager Winners (IBL) 1994-1998; Marketing Manager, Consumer Health, IBL Pharmaceuticals 1998-2005; Appointed Customer Services Manager CEB in 2006

**9) Shamshir Mukoon**

Corporate Planning & Research Manager, Age: 49

Qualifications: B. Tech (Hons) Mech Eng, MBA, CRPE, MIEM

Experience: Joined CEB in 1989 as Cadet Engineer, 1992-2002: Engineer, 2002-2007: Senior Engineer, 2007-2008- Principal Engineer (Generation Planning, New Projects & Power Station Operations), Appointed Corporate Planning & Research Manager in 2008

**10) Shyam Abacousnac**

Information Technology / MIS Manager, Age: 42

Qualifications: BSc Computer Science; MSc Software Engineering

Experience: Research Officer, National Computer Board 1997-2001;

Systems-Analyst, Development Bank of Mauritius Ltd 2001-2002; IT Manager, State Trading Corporation 2002-2006; IT Manager, Wastewater Management Authority 2006-2009; Joined CEB as IT/MIS Manager in March 2009

**11) Vishwanath Jhummon**

Corporate Administration Manager, Age: 59

Qualifications: Bachelor in Technology in Electrical Engineering; PG Diploma in Electric Power Distribution Systems; MBA

Experience: Joined CEB in 1976 as Cadet Engineer; Appointed Senior Engineer in 1983; Appointed Principal Engineer in 2002; Appointed Corporate Administration Manager in 2009

**12) Pharad Kurreemun**

Acting Chief Financial Officer (as from March), Age: 50

Qualifications: ACMA; CGMA

Experience: Joined CEB in 1985 as Temporary Clerical Assistant; Appointed Meter Reader in 1986; Appointed Auditor in 1993; Appointed Chief Salaries and Wages Officer in 2002; Appointed Administrative/Finance Officer in 2003; Appointed Accountant (Budget & Reporting) in 2005; Appointed Senior Accountant in 2006; Acting as Chief Financial Officer since March 2011

**13) Christabel Ahon**

Acting Non-Utility Generation Manager, Age: 40

Qualifications: DEUG-Sciences Economiques; MSG (ESUG Toulouse, France); Stockbrokers' examination (SEC, MES and The Securities Institute Education, Australia)

Experience: 1996-2002: Stockbroker & Financial Analyst, Compagnie des Agents de Change Ltée; 1998-2002: Financial/Research Analyst, Cirne Group; Joined CEB in Feb 2003 as Business Planning Analyst; Acting as Non-Utility Generation Manager since Nov 2010

## COMMUNICATION WITH STAKEHOLDERS

Open lines of communication are maintained to ensure transparency and optimal disclosure. Besides official press communiqués, regular meetings are held with the press to ensure that stakeholders and the public at large are kept informed on matters affecting the utility.

## CORPORATE SOCIAL RESPONSIBILITY

The CEB recognises the need to be socially involved and supportive of the wider needs of the community, more specifically those of less fortunate citizens.

During the review period, a number of assistance schemes were maintained to promote access to electricity to low-income customers and support to those with financial difficulties. They include:

### Low Voltage Network Extension Government Assistance Scheme

This scheme provides assistance to needy households for the supply of electricity to their first and new residence. It is applicable to households whose income band is less than Rs 17,500.

A total of 106 projects were implemented during the year under review.

### Displacement of Electric Service Lines/Poles Government Assistance Scheme

This scheme provides assistance to needy households who are building their first and new residence but who have not received clearance from the CEB due to the fact that an electric service line or pole is in close proximity to their construction. It is applicable to households whose income band is less than Rs 17,500.

Three projects were approved and completed in 2011.

### Social Tariff

Special consideration is given to the social dimension of electricity consumption by households. In this respect, the CEB has in place a social tariff (Tariff 110A) which is meant for needy customers. Under this scheme, customers whose monthly consumption does not exceed 75 kWh benefit from concessionary electricity rates.

As at December 2011, some 10,770 households were classified under the "social tariff" category.

## STATEMENT OF DIRECTORS RESPONSIBILITIES

The responsibility to prepare financial statements, in accordance with applicable accounting standards, rests upon the Directors and, accordingly, the financial statements for the year ending 31 December 2011 have been prepared in compliance with the International Public Sector Accounting Standards (IPSAS). Appropriate accounting policies have been selected and applied consistently and reasonable and prudent judgements have been made as and when required. Adequate accounting records have been kept and an effective internal control system has been maintained to ensure that all transactions have effectively occurred and

have been captured in a reliable information system.

To that effect, the Directors have recruited capable and trained employees to ensure adequate segregation of duties so that no process is carried out from the start to its end by one and same person. Furthermore, approval of documents rests upon personnel with appropriate level of authority and integrity. Assets have also been safeguarded from loss, misuse, and fraud. Finally, the Internal Audit Department enhances the internal control system, detecting errors and acting as a deterrent against fraud.

## INTERNAL CONTROL

Management is charged with the responsibility of establishing an effective internal control environment, including adequate internal financial controls. In addition, operational control systems are developed and maintained on an on-going basis to provide reasonable assurance to the Board regarding:

- The integrity and reliability of the financial statements;
- The safeguarding of the organisation's assets;
- The economic and efficient use of resources;
- The verification of the accomplishment of established goals and objectives;
- The detection and minimisation of fraud, potential liability, loss and material misstatement; and
- Compliance with applicable legislation and regulations.

These controls are contained in organisational policies and procedures, structures and approval frameworks, and they provide direction, establish accountability and ensure adequate segregation of duties. They each contain self-monitoring mechanisms.

The Board ensures that an effective internal control framework has been established. The Internal Audit function monitors the operation of the internal control systems and reports findings and recommendations for improvement to Management and the Audit Committee.

The Audit Committee monitors and evaluates the duties and responsibilities of Management and of Internal and External Audit to ensure that all major issues reported have been satisfactorily resolved. Finally, the Audit Committee reports all important matters to the Board.

Over the years, the CEB has regularly upgraded its organisational structure and accounting system so as to produce timely financial statements that present a true and fair view of its state of affairs. An effective internal control system has been developed in all spheres of activities and processes and all transactions are accounted for and recorded in an integrated accounting system.

## PROCESSES

The day-to-day operational activities are performed throughout different organisational processes, which are subject to rules and regulations. The CEB has introduced these rules and regulations over a long period of time in an objective manner to detect and prevent malpractices and

corruption. Some of the processes are examined below:

### Accounts Payable

Management is committed to ascertain that all purchases or services rendered to the CEB are settled in accordance with contractual terms and are adequately recorded. It also ensures that operations in the Accounts Payable Section are as transparent as possible and that necessary internal control is inherent in the system to prevent fraud and corruption. The control framework regarding Accounts Payable is summarised hereunder.

Framework	Details
Risk Management	<ul style="list-style-type: none"> <li>✓ Invoices can be processed only if goods or services have been received and are in accordance with contractual terms as evidenced by authorized persons</li> <li>✓ Physical access to Accounts Payable Section restricted to authorized personnel</li> <li>✓ Safe custody of bank cheques</li> <li>✓ All cheques bear 'A/C PAYEE ONLY'</li> <li>✓ All payments supported by original documents</li> <li>✓ All documents are stamped 'PAID' and filed after payments</li> </ul>
Transparency	<ul style="list-style-type: none"> <li>✓ General rules in connection with payment procedures are laid down in General Staff Instruction Circulars</li> <li>✓ Payment terms are clearly specified on contracts / order forms</li> <li>✓ Audit trail of all payments are kept</li> </ul>
Accountability	<ul style="list-style-type: none"> <li>✓ All payments are approved by duly authorized persons</li> <li>✓ Access to capture invoices and process payments are restricted</li> <li>✓ Cheques and bank transfers are signed by Top Management only</li> <li>✓ All payments are accounted under appropriate General Ledger Code</li> </ul>
Integrity Management	<ul style="list-style-type: none"> <li>✓ Information system records all users who accede any Module on SAP</li> <li>✓ Payments once processed cannot be captured in the system again</li> <li>✓ Segregation of duties in the Accounts Payable Section</li> </ul>

### Supply Chain Management (SCM)

The SCM function at the CEB has a strategic approach to procurement and the focus is on attaining business-related outcomes, while ensuring that basic principles of procurement best practices such as Economy, Efficiency, Fairness, Reliability, Transparency, Accountability and Ethical Standards are maintained. To this end, four core functions, namely Procurement, Contract Management, Transport and Warehousing, and Supplier Management have been established. The internal processes and procedures, which were already well developed, have been aligned with the provisions of the Public Procurement Act.

The functions highlighted above have been interrelated to ensure a reliable flow of goods and services and information along the value chain, as well as within the whole supply chain of the CEB. However, appropriate separation of responsibilities has been established in order to maintain confidentiality and transparency in the system.

#### Bidding Exercise

The bidding exercise at the CEB is established in a structured way so as to ensure compliance with existing procurement regulations and maintain confidentiality and transparency in the process. A systematic approach is adopted as soon as a procurement need arises until bids are received and opened in public. Interface between bidders and the CEB is made through the Chairman of the Tender Committee who has the sole prerogative to communicate and instruct

bidders on matters pertaining to the bidding process.

#### Evaluation of Bids and Approval of Procurement Contracts

As soon as bids are received and registered by the Tender Committee, all bids are secured until the setting up of an Evaluation Committee composed of at least three members. The Evaluation Committee evaluates the bids according to pre-determined evaluation criteria and in all independence. An appropriate internal control system has been set up to ensure that all procurements are supported by approval at relevant levels so that no commitment is taken by any officer on behalf of the CEB until the approval has been obtained.

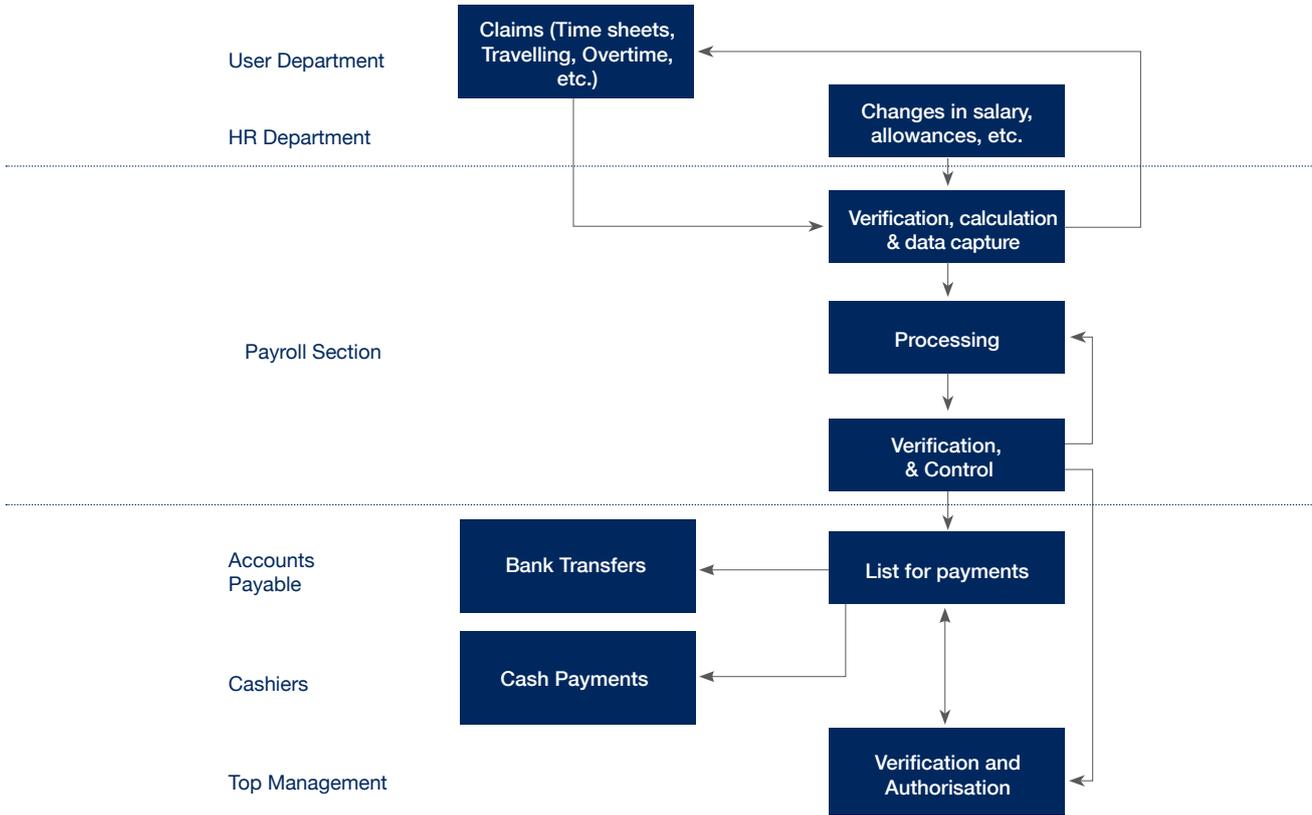
#### Meter Reading, Billing, Cash Collection and Debtors Management

The principle of separation of functions and responsibilities is also maintained with regard to meter reading, billing, revenue management, and revenue protection. This ensures that officers who issue bills do not collect payments or investigate into suspected cases of illegal abstraction of electricity or under-billing.

**Salaries and Wages**

There is a well-defined payroll process, with adequate internal controls, in accordance with the principle of check and balances. The process flow is shown below:

**SALARIES AND WAGES PROCESS FLOW**



**PEOPLE**

The Board acknowledges that organisational objectives can only be achieved through its employees. Accordingly, a lot of emphasis is placed upon the human capital by providing a healthy and safe working environment and adopting an equitable and fair approach towards employees' remuneration and benefits.

**Leaves**

Employees are encouraged to proceed on vacation leave, whether locally or abroad. The general rule is that, every employee should enjoy at least 50% of his/her yearly vacation leave entitlement, which otherwise, would be forfeited. Not only does this scheme ensure that employees get a deserved rest during the year, with increased efficiency and output thereafter, but it also helps the organisation in preventing and detecting corrupt practices, if any, during the employees' absence.

**Conflict of Interests**

The internal rules provide that, where an employee, in the

course of the discharge of his duties, suspects or should reasonably suspect that he may find himself in a conflict of interest, he shall disclose his suspicion to his immediate superior who shall note the declaration in writing and issue such direction as he feels proper.

Such disclosures are made by members of panels set up to evaluate tenders and by members of the Tender Committee.

**Code of Ethics/Conduct**

The last Collective Agreement between the Board and the Unions on salaries and conditions of service, which became effective as from 1 July 2009, contains a revised Code of Conduct which should be adhered to by the personnel. The Code of Conduct was reviewed in consultation with ICAC.

By setting out the minimum standards of ethical conduct expected from employees, the Code of Conduct aims at ensuring that their conduct and behaviour are professional and lawful at all times. The dissemination of the Code of Conduct has been done through circulars and e-mails and

is also readily available on the organisation's intranet. New recruits are made aware of its content during their induction programme.

Employees at different levels of the organisation hierarchy are required to abide by the Code of Conduct and report, to their respective Head of Department or immediate superior, difficulties encountered in its interpretation and understanding. Non-compliance can end up with sanctions depending on the seriousness of the breach; accordingly disciplinary proceedings may be initiated.

### **Confidentiality and Secrecy**

The affairs of the CEB are conducted in a transparent manner, with the timely preparation of financial statements and annual report. In addition, there are certain rules that employees have to adopt in relation to disclosure of information regarding the CEB.

### **Disciplinary Procedures**

There is a clear and defined policy at the CEB regarding disciplinary procedures which act as a deterrent to malpractices and wrongful conduct.

### **TECHNOLOGY**

The CEB has adopted an IT Governance Framework, referred to as COBIT (Control Objectives for Information and Related Technology), to implement, operate and maintain its IT infrastructure and applications.

COBIT provides the CEB with a set of clearly defined processes that integrates good practices grouped into four domains, namely:

- Planning and organising;
- Acquiring and implementing;
- Delivering and supporting; and
- Monitoring of IT performance.

It ensures that IT resources are properly and optimally used to provide the CEB with the information that it needs to achieve its business objectives, while minimizing the risks of fraud, corruption and misuse of resources.

While providing its employees with up-to-date IT facilities and tools to enable them to operate more efficiently and effectively, the CEB has adopted a number of policies and implemented measures to ensure an ethical and lawful use of the IT infrastructure.

However, with the rapidly changing nature of electronic media and services, no policy would be able to cover

every possible situation. Therefore, the policies adopted at the CEB express the general principles and define the boundaries for the "acceptable use" of the information technology infrastructure and applications of the CEB.

### **Voice Recording**

In very sensitive and high risk areas, dealings between CEB officers and Financial Institutions are recorded with a view to mitigating any risk of collusion.

### **Electronic Meter-Reading Equipment**

The CEB has witnessed a significant increase in illegal abstraction of electricity involving substantial loss of revenue. Accordingly, it has invested in the latest technology as regards metering equipment, which have an inbuilt system to detect and reveal any tampering thereof. More importantly, all movement of meters, both used and unused, are strictly controlled to minimise any risk of misuse.

### **OUTLOOK**

As the business world continues to recover from the recent recession and attempts to regain its momentum, we are still learning about how lapses in corporate governance contributed to the failures and losses of many global companies. It is important to learn from these experiences and to realise that firms need to take pre-emptive actions and revisit their existing governance practices, so as to identify where any weaknesses exist and what improvements are necessary.

In the face of these challenges, the CEB is conscious of the need to further improve its governance processes and principles so that they are in line with best practices and responsive to the prevailing business environment. The utility is equally aware of the need to re-examine and reinforce its risk management structures. These are being addressed in the short to medium term perspective in the context of various reform programmes.

# Power System Strategic Plan 2012-2014



## INTEGRATED ELECTRICITY PLAN 2013-2022

Given that Mauritius is not endowed with an abundant supply of natural energy resources, the CEB has a mission to rigorously and carefully plan for the reliable and sustainable supply of electricity that is also affordable.

The CEB produced its first national Integrated Electricity Plan (IEP), covering the period 2003-2012, in 2002 so as to guide Mauritius towards a more stable electricity future. The cornerstones of the IEP (2003-2012) were as follows:

- To optimise the use of the existing power system;
- To keep electricity prices as low as possible through least-cost capacity expansion;
- To encourage customers to participate in energy efficiency and conservation; and
- To provide for continued private sector opportunities in the electricity sector.

Taking notice of the fact that the IEP (2003-2012) will soon be dated, the CEB has set as priority, for 2012, the preparation and release of the second IEP for the planning period 2013-2022. The Plan will include an econometric analysis of the local electricity market. The following are the major projects, within the CEB Strategic Plan, which will be dealt with in the preparation of the IEP 2013-2022.

## CONSULTANCY SERVICES FOR REDEVELOPMENT OF ST. LOUIS POWER STATION

Consultant Mott MacDonald has already had a kick-off meeting with CEB representatives in relation to the feasibility study for the Redevelopment of St Louis Power Station.

This project forms part of the contingency plan of the CEB. It has been activated in response to the backlashes in the CT Power 110 MW Coal Power Plant Project.

It is to be noted that the Saint Louis Power Station bears the required space to augment its generation capacity, after the retirement of the old Pielstick engines. Another important consideration is the potential impact on the environment. The feasibility study for the Redevelopment of the St Louis Power Station is expected to be completed in 2012.

## DEVELOPMENT OF A NEW 100 MW COAL POWER PLANT

In accordance with the policy guidance of the Government, the CEB will launch, in 2012, tender invitations for the setting up of a 100 MW electricity production plant equipped with the latest coal technology.

## SETTING UP OF A 100 MW LIQUEFIED NATURAL GAS (LNG) POWER PLANT

With a view to further promoting the use of clean electricity generation technologies, the CEB will launch a Request for Proposal (RFP) to conduct a comprehensive feasibility study, which is expected to lay the foundation for the setting up of the 100 MW LNG Power Plant on a Built-Operate-Own (BOO) scheme.

## SETTING UP OF A GRID-CONNECTED 10 MW PHOTOVOLTAIC FARM

In line with the national objective of encouraging the penetration of renewable energy sources and reducing our dependency on fossil fuels, the CEB will call for an open tender for the setting-up of a grid-connected solar photovoltaic (PV) energy project, of up to a capacity of 10 MW, by Private Developers.



#### IDENTIFICATION OF POTENTIAL SITES FOR MINI/MICRO HYDRO POWER PLANTS

A study will be conducted so as to identify potential sites for the construction of new mini/micro Hydropower Plants. The objective of the study is in line with Government's Policy to optimize the use of renewable energy sources in the context of the *Maurice Ile Durable* (MID) scheme.

#### SETTING UP OF A 20-30 MW WIND FARM AT CUREPIPE POINT

Further to the Letter of Interest sent to the PadGreen/Suzlon Consortium, in connection with the Curepipe Point 20-30MW Wind Farm Project, the CEB, with the support of external consultants, will finalise all issues relating to the offer of the promoters in 2012. The signature of the Energy Supply and Purchase Agreement (ESPA) is also set for 2012, with the start of operations planned for 2014.

#### ELECTRIC NETWORK PLANNING

The CEB will continue to perform detailed analysis of the national transmission network. This will include identifying and analysing potential threats on the Grid, which may endanger the reliability of the power system and affect the quality of supply.

The CEB is also planning to develop a digital database for the medium-voltage distribution network, which is a key component of the Geographical Information System (GIS) Project. A fully operational GIS will enable simulation of the distribution network in order to enhance in-house planning activities.

#### FEASIBILITY STUDY TO IMPLEMENT A SMART GRID

In order to remain in line with the overall mission "to provide affordable, safe, and reliable electricity supply to the nation", the CEB will, in 2012, perform, with the assistance of an experienced consultancy firm, a feasibility study on the implementation of a Smart Grid for Mauritius.

#### ENVIRONMENTAL MANAGEMENT

The national legislation, with regard to the mitigation of environmental impact, has been reinforced to bring in the concept of sustainability and environment stewardship. In this respect, the CEB will continue to oversee the implementation of necessary measures to ensure that all its power generation activities are operating within the limits of the environmental standards and guidelines.

With a view to addressing the pressing needs of the environmental regulations on a long term basis, the CEB will consider implementing the Environmental Management System for its power generation plants, in line with the international standards of ISO 14001.

# General Manager's Review



**“The CEB, as a state-owned enterprise, is aware of the strategic role it has to play for implementing the country’s energy policy and vision “**

**Shiam Krisht THANNOO**  
*General Manager*

## Overview

It is a privilege for me to present the Annual Report and Accounts of the Central Electricity Board (CEB) for the year ended 31 December 2011.

For the CEB, 2011 represented a year of major challenges, but also of significant achievements. The operational performance of the utility was very good and we accomplished a noteworthy financial result, thanks to a number of favourable macroeconomic factors affecting our business, but equally as a result of the various reform measures implemented over the past few years.

The CEB, certainly, plays a key role in the socio-economic development of the country. While the energy sector is experiencing sustained growth, we are grappling with fundamental issues of security, reliability, affordability, and environmental impacts. The strategies that are being implemented by the CEB do take proper account of environmental externalities, but recognise the value of security, reliability and affordability, while ensuring the financial soundness of the utility.

## Financial Performance

The financial health of the CEB has always been of paramount importance. We are well aware of how important it is for a utility, which offers a critical service to the nation, to be financially sound and capable of supporting itself.

I wish to report that the CEB ended the year 2011 with a surplus of Rs 936 M, compared to a surplus of Rs 873 M for the year 2010. As regards our liquidity position, there was a marked improvement, with a positive balance of some Rs 20 M, as

against an overdraft of around Rs 527 M at 31 December 2010.

We have, thus, been able to achieve profitability for the past three years after a long period of financial downturn. It is, however, worth noting that the main costs of the CEB are driven by external factors, namely fuel oil and coal prices, exchange and interest rates, and inflation, over which the utility has little control. As such, in the event of an unfavourable external environment, the profitability level can drop drastically.

## Meeting the Supply Challenge

Electricity is a necessary input to all economic activities and is, in particular, important for realising our national socioeconomic objectives. The CEB, as a state-owned enterprise, is aware of the strategic role it has to play for implementing the country’s energy policy and vision. And throughout its history, the CEB has proved to be a privileged partner of the Government towards meeting our developmental goals and providing the necessary support and confidence to investors, while paying due regard to the nation’s sustainability concerns.

The CEB has, thus, to continually plan for additional generating capacity to ascertain that there is no risk, whatsoever, of any power shortage in the near future. In this respect, much headway was made regarding Phase 2 of Fort Victoria Power Station Redevelopment, which comprises the installation of 4 additional units of 15 MW each. Construction works are well in progress, and the units are scheduled to be commissioned in July 2012. This will take the total new installed capacity at Fort Victoria to 90 MW, if we include the two units that were commissioned in 2010.

In Rodrigues, the installation of an additional unit of 2.5 MW at Pointe Monnier Power Station is under way and is expected to be in service in November 2012. We are confident that, with these investments in new generating capacity, the CEB will be able to safely cater for the projected growth in demand in the short term, both in Mauritius and in Rodrigues.

### **Transitioning to a Sustainable Energy Future**

While focussing on the supply side, another key concern during 2011 was the diversification of our energy sources to reduce our reliance on fossil fuels, in line with the Maurice Île Durable vision. To this end, the CEB embarked on a number of power generation projects to further increase our renewable energy usage. Following the commissioning of a hydro power plant at La Nicolière in 2010, another similar plant of 375 kW is being constructed at Midlands Dam. As regards wind energy, discussions are on-going with PadGreen/Suzlon and Aerowatt for the setting up of a 29.4 MW wind-farm at Curepipe Point and a 18 MW wind-farm at Plaine des Roches respectively. In Rodrigues, four units of 275 kW each are already operational at Grenade, and this has taken the share of wind energy contribution in the total electricity generation to some 9%, which is a noteworthy achievement.

Another major progress in the renewable energy field during 2011 was the implementation of the Small Scale Distributed Generation (SSDG) project. Through this initiative, the first of its kind in Mauritius, necessary incentives have been given to Small Independent Power Producers (SIPPs) to produce, consume and sell any surplus electricity to the national grid, by exploring primarily renewable potential such as solar photovoltaic cells, wind turbines and micro hydro power. The objective is to increase the renewable energy share in the generation portfolio while democratising the national electrical grid. The response from the public was beyond our expectations and we had, unfortunately, not been able to take on board the numerous applications received from potential producers, given that the maximum allowable capacity was initially set to 2 MW. To cope with the demand, another 1 MW will be opened to the public in 2012, including 100 kW in Rodrigues. Besides the SSDG scheme, a new scheme will be launched for 2 MW and will be reserved exclusively for Public, Educational, Charitable and Religious (PECR) institutions.

In a similar vein, a lot of investment is being made in the promotion of an energy efficient environment, which is now an integral component of the CEB's energy policy. Energy efficiency as a resource is greatly underused, but has the potential to contribute to every aspect of sustainability. However, for many customers whose electricity use is

moderate, energy efficiency may be too far down the priority list. We need to instil greater public awareness and stronger incentives are needed to increase the uptake of energy efficiency.

Another area of interest for the CEB, in the coming years, will be to consider the implementation of a Smart Grid so as to further enhance our customer service delivery and improve the interaction with our customer base. In this respect, a full-fledged feasibility study will be required and, depending on the findings, consideration may be given to the implementation of the project on a pilot basis, prior to embarking on a wider scale.

### **Improving the Quality and Reliability of Supply**

The CEB provided high-quality supply throughout the year, with the exception of the general breakdown of 13 December 2011, when the whole island was deprived of electrical supply. The maximum power demand for the year reached 412.49 MW on 20 December 2011, representing an increase of 8 MW on the previous year. As for the total energy generation, it reached 2,433 GWh, which represents an increase of 2.1% over 2010.

Various major projects were initiated or implemented during 2011 to improve the quality and reliability of supply. These included the construction of 66 kV lines in different parts of the island, as well as the refurbishment of existing 66 kV lines. In addition, construction works at a number of new major 66 kV/22 kV substations were initiated or progressed satisfactorily during the period under review, namely, at Case Noyale, Jinfei, Anahita, La Tour Koenig, and Fort Victoria.

### **Enhancing Customer Service Delivery**

While implementing measures to meet our obligations as the country's sole electricity provider, the focus has also been on the enhancement of customer service delivery. A two-pronged approach was followed, comprising the refurbishment of our customer service centres island-wide and the improvement in processing time and response time to customers. Building on the initiatives undertaken over the past few years, several projects were implemented to further improve our relationships with our growing customer base, which stood at some 417,215 in 2011. Many of our existing business processes, such as revenue management, revenue protection, and customer service interactions, were reviewed and additional staff was recruited. The area that would be the subject of greater focus in the coming years will be the training of our front line staff with a view to positioning the CEB as a customer-centric business and attaining excellence in customer service delivery.

### A Commitment to our People

Our human resources are, indeed, our greatest asset and I would like to make special mention of their valuable contribution for achieving our overall mission. As we move ahead, I am sure that our family of some 1,900 employees will rise to the numerous challenges and continue to make the CEB a key part of realising our nation's socio-economic dreams.

In this respect, every effort is being made to ensure that we recruit and retain the skills needed to ensure a quality and reliable electricity supply for generations to come. An integral part of retaining current staff and recruiting new people has consisted in establishing the CEB as an employer of choice and in building a sound employment value proposition. Another main activity during 2011 was the implementation of a new performance management system (ePMS), which is one of the cornerstones of CEB's reform strategy as it will enable Management to effectively monitor performance and address the developmental needs of employees, as well as reward outstanding performances.

### Looking Forward

The volatility of the prices of fossil fuels, the growing demand of energy, the sophistication of customer needs, national competitiveness issues, and environmental imperatives are formidable challenges that the CEB have to address.

As we look forward, we are confident on the prospects of building a sustainable energy future and powering the socio-economic development of the Republic of Mauritius. With the business transformations under way and with the concerted efforts of the board, management, employees, and all stakeholders, we are convinced that we are well equipped to meet all challenges head on.



**Shiam Krisht Thannoo**  
General Manager

## Key Facts 2011

Total assets (Rs M)	25,768
Net profit (Rs M)	936
Net cash from operating activities (Rs M)	1,888
Capital expenditure (Rs M)	4,739
Employees (number)	1,897
Customers (number)	417,215
Electricity sales (MWh)	2,231,163
Nominal capacity (MW) (Including IPPs)	717
Effective Capacity (MW) (Including IPPs)	621
Power lines (all voltages) (km)	9,233

*Figures for Mauritius and Rodrigues*



# REVIEW OF OPERATIONS







The bulk of the energy production for Mauritius comes from fossil fuels, namely fuel oil and coal. The CEB uses heavy fuel oil, for its base load plants and kerosene for its gas turbines. The plants of Independent Power Producers (IPPs) are operated mainly as co-generation facilities, with bagasse as fuel source during the crop season, and coal during the off-crop season. The CEB also produces energy from its hydro facilities, but in a relatively smaller proportion.

During 2011, the share of CEB's production totalled 45 % of the total energy generated, with the remaining 55% being supplied by Independent Power Producers (IPPs). The main project in the generation sector was the implementation of the second phase of the Fort Victoria Power Station Redevelopment, which comprises the installation of four additional engines of 15 MW each. Commissioning of the engines is planned for 2012 and this would take the total capacity of the new power plant at Fort Victoria to 90 MW and would enable the CEB to safely cater for the projected growth in demand in the coming years.

#### DEMAND PATTERN (ENERGY AND POWER)

The total energy generated was 2,433.16 GWh, representing an increase of 2.1 % over last year (2010). The CEB plants generated nearly 1,096.45 GWh, and purchases were 1,336.72 GWh. The maximum power demand was 412.49 MW and was recorded on 20 December 2011 at 14.00 hours. This figure represents an increase of 8 MW over the maximum demand of 2010.

Sector	Energy Source	Output (GWh)	%
Hydro	Water	56.48	2.32
Thermal	Fuel Oil & JET A1	1,039.96	42.74
Purchase (CPP)	Bagasse	20.62	0.85
Purchase (IPP)	Coal & Bagasse	1,312.96	53.96
Purchase (Landfill)	Landfill Gas	3.14	0.13
Purchase (SSDG)	Photovoltaic	0.0027	-
<b>Total</b>		<b>2,433.16</b>	<b>100</b>

#### OPERATION AND MAINTENANCE

Regular maintenance programmes were carried out, with the aim of sustaining and improving current and future reliability and availability of plants. Another objective was to meet the challenges set by obsolescence and the ageing of critical plant items.

#### Thermal

##### *Fort George Power Station*

The total energy generated was 651.5 GWh, representing 62.6 % of CEB's generation and 26.8 % of the total energy generated.

The table below shows the cumulative running hours of each unit at Fort George Power Station.

Unit	Running Hours	
	During 2011	Since Commissioning
G1	6,762	132,827
G2	6,699	132,927
G3	7,416	108,743
G4	7,382	89,202
G5	7,111	84,995

Scheduled maintenance was carried out on all units. Engineers from the Engine manufacturer (Mitsui) were on site in September, during the major overhaul of Unit 3, to inspect the crankshaft coupling bolts which were replaced in 2010.

The power turbine (TCS) for Unit 1 was rehabilitated in August under the supervision of ABB.

The cleaning and inspection of two HFO bulk storage tanks were carried out during the year. The interior walls and bottom plates were cleaned and inspected. Repair work was carried out where corrosion was found.

As advised by the equipment manufacturer, critical engine components, which had run for over 100,000 hours on Units 1, 2 and 3, were replaced.

#### **Fort Victoria Power Station**

The total energy production was 180.1 GWh, representing 7.4 % of the total energy generated.

The two Wartsila Units, which were commissioned in October 2010, performed satisfactorily and generated 159.3 GWh in 2011. The table below shows the cumulative running hours of each Unit.

Unit	Running Hours	
	During 2011	Since Commissioning
Wartsila G1	6,007	7,863
Wartsila G2	5,947	7,921

Scheduled maintenance was carried out on MAN Engine 11 at 95,000 running hours in December. The Unit operated for 2,664 hours during the year, and the total energy produced was 20.8 GWh. No major problem was encountered with this engine.

The alternator for MAN Unit 12 encountered a major problem in June, due to the damage to three rotor poles and stator winding. The contract for repair of the alternator was awarded to Burmeister & Wain Scandinavian Contractor

(BWSC) and repair works were scheduled for completion in December 2011. These were, however, halted during the installation process, due to damage caused to the stator during handling operations. The Contractor agreed to supply a new stator, with 9 months' delivery time.

Phase II of Fort Victoria Power Station redevelopment, which comprises the installation of four Units of 15 MW each, progressed significantly during the year under review. The Factory Acceptance Test of the 4<sup>th</sup> Unit, which was initially scheduled for 10 November 2011, was postponed until 22-23 December 2011, due to a problem noted on the engine block. In consequence, a new engine block had to be manufactured but, according to the contractor, BWSC, there would not be any alteration in the taking-over date.

Security has been enhanced at the plant, with the successful commissioning of a Camera Surveillance System to monitor the premises of the power station.

Due to the above extension works, two HFO Separators have been installed to cater for the increase in the consumption of heavy fuel oil.

#### **Saint Louis Power Station**

The total energy production was 196.7 GWh, equivalent to 8.1 % of the total energy generated. The Wartsila Units generated 141.3 GWh and the Pielstick engines generated 55.4 GWh.

Despite having reached the end of their serviceable life (>160,000 running hours), the Pielstick generating sets operated satisfactorily, except for Unit 6 which had three poles of its alternator damaged. The repair works are expected to be completed by June 2012.

The Wartsila Units, operating at semi-base load, performed satisfactorily, with an average of 4,000 running hours. Major overhauls were carried out on all three units, as scheduled.

The following works were completed during the year:

- Replacement of strategic spares for Wartsila Engines, and
- Upgrade of control and monitoring system for fuel separators.

#### **Nicolay Power Station**

The total production was nearly 11.58 GWh, representing 0.5 % of the total energy generated.

A major overhaul was carried out on Unit 1 from August to October, whereby turbine components were replaced. The gear-box was also overhauled as per the recommendation of General Electric (GE). An inspection of the unit's alternator was also carried out by Alstom.



The other major capital projects implemented during 2011 were:

- Refurbishment of Unit 2 inlet filter housing and inlet duct;
- Replacement of Unit 1 inlet silencer;
- Upgrading of CO<sub>2</sub> fire suppression system for Unit 3; and
- Upgrading of Mark VIe Turbine Controller to replace the existing one on Unit 1.

### Hydro

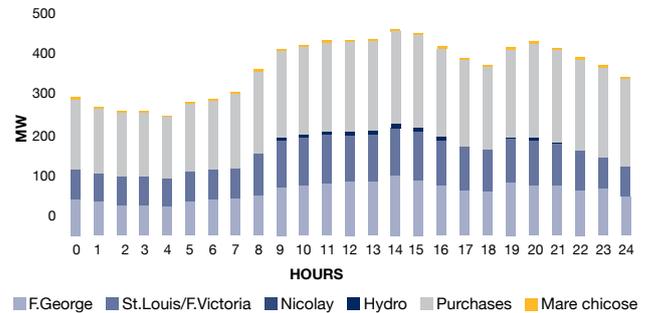
The total hydro production was only 56.5 GWh, representing 2.3 % of the total energy generated. This small output was due to low rainfall throughout the year 2011. The new 350 kW turbine generator at La Nicolière Feeder Canal, commissioned in September 2010, generated 0.68 GWh during the year.

The scheduled maintenance at all Hydro Power Stations island-wide was carried out successfully.

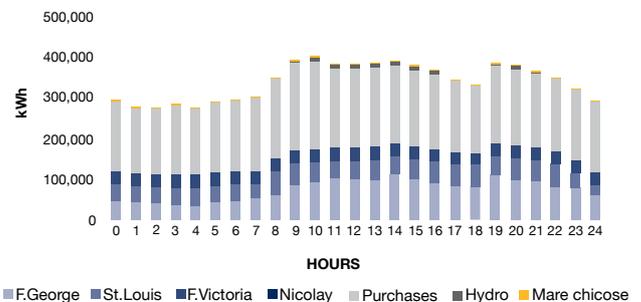
Major upgrading works were performed on the turbines, alternators, main inlet valves and governing systems of the two Units at Le Val Power Station, which has now completed 40 years of operation. Both Units were tested and commissioned under the supervision of engineers from Gordon Gilkes, UK, and are thereafter operating in automatic mode. In a similar vein, major upgrading works were carried out at La Ferme Power Station, which included the installation of a new alternator, a main inlet valve and a hydraulic control unit. The commissioning of the control unit, which was initially planned for November 2011, has been rescheduled due to the prevailing low inflow of water.

At Ferney Power Station, the refurbishment of the “penstock over velocity valve servomotor” and the hydraulic system

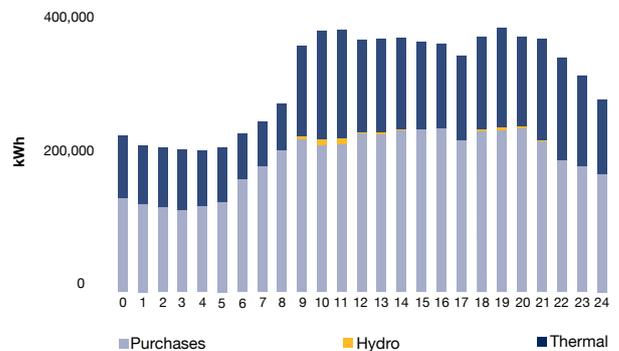
### Highest Maximum Demand 412.49 MW - 20.12.2011 at 14:00



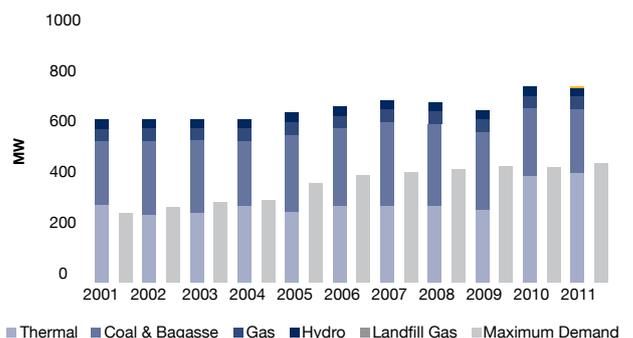
### Maximum Units Generated 8,078,216 kWh - 20.12.2011



### Highest Thermal Production 4,521,307 kWh - 06.05.2011



### Installed Capacity and Maximum Demand 2001-2011



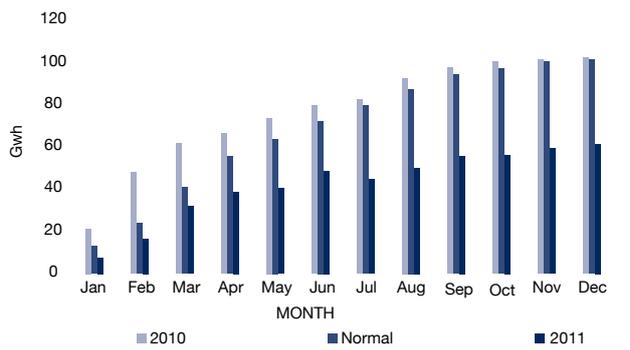


was completed during the year, with remote operation from the control room.

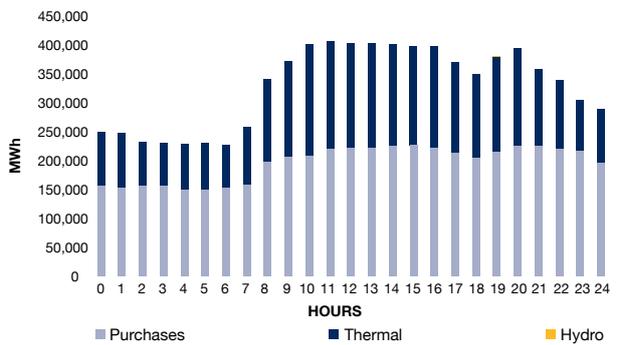
Other major projects were successfully completed during the review period, namely the manufacture and installation of an automatic trash rack cleaning mechanism at La Nicolière; and the rehabilitation of pipelines at Cascade Cécile Power Station.

The contract for the supply, installation and commissioning of a 350 kW Unit at Midlands Dam was signed with Exmont in December 2010 and civil works for this new power station were due to start in 2011. The project was, however, delayed due to a request from the Water Resources Unit to have the prior approval of an internationally recognised Dam Expert with regard to safety considerations. The civil works are now due to start in mid-January 2012.

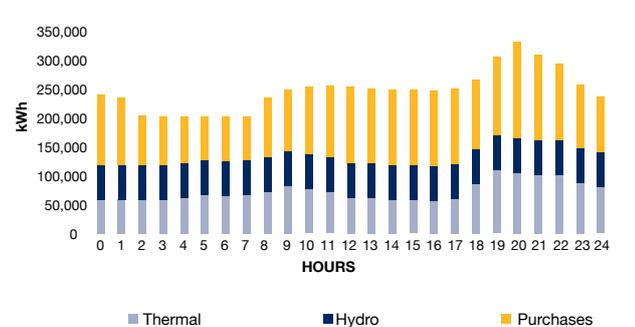
### Cummulative Hydro Production 2011



### Highest Purchases 4,571,054 kWh - 09.12.2011



### Highest Hydro Production 1,162,770 kWh - 13.02.2011





## ENERGY PURCHASES

The total energy purchases from Independent Power Producers (IPPs) and Continuous Power Producers (CPPs) for the year 2011 amounted to 1,336.71 GWh, corresponding to an increase of about 2% over the year 2010.

Overall, the IPPs and CPPs accounted for nearly 55% of the total energy sent out to the grid. The total amount of energy sent out on Bagasse and Coal were 352.59 GWh and 980.98 GWh respectively. The total energy sent out from the newly commissioned landfill gas plant was 3.14 GWh.

Two CPPs operated during the crop season 2011, namely Médine Sugar Estates Co. Ltd and Compagnie Usinière de Mon Loisir Ltée (CUDML). It is to be noted that Union Saint Aubin Sugar Factory ceased its operations as from the end of the crop season 2010, following the approval of its closure by the Ministry of Agro Industry and Food Security. The canes of Union Saint Aubin were, thereafter, diverted to Savannah Sugar Mill. Consequently, CTSav was able to increase its bagasse-fired energy to nearly 145 GWh, representing a growth of 26%, compared to the figure for 2010.

Consolidated Energy Limited (CEL) underwent major refurbishment on its boiler and its 3.8 MW alternator during the year 2011. As regards the operation of the other IPP plants, there were no major incidents during the year under review, and their availability was above 95 %.

The CEB signed an Energy Supply and Purchase Agreement (ESPA) with Sotravic Ltée on 18 July 2011 for the purchase of electrical energy generated from the landfill gas at Mare

Chicose. Two gas engines have been commissioned in the first instance, and the power plant has started commercial operation in November. Another gas engine would be commissioned in early 2013 to take up the total installed capacity to 3 MW.

At the start of the year 2011, the Ministry of Environment and Sustainable Development rejected the application of (Mauritius) CT Power Limited (MCTP) for an EIA licence regarding the setting up of a coal-fired power plant at Pointe-aux-Caves. MCTP subsequently lodged an appeal before the Environment Appeal Tribunal. The appeal has been heard, and the determination of the Environment Appeal Tribunal is awaited.

## PLANT CAPACITIES, UNITS GENERATED AND EXPORTED 2011

	Plant Capacity (MW)	Effective Capacity (MW)	Units Generated (kWh)	%Units Generated	Units Exported (kWh)
Hydro CEB					
Champagne	30.00	28.00	20,104,500	0.83	19,869,000
Ferney	10.00	10.00	21,164,400	0.87	21,074,194
Tamarind Falls	11.10	7.00	6,956,800	0.29	6,858,520
Le Val	4.00	4.00	1,151,020	0.05	1,085,475
Réduit	1.20	1.00	2,347,452	0.10	2,333,472
Cascade Cecile	1.00	1.00	1,920,078	0.08	1,904,065
Magenta	0.94	0.90	1,002,250	0.04	1,002,250
La Nicolière F.C	0.35	0.35	683,865	0.03	678,396
La Ferme	1.20	1.20	1,153,680	0.05	1,143,120
<b>Total Hydro</b>	<b>59.79</b>	<b>53.45</b>	<b>56,484,045</b>	<b>2.32</b>	<b>55,948,492</b>
Thermal CEB					
St. Louis	113.20	78.60	196,743,392	8.09	187,330,620
Fort Victoria	49.60	48.00	180,127,074	7.40	176,656,626
Nicolay	78.00	76.00	11,580,000	0.48	11,082,543
Fort George	138.00	137.00	651,513,100	26.77	623,885,300
<b>Total Thermal</b>	<b>378.80</b>	<b>339.60</b>	<b>1,039,963,566</b>	<b>42.74</b>	<b>998,955,089</b>
<b>Total CEB</b>	<b>438.59</b>	<b>393.05</b>	<b>1,096,447,611</b>	<b>45.06</b>	<b>1,054,903,581</b>
Thermal Purchases					
CTSav	87.00	74.00	461,148,031	18.95	461,148,031
Beau Champ *	24.50	22.00	90,613,399	3.72	90,613,399
Belle Vue**	70.00	62.00	371,315,122	15.26	371,315,122
F.U.E.L***	36.70	27.00	162,033,832	6.66	162,033,832
CTDS	34.50	30.00	227,848,685	9.36	227,848,685
Médine	10.00	6.00	5,265,620	0.22	5,265,620
Mon Loisir	14.00	4.50	15,350,362	0.63	15,350,362
Sotravic Ltd (Landfill Gas)	2.00	2.00	3,141,086	0.13	3,141,086
<b>Total Purchases Thermal</b>	<b>278.7</b>	<b>227.5</b>	<b>1,336,716,137</b>	<b>54.94</b>	<b>1,336,716,137</b>
<b>Grand Total</b>	<b>717.29</b>	<b>620.55</b>	<b>2,433,163,748</b>	<b>100.00</b>	<b>2,391,619,718</b>

Effective Capacity	Crop	Inter Crop
Beau Champ*	12	22
Belle Vue**	46	62
F.U.E.L***	20	27



Further initiatives were taken during the year under review to improve the quality and reliability of supply. New substations and networks were commissioned, and the existing network was upgraded.

The major activities and key operational statistics for 2011 are highlighted below.

## SYSTEM PERFORMANCE

With the exception of the power failures of 20 August and 15 November, and the general breakdown of 13 December whereby the whole island was deprived of electrical supply, the overall performance of the Transmission and Distribution network was very satisfactory during 2011.

On 13 December at 11:41, a major disturbance was observed on the Grid and was caused by a direct lightning strike on La Chaumière-St Louis double transmission circuit, in the vicinity of Coromandel. The protection system reacted by opening the 66 kV line St Louis–Chaumière 1 on both sides. The main protection on the 66 kV line St Louis–Chaumière 2 was activated and a tripping signal was sent to the breakers. However, the Chaumière 2 circuit breaker at St Louis Power station did not trip and the network continued to feed the fault. This resulted in the tripping of the generating units at Fort Victoria, St Louis, CTBV and Fort George power stations and in a collapse of the Grid. With the loss of approximately 70% of generation at that moment, a cascade effect was triggered, resulting in a general breakdown. Restoration was initiated by black-starting Champagne Unit 1 at 11:47. However, Champagne Unit 1 tripped immediately and, despite several attempts, could not be synchronised on the Grid.

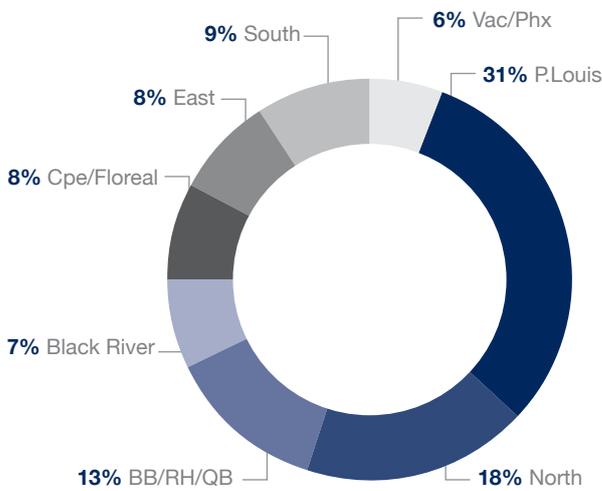
Champagne Unit 2 and Nicolay Unit 2 were black-started and synchronised at 11:55 and 12:14 respectively. However, the generators at Champagne and Nicolay tripped during system restoration. Black-start was performed once again at 12:34, and the 66 kV Grid was restored by energizing FUEL, Amaury and Wooton substations. Local supply was made available to the System Control by closing the Curepipe Henrietta 22 kV line. The 66 kV Grid was gradually re-energised and the CEB generators were gradually re-started and synchronised on the network. The 22 kV feeders were gradually closed, depending on the available generation and condition of the network. The restoration of supply, which was carried out solely with CEB generation units, was completed by 15:30.

## System Maximum Demand

The maximum power demand for the year 2011 reached 412.49 MW on Tuesday 20 December at 14.00. This represents an increase of 2.1% on the previous year. It is worth noting that the average increase in demand over the period 2001-2006 was 4.28%, whereas for the period 2006-2011 it stood at 2.36%.

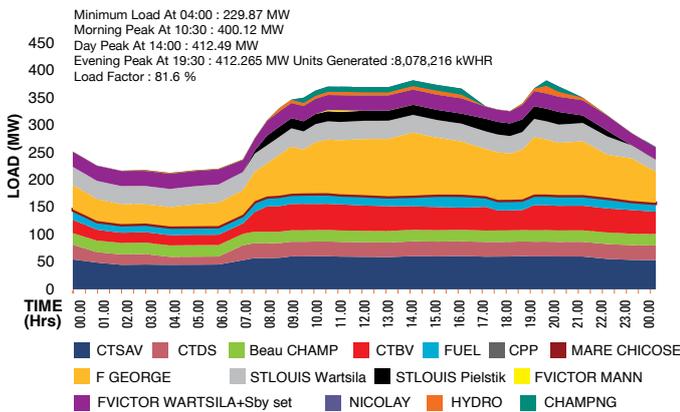
The approximate load distribution over the island on a regional basis at the time of the highest demand is shown hereunder.

### % Load Distribution per Region for the Maximum Demand



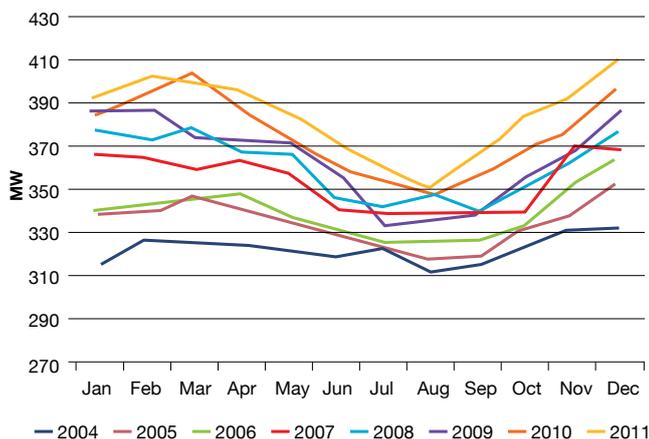
The production curve, corresponding to the day for the maximum demand as well as the contribution of various power stations in meeting the power and energy demands of the consumers on that day, is depicted below.

### Production Curve

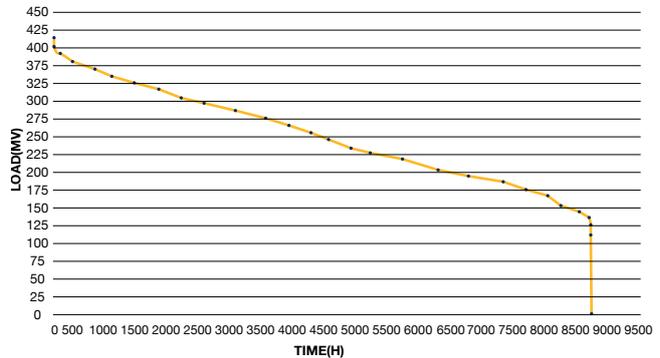


The monthly maximum demand curves for the last eight years and the load duration curve for the year are shown hereunder.

### Production Curve



### Load Duration Curve 2011



The total energy generation for the year was 2433 GWh, which represents an increase of only 2.4%, when compared to the value recorded for the previous year. It is worth noting that the average growth for the period 2006-2010 was around 3.2%.

The average load factor for the year was 72.07%, and this represents a percentage decrease of 1.2% over that of last year. The average load factor for 2011 represents a negligible percentage decrease of 0.5% over the average load factor of 72.38% computed for the five previous years. This shows that there has been an efficient use of the electrical plants in the country. This is the direct result of the energy saving campaign launched jointly by the Ministry of Energy and Public Utilities in conjunction with the CEB.

### TRANSFORMER CAPACITY, NETWORK GROWTH, AND SYSTEM LOSSES

#### Transformer Capacity

At the end of the year, the total installed transformer capacity in the major substations was 2,066 MVA, whilst for the distribution substations, the total installed capacity reached 1,490 MVA, thus making a total of 3,556 MVA installed on the system.

#### Growth of Network

In the course of the year, the overhead transmission and distribution network was extended by 152 km, thus bringing the total length of overhead lines to 8,177 km. This figure includes 4.7 km extension of the 66 kV overhead transmission lines.

The underground transmission and distribution network increased by 29 km during the year, to bring the total route length to 563 km, which includes 18 km of 66 kV underground cables.

The grid lengths, as at December 2011, were as follows:

Data	Transmission	Distribution MV	Distribution LV
Voltage levels (kV)	66	22/6.6	0.400/0.23
Length of overhead cables (km)	285	2,732	5,160
Length of underground cables (km)	18	362	183

### System Losses

The overall system losses for the year 2011 were contained to 7.95%, which was a very good performance. The figures for the last five years are reproduced for comparison.

Year	2007	2008	2009	2010	2011
Losses (%)	9.47	9.44	8.7	8.1	7.95

### TRANSMISSION

In order to cope with the load growth and to channel energy from both the CEB and the IPP generating plants, the following works were carried out on our transmission networks during the year 2011.

#### 66 kV Networks

##### **Refurbishment of 66 kV Transmission Line**

The existing 66 kV Wooton – Champagne, Henrietta – Saint Louis, and Dumas – Belle Vue – Amaury – FUEL lines, which are more than 30 years old, require proper refurbishment in order to extend their working life. In this respect, major reconstruction works were scheduled for the systematic replacement of corroded members in order to strengthen and increase the lifespan of the existing lines. It is worth noting that, following a “Corrosion Protection Treatment” training session, which was held in May 2010, the CEB has embarked on a corrosion protection scheme, in lieu of the systematic replacement of corroded tower members. The CEB personnel have also been given training in connection with intervention on double-circuit towers, with one circuit live.

Back in 2007, a tender for the reconstruction of thirty-one towers, from Wooton to Champagne, was awarded to a local Contractor. This contract was, however, terminated in 2009 due to a breach in contractual obligations, with the reconstruction works left outstanding. Corrosion protection treatment and replacement are now being carried out by CEB teams, subject to the availability of power cuts and manpower.

In 2011, maintenance and refurbishment works were carried out on 66 kV Chaumière – Henrietta 1 & 2, Saint Louis – Chaumière 1 & 2, Wooton – Ferney – Champagne, Combo – Henrietta, and Belle Vue – Amaury. Corrosion treatment, painting of towers, and replacement of rusty strain insulator sets, rotten cross-arms, T-plates and shackles, were carried out on the towers of the above-mentioned lines. It is to be noted that approximately 600 rotten bolts were replaced on the Wooton – Ferney – Champagne line during these interventions.

##### **Continuation of Works on Henrietta – Case Noyale – Combo 66 kV Line**

The construction of the 66kV line is motivated by the need to strengthen the Transmission network and provide the “N-1” criteria to the existing Combo – Henrietta 66 kV line. It will also improve the reliability of supply in the Black River and Le Morne areas, where major developments, in respect of IRS projects are in the pipeline. Its construction, over a line route of about 60 km, was planned to be completed by July 2009, but numerous problems cropped up, thus delaying its completion. The biggest difficulty was encountered in the region of Le Morne where works had to be stopped, due to issues related to Le Morne Cultural Heritage. It is to be noted that some 89 poles, erected in the Le Morne area, had to be removed at the request of Le Morne Heritage Trust Fund. Extension of HT network in the vicinity of Le Morne area will be carried out with underground cables instead of overhead cables, as originally planned.

Approximately 45.5 km of overhead network and 5 km of underground cables were laid and energized. At the end of 2011, the outstanding works consisted of approximately 4 km overhead network and 2.5 km underground cable works in the vicinity of Le Morne. Further delays in implementation cropped up following the approval of Government for the construction of a new hotel (Southern Comfort Resort) at La Prairie, which will necessitate the displacement of 25 poles already erected.

Works associated with the laying of 2.5 km underground cables at Case Noyale, which was earmarked for IRS Corniche Bay, are scheduled to start after the completion of necessary wayleave formalities with the new promoters of the land development project. Laying of the underground cables and energizing of the line at 66 kV are scheduled to start after the laying of 66 kV underground cables associated with the Fort Victoria Redevelopment Project, which is expected to be completed in the second half of 2012.

##### **66 kV lines from Beau Plan to Riche Terre - Jinfei Economic Zone**

The requirement of 45 MW of power in 2013 for the Jinfei (Ex-Tianli) project necessitates the erection of about 7.5 km of double-circuit 66 kV lines from Beau Plan to Riche Terre. Approximately 1.3 km of this new line will consist of underground cables. Compulsory acquisition procedures,

which were initiated in 2009 against six owners who had refused to grant permission for the erection of poles and conductors on their land, were completed in 2010. Formalities for payment of compensation to the landowners were initiated in 2011 and are in progress.

The erection of the 66 kV line to supply the 66/22 kV substation at Jinfei was initiated in March 2009. At the close of 2011, the total length of double-circuit overhead line was approximately 3.6 km.

The laying of underground cables, planned for the year 2011, was postponed as the cables were reassigned to the Fort Victoria Redevelopment Project. The laying of cables is now scheduled for the end of 2012 /early 2013.

#### **66 kV lines to supply La Tour Koenig**

Much progress was made regarding the on-going project to energise La Tour Koenig 66/22 kV Substation from the existing 66 kV St. Louis – Chaumière lines, which involve the erection of 0.5 km overhead network and the laying of some 1.3 km underground cables. After securing way-leave from the Black River District Council and completion of civil works for the laying of pipes in 2010, cable-laying was scheduled to start by March 2011, with the completion date set to August 2011. However, on account of the urgency of the Fort Victoria Re-development Project, which necessitated the laying of new underground cables between St Louis and Fort Victoria, the cable works at La Tour Koenig have been re-scheduled for 2012.

#### **OPGW on Transmission lines**

The purpose of optical ground wire is to shield the transmission lines against lightning-stroke effects, while also providing communication facilities between the System Control and all the major 66/22 kV substations. It is planned to replace all traditional earth conductors on transmission networks by OPGW.

In 2011, the stringing of OPGW on the existing 66 kV network from Belle Vue to Sottise, and from Union Vale Substation to Champagne Substation, over distances of 10 km and 18 km respectively, was carried out.

#### **66 kV lines Union Vale - Wooton**

In line with CEB's policy to ensure the "N-1" security criterion for the Transmission Grid, there is a need to construct a new 66 kV line from Union Vale to Wooton. This new line, with a route length of about 42 km, would relieve load on the Champagne - Wooton line, while ensuring continuity in the evacuation of power, in case the Champagne – Wooton line should fail.

The project is presently at the survey and design stage. It is to be noted that about 5 km of the proposed Union Vale - Wooton line will pass through forests, which fall under the

responsibility of the Ministry of Agriculture and the Ministry of Housing and Lands. The survey and design of the line, which was scheduled to be completed in 2011, were delayed due to way-leave problems.

Way-leave formalities, which are in progress, take a considerable time to finalise since they involve proprietorship rights and many other implications, such as EIA licence, tree felling issues, compulsory acquisition procedures, and compensation issues. Experience has shown that, for a project of this nature, the securing of all way-leaves may take up to one year. On account of these constraints, this project is expected to start in 2013 and should be completed by end 2014.

#### **66 kV line from Saint Louis to Fort Victoria**

Implementation of the Fort Victoria Re-development Project has relied on the use of the existing oil-filled 66 kV cables between Saint Louis and Fort Victoria for the evacuation of power from the newly-installed generators. The CEB was advised in early 2011 by BWSC, the contracting firm responsible for the implementation of the project, to consider the replacement of two existing 66 kV cables which are more than 30 years old. This work involves the laying of two underground 66 kV cables from Saint Louis to Fort Victoria over a distance of approximately 2.3 km. Way-leave formalities have been completed and works are scheduled to start in February 2012, after receipt of the engines for the Fort Victoria Power Station.

#### **66 / 22 kV Major Substations**

##### **Case Noyale 66/22 kV Substation**

This substation will improve the quality and reliability of supply to existing Hotels and consumers in the Southern and Western parts of the island, while providing power to the various IRS projects located at La Balise (Tamarin), Valriche (Bel Ombre), Baie du Cap, Corniche Bay, Les Salines and Ile-aux-Bénitiers.

Formalities for the acquisition of land from Bel Ombre Sugar Estate for construction of the substation have been completed, and necessary payments effected in 2011. All substation equipment has been procured, and electrical and civil design would be initiated shortly. Civil works are expected to start in 2013, and the commissioning of the substation is scheduled for the end of 2015.

##### **Jinfei 66/22 kV Substation**

This substation is being constructed in order to cater for the projected load of the Jinfei Economic Zone, as well as for the future load growth in this part of the island.

Electrical and civil design has been completed and all substation equipment has been procured. Tender for civil works was awarded in 2011 and the civil works are scheduled to be completed in 2012. The installation of

the substation equipment and the commissioning of the substation are planned for the end of 2013.

#### **66 kV Dumas Substation**

Following problems encountered with the disconnecter bushings at Dumas Substation in 2009, new disconnectors and associated equipment were procured. The replacement of bushings was completed in December 2009, and the substation was commissioned in January 2010.

However, the Dumas substation was bypassed once again due to the failure of the through-wall bushings on 18 July 2010. Arrangements were, thereafter, initiated for the replacement of all such bushings at Dumas Substation and Union Vale Substation. The through-wall bushings were subsequently replaced at the end of 2011, and commissioning is scheduled for early 2012.

#### **66 kV Beau Champ Substation – Anahita Project**

This substation will provide power to the IRS Anahita project and will help to relieve the existing 22 kV feeders which are currently being supplied by FUEL.

The 66 kV and 22 kV busbars were energized in July 2009 and June 2010 respectively. A corrosion treatment exercise was carried out on the transformers in 2011, under the supervision of a foreign expert. Commissioning of the power transformers is scheduled for early 2012.

#### **Erection of 66 kV Bays at Henrietta and Combo Substation for Case Noyale 66 kV Line**

In connection with the construction of the Case Noyale 66/22 kV substation, additional 66 kV bays would be required at Henrietta and Combo Substations. The civil works were completed in 2009, and erection of the 66 kV line is scheduled to be completed by the end of 2012.

#### **La Tour Koenig 66/22 kV Substation**

This substation will provide power to the Industrial zone of La Tour Koenig, while relieving our existing 22 kV feeders.

The construction of the substation building was completed in April 2010. Installation of the substation equipment, which started in September 2010, was continued in 2011. The commissioning of the substation is scheduled for end of 2013.

#### **Upgrading of Power Transformers at Wooton, Union Vale and Amaury Substations**

In 2010, works were initiated for the replacement of two existing power transformers with capacity of 20/30 MVA by 36/45 MVA at Wooton Substation. One power transformer was commissioned in November 2010. As far as the upgrading of the second transformer is concerned, the contract for civil works in relation to the 66 kV bay was awarded in 2011. Works are in progress, and commissioning is scheduled for early March 2012.

At Union Vale Substation, installation of one additional 20/30 MVA power transformer is scheduled for 2012. After the completion of this project, the 22 kV switching station would turn into a 66/22 kV substation, equipped with two power transformers and provided with the “N-1” criterion.

At Amaury Substation, one existing 15 MVA 66/22 KV transformer was damaged, beyond repair, by lightning on 14 December 2011. The replacement of the transformer, by one of 36/45 MVA capacity, was effected on a fast track basis to restore the reliability of supply.

#### **Upgrading of 66 kV Circuit Breakers in Substations**

The replacement of old 66 kV circuit breakers by SF6 gas-insulated ones was carried out on the 66 kv bays La Chaumière 1 & 2 and Fort Victoria 3 & 4 at Saint Louis Power Station, as well as on the G1 Unit at Champagne Power Station. The replacement programme will be pursued in 2012, and will concern Saint Louis, Ebène and Belle Vue Substations.

#### **Fort Victoria 22 kV Substation**

This new 22 kV indoor substation at Fort Victoria will help to evacuate power from Fort Victoria and meet the growing load demand, as well as improve the reliability of supply in the Port Louis area and the surrounding localities.

Civil works, which started in November 2010, were completed in mid-2011. The contract for the procurement of switchgear panels was awarded in 2011 and the equipment would be received in February 2012. Commissioning of the substation is scheduled for mid-2012.

#### **Reconstruction of 22 kV Major Substation**

During the year under review, the Construction and Maintenance (C&M) Section carried out the retrofitting of eight 22 kV switchgear panels at Nicolay, La Chaumière and Henrietta Substations.

It is to be noted that the CEB received the visit of an Engineer from Schneider in September, regarding recurrent gas leakage problems on the 22 kV circuit breakers installed at Ebène Substation. The cause of the problem was identified and necessary remedial actions taken.

Due to the explosion of one pole of the circuit breaker on the 22 kV feeder Pointe-aux-Sables at Saint Louis on 15 November, a partial breakdown was recorded. Necessary repairs were carried out and the faulty circuit breaker was replaced.



## DISTRIBUTION

Our objective is to serve the community and industry through prudent investment in the network so as to provide sustainable and reliable electricity, as well as secure timely connection of new requests.

In order to cope with the normal load growth and cater for the demand of new customers, the following works were completed in the distribution sector during the year under review.

### 22 kV Rings and Feeders

The under-mentioned projects were implemented in 2011 with a view to improving the reliability and quality of supply, and reducing line losses:

1. Ring between Spur Gros Billot and Spur La Rosa (Ferney–Union Vale–Le Val Feeder) (1 km);
2. Ring between Spur Mongelard and Spur Gebert (Ferney–Union Vale–Le Val) (2 km);
3. Ring between 22 kV Shandrani Feeder and Airport No. 1 Feeder (0.7 km).

It is to be noted that works are in progress for the erection of an additional feeder from Ebène to supply the Mall of Mauritius complex at Bagatelle. A total of 6 km of cable was laid in 2011 and the outstanding works, which consist of an additional length of 4 km of cable, are planned for 2012.

### MV Reconstruction and Distribution Network Reinforcement

In order to enhance the reliability of supply and reduce line losses, the following projects were implemented in 2011:

1. Rerouting of part of the existing 22 kV line from Ferney to GRSE (2 km);
2. Reconstruction of part of existing 22 kV line at Saint Martin (1 km)
3. Rerouting of Ferney–Union Vale from Grand Bel-Air to

- Plaine Magnien Cemetery (1.5 km);
4. Reconstruction of part of LeVal–Wooton Feeder at Union Park (1 km);
5. Reconstruction of Spur Gros Billot (1.2 km);
6. Reconstruction of spur Gébert (0.5 km).

### Inspection of Poles on 66 kV and Distribution Networks

With a view to improving the security of supply and the reliability of the network, the CEB has embarked on a programme which involves the systematic testing and replacement of unsecure wooden poles, and the replacement of all round concrete poles which were erected some 40 years ago.

Some 6,219 HT poles were inspected island-wide during the year under review, out of which 446 were replaced.

### Assistance Scheme for Extension of Low Voltage Network

The above-mentioned scheme provides assistance to households who, in view of their difficult financial situation, cannot meet the cost for supplying them with electricity. The scheme was pursued in 2011 and the expenditure incurred was partly funded by Government, and partly by the CEB. A total of 106 projects were implemented, totalling Rs 2,941,655.

## SYSTEM CONTROL

### SCADA System Upgrade

This project caters for the upgrading of the SCADA system from Energy Management Platform version 2.1 to version 2.5. It involves, primarily, the replacement of SCADA and the Historical Information System hardware, as well as training on the Digital Training Simulator and associated software so as to improve system performance.

The tender for the upgrade of the SCADA and Historical Information System was awarded in December 2009. The installation and migration was started in December 2010, and works were completed in February 2011 with the Site Acceptance Test (SAT).



### MAJOR DISTRIBUTION PROJECTS

Major electrical infrastructural works were performed in 2011 to supply the important consumers mentioned below:

- a) Emtel (1.5 MVA) - Arsenal;
- b) MCB St. Jean (1.3 MVA);
- c) St. Regis (3 MVA) - Le Morne;
- d) Bagatelle Mall of Mauritius (1<sup>st</sup> Phase - 2 MVA);
- e) Mella Villas (1.25 MVA) - Balaclava;
- f) Hennessy Court (1 MVA);
- g) UBP Geoffroy (2.6 MVA);
- h) Installation of new 22 kV-switchgears at AML Plaisance;
- i) Cascavelle Shopping Village - (1 MVA).

### SAIDI AND SAIFI INDICES OF DISTRIBUTION AREAS

The average SAIDI and SAIFI indices for the year under review for the three geographical Areas are given below.

Parameters	Units	Areas	2010	2011
SAIDI	Hours	North	2.15	1.77
		Centre	2.44	2.51
		South	4.38	4.79
SAIFI	Index	North	1.15	0.84
		Centre	0.84	0.8
		South	1.93	1.68

**SAIDI (System Average Interruption Duration Index)** is the average duration of interruption of electricity experienced by a customer during the year.

**SAIFI (System Average Interruption Frequency Index)** is the average number of times a customer has experienced interruption of electricity during the year.

### MAINTENANCE WORKS

During the year, regular maintenance works, including tree lopping, were carried out on networks with a view to reducing the risks of power outages. Infrared sensing device for monitoring specific equipment and network analyser were also used to detect any abnormal performance of equipment and ensure the quality of supply.

### STREET LIGHTING

A Memorandum of Agreement (MoA) was signed between the CEB and Municipal/District Councils in November 2007 with a view to effectively managing street lighting systems island-wide and attending to faults thereon in a prompt manner. The agreement clearly defines the responsibilities of each party and the modus operandi for all works related to street lighting. It also provides for the CEB and the Councils to meet in a Technical Committee on a quarterly basis to thrash out administrative and technical problems encountered in practice regarding street lighting

The validity period of the MoA has lapsed on 30 November 2010. Prior to the renewal of the MoA, the Councils were requested to submit their proposals for any amendment and these were discussed in the Technical Committee of 30 August 2011. Thereafter, a draft MoA was prepared and forwarded to each member of the Technical Committee for consideration. The draft MoA has been finalised during the last meeting held on 8 December 2011 and would be submitted to the Board for approval.

### TREE LOPPING/FELLING

Numerous trees, which were in proximity to the electricity networks, were felled during the year in order to improve the clearance with overhead cables and conductors. The branches of those trees can adversely affect the supply of electricity, especially during windy and cyclonic conditions.

### METER LABORATORY

In 2011, some 1,016 MDI metering installation were inspected, and 180 three-phase-CT-connected electro-mechanical meters were replaced by electronic ones. Cases of anomalies in registration, due to tampering, wrong connections or faulty equipment, were detected and remedial actions taken.

Some 110 HT metering, with Automatic Meter Reading (AMR) facilities, were installed on a pilot basis. These meters were monitored on a monthly basis and were remotely accessed *via* the GPRS network. It is to be noted that, through AMR meters, the CEB can bill customers on the 1<sup>st</sup> of each month, which is not the case with traditional meters.

The Meter Laboratory was also involved in the implementation and commissioning of Small Scale Distributed Generation (SSDG) units island-wide. Three-phase meters were installed at the following SSDG sites: Hindu Girls, Eric Maingard, Mungroo & Sons, MITD, Le Bocage and the University of Mauritius.

# Customer Services



Due to the monopolistic situation of the CEB, there has always been a tendency to focus on the provision of a quality and reliable electricity supply, while somehow laying less emphasis on the customer service aspect. But, during the past few years, there has been a real paradigm shift. We have, to a great extent, reoriented our strategies and repositioned the CEB as a customer-centric business with a view to attaining excellence in customer service delivery.

The Customer Services division is organised along of three main business units namely, Customer Services and Interactions, Revenue Management, and Revenue Protection, all of which work in close collaboration so as to provide a prompt and efficient service to customers.

In the year 2011, various business policies and processes were revisited with a view to providing a better service to our customer base which, at the year-end, reached 404,751 customers, representing a 2 % increase in our customer base over the previous year.

## **CUSTOMER SERVICES AND INTERACTIONS**

All customer contacts throughout the island are managed by the Customer Services and Interactions Section, which regroups the CEB's 14 walk-in centres, as well as the CEB's 130 Helpdesk.

The following improvements were brought about to enhance customer services during the review period.

### **Upgrading of Customer Service Centres**

The programme for the complete renovation of our Customer Service Centres (CSCs) island-wide was continued in 2011 with a view to facilitating access to our services by

customers, while providing a pleasant working environment to our employees.

After the renovation of our CSCs at Vacoas, Pamplemousses, Souillac, and Rose Hill, works at Poudrière was launched in December 2011 and is due for completion in June 2012.

### **Service Response Time**

The response time to the requests of customers is a very important aspect of service delivery and requires close monitoring. Two Key Performance indicators (KPIs) have been set up to that effect. The first KPI ( $KPI_{\text{fins}}$ ) indicates the average number of days between an application being lodged at the CEB and the first site visit to the customer's premise. The second KPI ( $KPI_{\text{p2m}}$ ) indicates the average number of days between payment being made for a new supply and the effective connection to the CEB grid.

The Table below shows the progress of the above KPIs for the year 2011.

Year 2011	No. of Requests for New Connections	KPI <sub>fin</sub>	KPI <sub>p2m</sub>
January	1,706	5.1	5.3
February	1,758	5.5	5.1
March	2,044	5.2	6.2
April	1,988	5.1	4.9
May	2,012	4.1	4.2
June	2,009	5.3	4.4
July	1,888	4.1	4.0
August	1,995	3.5	3.5
September	1,983	3.7	3.8
October	1,918	4.1	4.1
November	1,981	3.7	4.5
December	2,016	4.1	3.3
<b>Total</b>	<b>23,298</b>		

The average KPIs for the period 2009-2011 are given hereunder.

Year	No. of Requests for New Connections	Average KPI <sub>fin</sub>	Average KPI <sub>p2m</sub>
2009	24,148	7.5	7.5
2010	23,126	5.8	5.5
2011	23,298	4.5	4.4

As shown in the table, there has been a marked improvement in response time along both dimensions over the years. The aim is to bring these KPIs still further down in the quest towards service excellence.

### Customer Service Operations

The CEB has 14 walk-in centres island-wide which deal with numerous requests or notifications from customers. Some 48,678 requests of different nature such as new connections, approval of plans, change of tariff, displacement of poles, and change in load were successfully dealt with during the year.

### Providing Additional Payment Channels

The CEB already offers a broad array of payment options to its growing customer base. Our aim is to deliver additional payment solutions that are reliable, secure and functional, and which are in line with technological developments.

In this respect, a new payment option was introduced in 2011 whereby customers can pay their electricity bills through the ATMs of State Bank of Mauritius Ltd, as well as through Points of Sales of Winners Supermarkets. Another facility inaugurated during the year was the payment of electricity bills through Internet Banking, open to customers of MCB Ltd and SBI Ltd.

In future, the electronic modes of payments (ATM, Point of Sales and Internet Banking) will be extended to other local banks. Negotiations are also underway with Mauritius Telecom to enable the payment of electricity bills by SMS.

### CEB 130 Helpdesk

The CEB is one of the few organisations in Mauritius which provide emergency repairs on a 24/7 basis. During the year 2011, the Call Centre successfully handled some 222,378 inbound calls in connection with emergency repairs, enquiries and other requests for information.

The business processes of the Call Centre are also being re-engineered to step up the efficiency of operations, as well as improve the coordination between standby teams and the coordinators responsible for the management of faults.

	No. of Calls Attended by CEB 130 Helpdesk				
	Calls Answered				
	2007	2008	2009	2010	2011
January	22,240	16,374	27,429	28,808	20,258
February	49,499	23,699	33,006	29,847	24,288
March	31,475	19,098	19,659	21,732	25,484
April	16,138	13,320	18,459	17,151	16,003
May	12,607	16,613	16,436	15,780	17,485
June	15,493	13,897	15,830	15,375	15,394
July	13,491	15,560	17,659	18,018	16,459
August	11,020	12,701	16,229	15,655	13,578
September	10,518	16,811	15,625	15,490	16,760
October	15,686	17,545	25,758	16,011	17,469
November	14,479	19,779	21,564	20,004	19,006
December	13,919	21,554	23,648	17,135	20,194
<b>Total</b>	<b>226,565</b>	<b>206,951</b>	<b>251,302</b>	<b>231,006</b>	<b>222,378</b>

### Training Programme for Frontline Employees

Customer contact employees are the most visible of all employees and they are critical to determining how the CEB is perceived as a service provider. This highlights the crucial importance of training front-line staffs and equipping them with the skills, knowledge and attitude to deal with the stress and demands that arise from customers' high and constantly growing expectations.

In this respect, an agreement was signed with the University of Mauritius for running a training programme on customer service delivery. Some 400 CEB employees followed the training programme and were able to transfer the valuable learning to their work context.

### Corporate Social Responsibility

The CEB recognises the need to be socially involved and supportive of the wider needs of the community, more specifically those of less fortunate citizens. During the review period, a number of assistance schemes were maintained to promote access to electricity to low-income customers and support to those with financial difficulties.

#### *Low Voltage Network Extension Government Assistance Scheme*

This scheme provides assistance to needy households for the supply of electricity to their first and new residence. It is applicable to households whose income band is less than Rs 17,500.

A total of 106 projects were implemented during the year under review.

#### *Displacement of Electric Service Lines/Poles Government Assistance Scheme*

This scheme provides assistance to needy households who are building their first and new residence but who have not received clearance from the CEB due to the fact that an electric service line or pole is in close proximity to their construction. It is applicable to households whose income band is less than Rs 17,500.

Three projects were approved and completed in 2011.

### Social Tariff

Special consideration is given to the social dimension of electricity consumption by households. In this respect, the CEB has in place a social tariff (Tariff 110A) which is meant for needy customers. Under this scheme, customers whose monthly consumption does not exceed 75 kWh benefit from concessionary electricity rates. As at December 2011, some 10,770 households were classified under the "social tariff" category.

## REVENUE MANAGEMENT

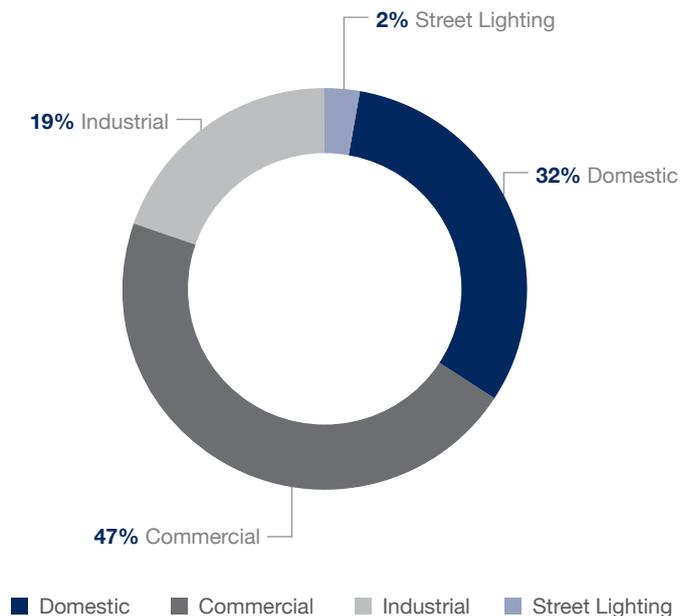
The Revenue Management Unit deals with all customer-related financial functions namely Meter Reading, Billing, Cash Collection and Debt Recovery.

The main activities involve ensuring timely billing, invoicing and despatching of invoices, optimising debt collection, and minimising revenue losses.

### Revenue Collected

During the year under review, some 4.9 million meter readings were carried out to enable billing of electricity consumption and the Sales Revenue generated was Rs 12.7 billion. This figure represents an increase of 12 % over the previous year.

The sales revenue distribution among the different categories of customers is represented in the pie-chart below:



### Under-Billing

During 2011, the revenue recovered from under-billing cases, due to technical problems in metering equipment and inappropriate tariff assignments, was Rs 3.2m.

### Projects

The main projects implemented by the Revenue Management Unit during 2011 were as follows:

**Replacement of Electro-mechanical Meters for MDI Customers**

The project for the replacement of electro-mechanical meters by electronic ones, which was initiated in 2010 to enhance accurate billing and mitigate risks of loss in revenue, was continued in 2011. An additional 200 electromechanical meters were substituted, taking the total to 300 replaced meters since the implementation of the project.

**Automatic Meter Reading (AMR)**

Following the successful implementation of the pilot project involving a sample of 13 customers in 2010, the project of remote reading of meters was rolled out on a larger scale during 2011, whereby over 500 customers, representing 23 % of our total sales, were shifted on the AMR system.

This project has contributed to the improvement in cash flow, since the time-lag between consumption and billing has been reduced. During 2012, it is planned to shift an additional 1,000 customers on AMR.

**Disconnection Warning Message**

Disconnection message tags were attached to electricity invoices delivered during the months of May and September 2011, with a view to sensitising customers on the need for timely settlement of their invoices, thus avoiding disconnection of supply for non-payment.

**Meter Management**

This exercise was initiated in 2010 whereby missing information, in relation to 50,000 meters installed at our customers' premises, were collected in order to update our customer database as well as assess the age of the meters for their eventual replacement. During the year 2011, our Meter Readers collected meter details pertaining to 50,000 additional meters. It is expected that the data collection for the remaining 50,000 meters will be completed during 2012.

**REVENUE PROTECTION**

The Revenue Protection Unit deals with the investigation and recovery of the revenue losses due to illegal abstraction and consumption of electricity. Over the past few years, there has been a significant increase in the amount of revenue collected from fraud cases. The CEB has reinforced its policy by resorting to the disconnection of electricity supply, civil law-suits, and police cases against the offenders.

In 2011, around 600 confirmed cases were detected and a total amount of Rs 14,170,102 was recovered.

The awareness campaign against the illegal abstraction of electricity was pursued so as to inform customers and the



Revenue Collected from Fraud Cases				
Year	Domestic Tariff (Rs)	Commercial Tariff (Rs)	Industrial Tariff (Rs)	Total (Rs)
2006	2,479,299	3,222,305	1,352,628	7,054,232
2007	2,559,431	4,947,370	10,241,743	17,748,544
2008	3,005,849	5,615,827	2,245,000	10,866,676
2009	2,582,509	6,387,148	314,221	9,283,878
2010	3,853,924	9,246,500	2,448,929	15,549,353
2011	7,782,926	4,722,898	1,664,278	14,170,102

public at large of the legal consequences of electricity theft. The aim of this campaign is to prevent tampering of CEB meters and cut down on non-technical losses.

The CEB has also introduced Automatic Meter Reading (AMR) for big customers with a view to enabling faster detection of fraud and deterring tampering of meters.

## CUSTOMERS PER TARIFF

Category	Code	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	110/111	113 554	115 351	117 229	119 275	120 894	122 385	123 873	124 758	124 612	125 101
	120/121	151 050	155 830	160 612	166 250	170 550	174 880	179 501	184 700	189 423	195 188
	140/141	30 062	31 206	32 237	33 550	34 386	35 635	36 843	38 299	39 654	40 942
Domestic	S/Total	294 666	302 387	310 078	319 075	325 830	332 900	340 217	347 757	353 689	361 231
	209/210/215	27 226	27 908	28 575	29 803	30 913	32 109	33 327	33 674	34 332	34 888
	211/212/213/217	810	868	938	1 004	1 077	1 138	1 229	1 295	1 373	1 472
	221/223/225/245/250	18	21	39	59	70	62	74	82	108	116
Commercial	S/Total	28 054	28 797	29 552	30 866	32 060	33 309	34 630	35 051	35 813	36 476
	309/310/315	5 768	5 786	5 752	5 838	5 850	5 889	5 747	5 567	5 406	5 193
	311/313/341	576	601	595	595	620	639	648	668	681	700
	312/317	281	260	246	237	214	208	185	167	149	139
	320	3	3	3	3	6	4	4	3	2	2
	321/323/351	3	4	4	5	5	11	15	18	18	19
	322/325	7	8	7	7	8	7	7	7	7	7
	330/340	6	4	7	7	9	8	8	7	7	8
	350	3	3	4	4	4	4	4	5	4	5
	411/421	11	12	11	13	13	11	12	12	10	9
	412/422	4	-	-	1	-	1	1	-	-	-
Industrial	S/Total	6 662	6 681	6 629	6 710	6 729	6 782	6 631	6 454	6 284	6 082
Irrigation	511/515	318	376	403	422	447	463	465	478	493	504
	S/Total	318	376	403	422	447	463	465	478	493	504
Street Lighting	510	305	322	328	331	342	349	362	396	422	458
	S/Total	305	322	328	331	342	349	362	396	422	458
<b>GRAND TOTAL</b>		<b>330 005</b>	<b>338 563</b>	<b>346 990</b>	<b>357 404</b>	<b>365 408</b>	<b>373 803</b>	<b>382 305</b>	<b>390 136</b>	<b>396 701</b>	<b>404 751</b>
% Increase over preceding year		2%	3%	2%	3%	2%	2%	2%	2%	2%	2%

**SALES OF ENERGY (kWh PER TARIFF)**

Category	Code	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	110/111	155 380 507	164 251 149	167 945 042	175 394 811	176 833 335	183 219 436	183 620 858	188 290 805	194 054 333	196 295 708
	120/121	279 437 725	295 944 395	300 651 931	317 874 082	324 076 476	336 518 172	340 799 730	356 228 479	372 488 661	382 187 780
	140/141	86 319 248	92 453 727	93 776 038	99 967 524	102 528 855	108 668 402	113 114 389	120 818 242	128 769 114	131 512 846
Domestic	S/Total	521 137 480	552 649 271	562 373 011	593 236 417	603 438 666	628 406 010	637 534 977	665 397 526	695 312 108	709 996 334
	209/210/215	112 774 786	120 955 747	123 349 367	128 173 353	134 994 679	141 782 150	148 771 677	156 682 954	165 190 210	171 297 446
	211/212/213/217	229 667 876	249 853 781	268 486 021	294 279 218	309 609 336	326 428 263	341 358 626	345 155 938	351 774 154	354 106 814
	221/223/225	77 245 034	102 223 854	117 323 826	124 465 164	127 419 209	139 885 527	171 561 185	190 535 666	218 429 411	255 369 420
	245	-	-	-	637 313	1 000 888	870 132	720 967	610 405	575 561	485 351
	250	-	-	-	644 755	1 066 803	1 166 605	2 119 401	2 672 928	3 614 383	5 422 608
Commercial	S/Total	419 687 696	473 033 382	509 159 214	548 199 803	574 090 915	610 132 677	664 531 856	695 657 891	739 583 719	786 681 639
	309/310/315	29 200 218	30 246 135	30 718 264	28 513 151	28 628 597	29 262 090	29 994 055	29 415 788	29 775 877	28 934 729
	311/313/341	181 866 412	191 234 778	202 713 958	188 243 326	207 843 899	213 991 175	219 142 884	221 458 832	242 898 421	247 542 144
	312/317	159 457 203	156 819 896	152 874 036	151 705 278	152 394 000	146 944 199	126 677 003	95 035 081	85 202 457	82 134 103
	320	2 146 515	5 938 941	6 534 770	6 633 493	10 885 470	13 269 854	6 883 153	1 587 638	1 222 407	1 409 209
	321/323/351	25 088 383	25 983 241	34 866 024	24 179 128	28 132 890	42 877 217	71 331 350	78 014 085	85 822 069	92 233 327
	322/325	92 324 845	95 643 504	105 066 538	117 991 348	142 640 327	153 262 042	160 903 691	151 449 328	156 972 316	146 502 036
	330			83 643	6 653 141	11 395 285	11 315 330	10 798 446	11 568 086	12 465 746	13 605 445
	340	803 558	1 625 662	1 960 589	3 695 081	4 933 649	6 099 986	7 732 269	6 750 914	7 149 621	7 800 242
	350	4 657 010	12 434 643	13 346 481	17 279 505	19 133 112	21 592 360	22 179 760	24 380 449	26 208 116	31 383 875
	411/421	2 736 168	3 436 435	4 080 646	4 048 069	4 966 457	2 518 625	1 993 228	2 930 994	4 096 240	3 361 103
	412/422	950 346	306 694	135 884	137 441	-	1 905 000	3 511 000	894 000	-	-
Industrial	S/Total	499 230 658	523 669 929	552 380 833	549 078 951	610 953 686	643 038 478	661 146 839	623 485 195	661 813 270	654 906 213
	511/515	27 447 489	26 930 954	23 662 450	26 754 142	28 706 528	28 170 230	25 806 116	20 447 412	23 814 590	22 490 994
Irrigation	S/Total	27 447 489	26 930 954	23 662 450	26 754 142	28 706 528	28 170 230	25 806 116	20 447 412	23 814 590	22 490 994
Street Lighting	510	21 841 034	27 610 698	30 566 442	31 603 845	32 615 970	33 147 726	33 979 768	33 303 230	30 901 976	24 359 470
Temporary	610/615	104 453	122 945	146 617	386 202	404 162	218 492	207 721	214 987	220 445	220 882
Miscellaneous	-	-	-	554 099	-	1 874 969	4 909 322	2 546 574	1 906 534	2 974 888	2 696 359
	S/Total	21 945 487	27 733 643	31 267 158	31 990 047	34 895 101	38 275 540	36 734 063	35 424 751	34 097 310	27 276 711
CEB	2 220 081	3 028 407	3 203 174	2 963 669	3 063 854	2 523 712	2 641 021	2 788 508	2 841 667	2 952 524	
<b>GRAND TOTAL</b>	<b>1 491 668 891</b>	<b>1 607 045 586</b>	<b>1 682 045 840</b>	<b>1 752 223 029</b>	<b>1 855 148 750</b>	<b>1 950 546 647</b>	<b>2 028 394 872</b>	<b>2 043 121 283</b>	<b>2 147 462 664</b>	<b>2 204 304 415</b>	

#### kWh PER CUSTOMER PER CATEGORY

Category	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Domestic	1 768	1 828	1 814	1 859	1 852	1 888	1 874	1 913	1 966	1 965
Commercial	14 960	16 426	17 229	17 761	17 907	18 317	19 189	19 847	20 651	21 567
Industrial	74 937	78 382	83 328	81 830	90 794	94 815	99 705	96 604	103 726	107 679
Irrigation	86 313	71 625	58 716	63 398	64 220	60 843	55 497	42 777	48 305	44 625
Street Lighting	71 610	85 748	93 190	95 480	95 368	94 979	93 867	84 099	73 227	53 187
Others	2 324 533	3 151 352	3 903 890	2 963 669	5 342 985	7 651 526	5 395 316	4 890 029	6 037 000	5 869 765
<b>Mixed</b>	<b>4 520</b>	<b>4 747</b>	<b>4 848</b>	<b>4 903</b>	<b>5 077</b>	<b>5 218</b>	<b>5 306</b>	<b>5 237</b>	<b>5 413</b>	<b>5 446</b>

#### VARIATION OF SALES PER CATEGORY OF CUSTOMERS FOR THE YEARS 2009–2011

Customer Category	kWh Sold			% Increase over previous year	
	2009	2010	2011	2009–2010	2010–2011
Domestic	665 337 526	695 312 108	709 996 334	4.51	2.11
Commercial	695 657 891	739 583 719	786 681 639	6.31	6.37
Industrial	623 485 195	651 813 270	654 906 213	4.54	0.47
Irrigation	20 447 412	23 814 590	22 490 994	16.47	(5.56)
Others	38 193 259	36 938 977	30 229 235	(3.28)	(18.16)
<b>Total</b>	<b>2 043 121 283</b>	<b>2 147 462 664</b>	<b>2 204 304 415</b>	<b>5.11</b>	<b>2.65</b>

#### PERCENTAGE SALES TO EACH CATEGORY

Category	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Domestic	34.94	34.39	33.43	33.86	32.53	32.22	31.43	32.56	32.38	32.21
Commercial	28.13	29.43	30.27	31.29	30.95	31.28	32.76	34.05	34.44	35.69
Industrial	33.47	32.59	32.84	31.34	32.93	32.97	32.59	30.52	30.35	29.71
Irrigation	1.84	1.68	1.41	1.53	1.55	1.44	1.27	1.00	1.11	29.71
Street Lighting	1.46	1.72	1.82	1.80	1.76	1.70	1.68	1.63	1.44	1.02
CEB + Others	0.14	0.19	0.23	0.15	0.29	0.39	0.27	0.27	0.27	0.27



As we experience growing pressures on improving efficiency, cutting down operating costs, adding value and delivering heightened customer service, the availability of talented, motivated and skilled people becomes even more critical. In this respect, we are making the necessary human resources investments to make the CEB a high-performance organisation that is customer-driven, open and responsive, and meets the needs and expectations of the communities it serves.

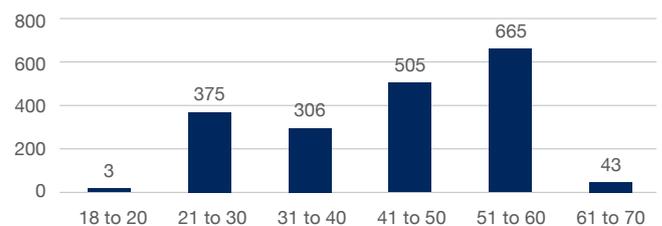
## MANPOWER

70 people left the CEB during the year 2011; this represents normal attrition, including retirements, deaths and resignations. During the same period, 43 new staff members were recruited and the labour force, as at the end of 2011, stood at 1,897.

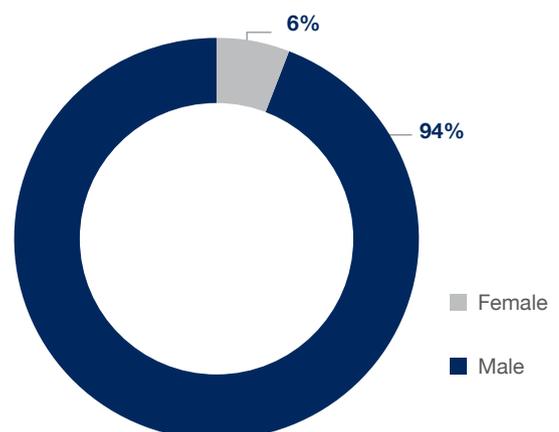
Some key human resource indicators are shown hereunder:

No. of Employees		
	Mauritius	Rodrigues
	2011	2011
Staff	817	32
Manual	855	52
Trainee/Cadet Engineer	28	2
Trainee/Cadet Technician	101	10
<b>Total</b>	<b>1,801</b>	<b>96</b>

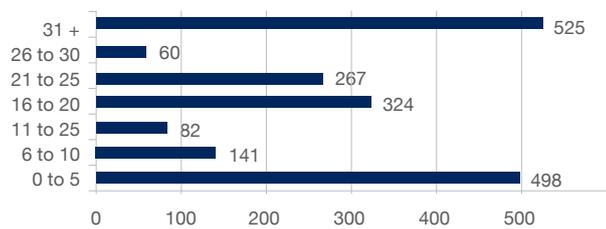
## Age Distribution



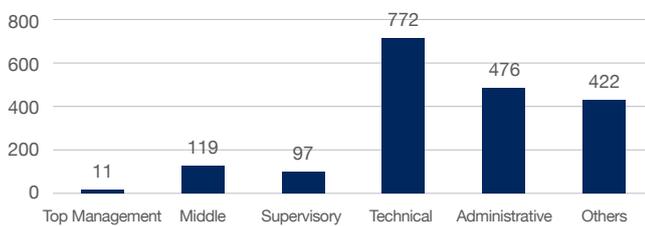
## Gender



### Years of Service



### Grade Category



### Recruitment

As part of its strategy for talent management, the CEB is committed to acquiring, retaining and developing the best talent and skills. After their appointment, new employees are required to undergo an induction programme with a view to equipping them with the skills and knowledge required for their new roles, as well as inculcating in them the organisational culture.

During the year 2011, some key and critical positions were filled at various levels of the organisation. In this respect, the recruitment and selection process was completed for 15 positions which, altogether, corresponded to the filling of some 250 vacancies.

### EMPLOYEE RELATIONS

The Employee Relations Section provides direction, advice, and support to employees on the interpretation and application of Collective Agreement, internal regulations, employment-related legislation and other employment issues.

### JNC Meetings/ Consultations

Management, along with the Unions, have the responsibility of promoting good employment relations. In that spirit, regular meetings and consultations were held with the three recognised unions, namely the CEB Staff Association (CEBSA), the Union of Employees of CEB (UECEB), and the CEB Workers' Union (CEBWU) during the year 2011.

### Collective Agreement

Following the publication of the Appanna Report in October

2009, Collective Agreements were signed with the CEBSA and the CEBWU. Subsequently, all cases of errors/ omissions and clarifications were submitted to Mr. Appanna, through the Management of the CEB. After examining the representations, the Consultant published a Report on "Errors, Omissions, Clarifications and Other Issues" in September 2010. During 2011, further negotiations were carried out, on the recommendations contained in the latter report with the CEBSA and the CEBWU.

As regards the UECEB, negotiations, with a view to concluding a Collective Agreement, were undertaken on an on-going basis during 2011. A number of contentious issues, on which no agreement could be reached, were identified. In consequence, and per the Memorandum of Understanding signed with the UECEB in October 2009, it was agreed to jointly refer the matter to an Arbitrator.

### Procedure Agreement

A Procedure Agreement was signed with the CEBWU in June 2011. This Procedure Agreement provides for an agreed procedure and method to resolve collective bargaining issues and promote consultation on matters affecting employees

### TRAINING AND DEVELOPMENT

The CEB has always laid great emphasis on Training and Development as a framework for helping employees develop their skills, knowledge and abilities. Our learning strategy is geared towards developing employees to perform optimally in their current position, build an internal pipeline for future skills requirements, and create career opportunities.

### Performance Management System

The Board gave its approval to extend the implementation of a new Performance Management System (PMS) on a pilot basis for another year, with effect from 1 January 2011, to allow a better adherence to and acceptance of this innovative and challenging project.

The various processes of the PMS, namely Performance Planning, Mid-year Performance Review and Final Performance Assessments, were explained to all staff and manual workers concerned. The PMS reviews performance on the basis of Key Performance Indicators (KPIs) and certain qualitative factors, such as Teamwork and Cooperation, Professional Competence and Experience, Sense of Responsibility, Leadership, and Loyalty and Reliability. During the year under review, the HR and IT departments teamed up to upgrade the electronic version of the PMS, namely the e-PMS. The services of consultancy firm Hewitt

were retained to further support the implementation of the e-PMS.

The consultants started Performance Planning Stage in January 2011, and they also visited Rodrigues during that period. Some 60 officers underwent in-depth training to act as e-PMS Champions in order to assist in implementation of the e-PMS across the organisation, including Rodrigues. Additional training sessions were conducted at section's level by the e-PMS Champions to communicate the various processes of the e-PMS to all staff and manual employees.

This e-PMS project will enable the alignment of operational goals to organisational strategic objectives, as well as create greater employee commitment. It will also make the organisation more performance-driven. A compliance rate of 80% was achieved by staff employees at all 3 stages of the e-PMS programme in 2011, indicating good employees' acceptance of the new PMS.

#### **Human Capital Development**

To meet the challenges of rapid technological advances and changes in customer demands, the CEB continuously upgrades the skills and competencies of its people. In this respect, a total of 13,310 man-hours of training were provided during 2011, both locally and overseas.

The overseas training (627 man-hours) consisted of different courses, mainly in the technical field, which was attended by employees from different departments.

The local training was mainly made up of courses conducted at CEB's Training School (CFPP) and on-the-job training. Moreover, some 43 employees completed a two-year part-time training in Electrical Installation Works, at National Certificate Level 3, at the MITD, under the Apprenticeship Mode. Similarly, some 60 employees, mainly casual workers and handymen, completed a training programme in Adult Literacy and Numeracy, for a period of 3 months, under the National Empowerment Foundation Scheme. This training programme will enable the participants to enroll on the course in Basic Electrical Installation Works, at National Certificate Level 3, at the MITD.

Training for non-technical personnel was also emphasized during the review period. In this respect, some 222 employees followed a 3-day training course in Customer Care, dispensed by the University of Mauritius, with a view to enhancing our customer service delivery. Moreover, some 160 employees were sponsored to follow a training course on Internet and Computer Core Certification (IC3), conducted by the National Computer Board.

Induction Training, initiated in 2010, was also imparted to all new recruits to familiarize them with the company's policies and procedures, prior to their placement in the work setup.

As part of its social responsibility obligation, the CEB also provided work placements to some 195 students from both local and overseas institutions so as to offer them the opportunity to gain experience in relation to their respective course of study.

#### **SAFETY AND HEALTH**

The management of Occupational Safety and Health is a primary concern of the CEB, given that the operational activities of the utility encompass several high-risk fields, such as electrical, mechanical, civil, high structures, underground networks, and flammables. The CEB is highly committed to providing a safe and healthy working environment to all its employees and contractors. The "zero-rate accident" remains a focal point of our safety improvement drive.

As in recent years, 2011 has also witnessed a wide range of activities and awareness campaigns to promote safety and health at the workplace. One major event was the conclusion of the comprehensive safety audit that was undertaken by a Safety and Health Consultant. In his report, the Consultant has proposed several measures to uplift the health and safety status at a number of CEB sites.

A phased-approach will be adopted regarding the implementation of the safety and health measures in view of their significant financial implications.

#### **Promotion of Safety and Health**

During the period under review, many activities were carried out to promote safety and health at work.

#### ***Independence Day Celebration***

A float, representing the production and use of renewable and clean energy, was presented to the public during a procession at the official ceremony of Independence Day Celebrations at Champ de Mars. The float also took part in a parade, passing through the villages of Mapou, Goodlands, Triolet and Mon Choisy.

#### ***World Day for Safety and Health at Work***

The World Day for Safety and Health at Work was celebrated on 28 April 2011. The theme for the year was: "Occupational Safety and Health Management System - A Tool for Continual Improvement". In this context, the CEB participated in a two-day exhibition at the Municipality of Port Louis.

Moreover, the Safety Unit, in close collaboration with the Training School (CFPP) and the Customer Services Department, organised an exhibition on the “*Safe Use of Electricity*” on 28 and 29 April, which were held simultaneously at thirteen of our Customer Service Centres island-wide, including the Rodrigues Branch. During this exhibition, a presentation on the “*Dangers of Electricity and its Associated Safety Aspects*” was made to customers, school children and members of the public.

The CEB intends to celebrate the World Day for Safety and Health at Work every year in order to re-iterate its commitment to the safety and health of its employees and other stakeholders.

### **Safety Awareness Campaign**

Sixteen talks were held island-wide with a view to informing and educating our employees on the importance of various safety and health issues. The presentations were made by the Police Road Safety Unit, the NATRESA, the Society for the Welfare of the Deaf, and the Occupational Safety and Health Inspectorate of the Ministry of Labour, Industrial Relations and Employment. Some 740 employees attended the sessions.

To mark the 30<sup>th</sup> Anniversary of the Institute of Occupational Safety and Health Management (IOSHM), an exhibition was held at the Caudan Waterfront from 22 to 23 October 2011. The theme of the exhibition was “*Safe Use of Electricity*”. The CEB put up a stand, highlighting Electrical Safety, Manual Handling and Use of Personal Protective Equipment at Work.

### **Revised Transmission and Distribution Safety Rules**

After approval by the Main Safety and Health Committee, 2,000 copies of the updated Transmission and Distribution Safety Rules were printed. Nineteen training sessions were held, in collaboration with the Training School (CFPP), from August to December. Some 613 employees, including 30 from Rodrigues and 17 from CEB Contractors, attended the two-day training sessions held at the CFPP and in Rodrigues.

### **Safety Inspection and Enforcement**

During the year, more than 600 safety inspections were carried out throughout the island and Rodrigues. Heavy emphasis was laid on safe systems of work and the use of personal protective equipment. Competency tests, trade tests and fire drills were also executed to validate the aptitude of competent personnel regarding safety and safe systems of work.

Five meetings of the Main Safety and Health Committee were conducted at the Head Office, and 12 meetings of the Regional Safety and Health Committees were held island-wide and in Rodrigues.

### **Health Surveillance**

Medical examinations were carried out by our Occupational Health Consultant for all employees attached to power stations and for those working on electricity networks. The objective was to ensure that they were medically fit to perform their assigned tasks.

### **Training on Safety and Health**

Regular training was provided to in-house employees and employees of CEB contractors at the Training School (CFPP) to further develop their safety awareness and competencies. On-the-job safety training was also delivered island-wide. Overall, some 10,000 man-hours of safety training were imparted during 2011.

Constant efforts were made to make the workforce more conversant with the company Safety Rules. The concept of accountability for unsafe acts and unsafe conditions, and the role of adequate and proper supervision, were emphasised, bearing in mind that technical work, associated with the production, transmission, distribution and utilisation of electricity, is inherently dangerous and that the key to accident prevention is eternal vigilance.

In line with the CEB’s Training Policy, the Safety Unit also participated in the Induction Training Programme for new employees, whereby the contents of the Safety and Health Policy were explained, including the importance of strictly observing the principles of safety at work.

### **Training on HIV/AIDS**

A number of employees attended a two-day seminar, organised by the Ministry of Labour, Industrial Relations and Employment, on issues relating to the stigmatisation and discrimination at work of people living with HIV/AIDS. They were called upon to create awareness among their colleagues thereon, with the assistance of the AIDS Unit of the Ministry of Health.



### Accident Statistics

Thirty-seven work-related accidents, requiring more than 3-days' absence from work, were recorded during 2011. It is worth noting that no fatal accident has been recorded for the past 12 years. The corporate goal of "zero accident" still remains our priority target.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Accidents	110	83	73	86	55	79	73	41	38	37
Man-Days Lost	1,385	13,22	1,077	1,486	1,103	1,380	1,462	633	922	925
Frequency Rate	33.26	25.07	22.40	25.98	15.8	25.05	17.03	13	10.14	9.9
Severity Rate	0.42	0.41	0.33	0.45	0.35	0.44	0.34	0.26	0.25	0.24
Fatal Accidents	Nil	Nil	Nil	Nil						

### WELFARE AND BENEFITS

The CEB prides itself highly in looking after the welfare of its workforce. In this respect, the necessary mechanism has been put in place for the provision of a wide range of benefits to employees. The organisation of sports activities is also a regular feature.

During the year 2011, employees were given the opportunity to take part in various sports activities such as Football, Badminton, Bowl Game, and Tennis. A Football tournament was also organised, which involved the participation of some 400 employees. Moreover, the CEB Football Teams participated in two regional tournaments and reached the quarter and semi-finals respectively.

# Information Technology/Management Information System



The CEB recognises that Information Technology (IT) is clearly shifting away from the traditional support function to the more mainstream and strategic function. Our vision is to create a “Connected Organisation” in which the different departments/sections communicate and work together more effectively, and where services are delivered to customers in a more accessible and timely manner.

To enable the CEB to make the best use of IT for its operations, control, and decision-making, and to achieve its vision and business objectives, a 3-Year Strategic Plan was devised and architected around the following strategic directions:

- **Programme 1 – Streamline and Automate Business Processes**  
Streamline and automate business processes for greater efficiency and effectiveness, better control, and improved decision-making.
- **Programme 2 – Build a Reliable Technical Infrastructure**  
Implement, operate and maintain the necessary technical infrastructure to support business applications and network services/applications.
- **Programme 3 – Ensure Security, Scalability and Availability IT Infrastructure and Applications**  
Ensure security, availability and continuity of IT Infrastructure and Applications.

- **Programme 4 – Attract, Develop and Retain IT Staff**  
Attract, train, develop and retain qualified, experienced and competent IT professionals to properly operate and support the increasingly complex and critical IT Infrastructure and Applications deployed at the CEB.

- **Programme 5 – Promote Acceptance and Usage of IT Applications**  
Develop and implement training programmes for CEB end-users to promote acceptability and usage of IT applications.

In line with the above Strategic Plan, during 2011, the CEB pursued its efforts towards the implementation of the different programmes mentioned therein.

## SETTING UP A RELIABLE TECHNICAL INFRASTRUCTURE

The CEB has successfully:

- revamped the Head-Office Local Area Network (LAN) through the implementation of core switching equipment and security equipment, such as firewall and intrusion detection/prevention system;
- re-designed and upgraded the Wide Area Connectivity (WAN) between the CEB Head-Office and its Sub-Offices/

Power Plants, including Rodrigues and a few offices of Mauritius Post Ltd and Central Water Authority.

These efforts were pursued during 2011. Steps to review and upgrade the Local Area Network (LAN) at CEB Sub-Offices were undertaken in two phases, namely:

- Phase 1 –Review and upgrade of the switching infrastructure; and
- Phase 2 –Review and upgrade of the cabling infrastructure.

Phase 1 was initiated in 2011 and is expected to be completed in 2012. Phase 2 depends on the progress accomplished with regard to the Sub-offices' renovation programme. It will be carried out only at Sub-Offices that are renovated.

#### **ENSURE SECURITY, SCALABILITY AND AVAILABILITY IT INFRASTRUCTURE AND APPLICATIONS**

Following the replacement of the old UPS by two new 3-phase 60 KVA UPS to cater for the increased load and future projects, the ageing air-conditioning system was replaced by two new air-conditioning systems of 90,000 BTU each during 2011.

During the last 2-3 years, a number of projects were implemented in order to build a reliable technical infrastructure and ensure security, scalability and availability of IT infrastructure and applications. The CEB is now progressively moving towards implementing projects aimed at streamlining and automating its business processes.

#### **SAP UPGRADE**

A major step was taken to upgrade the existing SAP 4.7 to later SAP ECC 6.0. Adoption of the new version entails the implementation of a number of functional enhancements, together with the acquisition of new servers. The contract for the upgrade was awarded to State Informatics Ltd/ Enteg Infotech Pvt Ltd.

This upgrade will enable the CEB to get the benefits of latest technology and new functionalities, while also reaping the advantages of higher stability and reliability of SAP ECC 6.0.

The upgrading will equally lay the foundation for greater value-adding as well as a higher level of computerisation for the deployment of more complex IT applications, earmarked in the IT Plan 2010-12, such as:

- Enterprise Asset Management (EAM);
- Enterprise Content Management (ECM);
- Data Warehousing (DW) and Business Intelligence (BI);

- Geographical Information System (GIS);
- Automated Meter Reading (AMR); and
- Computer-Aided Audit Tools and Technique (CAATTS).

The above-mentioned applications will extend the computerisation at the CEB from the current “mostly support functions” to “core functions”, and from meeting the current operational requirements to addressing management requirements for control, monitoring and decision-making.

This project shall be implemented during 2012.

#### **AUTOMATED METER READING (AMR)**

Automatic Meter Reading (AMR) is the technology of automatically collecting consumption, diagnostic, and status data from electric metering devices and transferring that data to a central database for billing, troubleshooting, and analysing.

The deployment of electronic meters at the CEB has made remote reading possible. During 2011, the Automated Meter Reading (AMR) was implemented and tested successfully on a pilot basis for around 200 customers. This number will be progressively increased in the near future to cover a significant number of CEB customers.

It is to be noted that the deployment of AMR will gradually eliminate the need for periodic trips to each physical location to read a meter, thereby increasing operational efficiencies. It will, as well, enable the detection of outages and the notification of tampering with meters.

#### **E-PMS**

The CEB has successfully developed a software application to support the implementation of Performance Management System (PMS) within the CEB.

The e-PMS Application enables the online definition of different roles and the association of Key Performance Indicators (KPI) and other evaluation criteria to the said roles. It supports three phases of the performance management cycle, namely Performance Planning, Mid-year Review and Year-end Evaluation.

The e-PMS Application has provided an easy-to-use, transparent, and objective means of setting and measuring employee performance at the CEB.



During the year under review, the CEB was actively involved in assessing the national electricity market evolution, evaluating alternative power-generation capacity, and analysing the electric network so as to sustainably secure the long-term least-cost electricity supply for the country.

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Despite the enduring difficult international context, which continued to impinge on the local economy, the demand for electricity maintained its steady growth. With on-going infrastructural development around the island, the electricity demand maintained an upward trend, albeit at a lower rate.

In this context, the Corporate Planning Division initiated and kick-started the planning of a number of strategic power projects to ensure the competitiveness and responsiveness of the utility in the face of emerging challenges.

## **DEMAND-SUPPLY BALANCE**

The CEB recognises that much effort is being made, in the context of the “*Maurice Ile Durable*” vision, to adopt energy conservation measures and promote energy efficiency. However, continuous monitoring and assessment of the local electricity market showed that the demand for electricity had continued to grow, but at a much slower rate than in the past decade.

Taking into account the prevailing and projected social and economic development of Mauritius, the CEB forecasted a peak demand of 414 MW for the year 2011. The effective peak demand was 412.49 MW and was recorded on 20 December 2011, thus confirming our expectations in the demand growth. According to this trend, it is foreseen that the peak demand would reach 430 MW, provided the

economic conditions in our main export markets do not deteriorate.

To ensure secure and reliable electricity supply to the country, with respect to the future expected demand, alternative energy supply strategies were formulated and evaluated, based on assumptions related to fuel availability and prices, market penetration rates of new technologies, new investment limits, environmental emissions, structure of energy/electricity markets, and global economic concerns.

The following projects were developed within the utility’s integrated planning framework, which also included contingency scenarios:

### **Landfill Gas to Energy Project**

After successful negotiations, the first phase of this clean energy generating power plant of 2 MW started its commercial operations on 3 November 2011. The Landfill Gas to Energy Project of Sotravic Ltd will not only reduce our dependence on imported fuels, but will also contribute to reduce greenhouse gas effect.

### **Fort Victoria Redevelopment Phase II**

Due to the considerable delay in the erection of a 110 MW Coal-Fired Power Plant at Pointe-aux-Caves, the contingency plan for the installation of four additional diesel generating

sets of 15 MW each at Fort Victoria Power Station was activated. The Phase II of the Fort Victoria Power Station redevelopment would be carried out on a fast-track basis, and the commissioning of the four new diesel units is planned for August 2012.

#### **Setting up of Wind Farm at Bigara**

Procedures were launched for the erection of a Wind Farm of 1.1 MW (4x275 kW) at Bigara, to further promote the penetration of renewable technologies in our power system.

An Interference Study was carried out by the consultancy firm Analysis Mason with a view to assessing the impact of the proposed Wind Farm on the highly sensitive communication infrastructures located on the site. The study was completed in April 2011. Subsequently, further discussions took place with all relevant stakeholders to clear out their concerns regarding the project.

#### **Expression of Interest for 100 MW Power Plant operating on Liquefied Natural Gas (LNG)**

In a quest to further promoting the use of clean electricity-generation technologies, an Expression of Interest (EOI) was launched in August 2011, with the objective of looking for eligible developers who could set up a 100 MW power plant based LNG technology in Combined Cycle mode. Eighteen promoters submitted their offers, which indicate the wide interest in the project. The next step would be to select a Consultant to carry out a feasibility study for this project.

#### **Consultancy Services for the Redevelopment of Saint Louis Power Station**

The redevelopment of Saint Louis Power Station forms part of the contingency plan of the CEB in response to the delay in the implementation of the CT Power 110 MW coal power plant. It is to be noted that the Saint Louis Power Station bears the required space to augment its generation capacity, after the retirement of the old Pielstick engines. Another important consideration is the potential impact on the environment. In this respect, the a Request for Proposal was floated in August 2011 with a view to selecting a Consultant for carrying out a redevelopment plan for the Saint Louis Power Station while, at the same time, taking into account the environmental aspects. After evaluation of the proposals, Consultant Mott MacDonald of Ireland was awarded the contract in December.

#### **Setting up of a Grid-Connected 10 MW Photovoltaic Farm**

In line with the national objective of encouraging the penetration of renewable resources and reducing our dependency on fossil fuels, a project was initiated for the

setting up of a grid-connected solar photovoltaic (PV) plant with a capacity ranging between 1-2 MW, inclusive. The total capacity for this project shall be limited to 10 MW. Assistance was obtained from EDF Reunion for the preparation of the Request for Proposal and same would be floated in January 2012.

#### **Setting up of Wind Farm at Curepipe Point**

The closing date for the Request for Proposal (RFP) in relation to the above project was set for April 2011. From a list of nine pre-selected bidders, only two submitted their proposals for this RFP. After evaluation of the two bids, Consortium Padgreen/Suzlon was selected as the Preferred Bidder. A letter of interest was subsequently issued to the latter.

#### **Aerowatt Wind Farm**

Another project, which was the subject of negotiations in 2011, was the setting up of a 18 MW Wind Farm by Aerowatt at Plaines Des Roches. The CEB's Negotiation Panel had several discussion meetings with the promoter in view of finalising an Energy Supply and Purchase Agreement (ESPA). There still exist some pending issues, and it is anticipated that the ESPA would be finalised in 2012.

#### **TRANSMISSION AND DISTRIBUTION NETWORK PLANNING**

The following in-house key studies were conducted in 2011, in connection with planning of the Transmission and Distribution network:

- Interconnection Study of the proposed 18 MW Aerowatt Wind Farm at Plaine des Roches;
- System Study to economically provide network services with a view to meeting the heating-up power demand in the Ebène, Highlands, and Bagatelle triangle;
- Power Evacuation and Delivery Study in connection with the Neotown Real Estate Project at Les Salines, where a 66 kV Substation is contemplated;
- Interconnection Study in relation to the setting up of a 20-30 MW Wind Farm Power Project at Curepipe Point;
- Interconnection Study in relation the proposed 1.1 MW Wind Park at Bigara; and
- Interconnection Study for the 3 MW Landfill Gas Generation Plant at Mare Chicose.

#### **DEMAND SIDE MANAGEMENT**

As a forward-looking utility, the CEB attaches great importance to Demand Side Management (DSM). Various policies and measures are being implemented to control, influence and generally reduce electricity demand, while also helping the country in the fight against climate change and greenhouse gas emissions.

The main DSM initiatives for the year 2011 are detailed hereunder.

### Small Scale Distributed Generation (SSDG)

With a view to promoting clean energy, and in line with its vision to democratise the electricity grid, the CEB, in collaboration with the Ministry of Energy and Public Utilities came forward with a project whereby Small Independent Power Producers (SIPPs) were given the opportunity to produce their own electricity from renewable sources, and export any surplus to the Grid.

For this project to be feasible a Grid Code was established so as to allow the integration of photovoltaic, wind turbine and mini-hydro technologies within the Grid. The Grid Code defines all the requirements relevant to the performance, operation, testing, safety, and maintenance of distributed generation connected to CEB's low voltage (LV) network. Furthermore, it sets out the rights, responsibilities and conduct of all parties having access to the power system by producing electricity on renewable Small Scale Distributed Generators. Another crucial aspect for making this project successful was the definition of attractive Feed-In tariffs that would be paid to the SIPPs for the energy exported to the Grid.

The first phase of the SSDG Project was launched on 9 December 2010 for a total capacity of 2 MW. As at the closing date of 6 May 2011, 271 applications representing a total capacity of 3.2 MW were obtained, as shown hereunder.

Category	No. of Applications	Capacity (MW)
Residential	196	1.2
Other (Commercial & Industrial)	75	2.0
<b>Total</b>	<b>271</b>	<b>3.2</b>

After processing of the applications, only 164 Residential, 1 Industrial, and 39 Commercial applications were retained, representing a total capacity of about 2 MW.

A summary of the status of the applications, as at the close of the year 2011 and at the different stages of the process flow, is given hereafter.

Description	Number	Equivalent capacity
Applications within 2 MW limit	204	1993.19 kW
Permits granted	112	1212.75 kW
Installations commissioned	7	68.75 kW
Installations tested	1	10 kW
Energy exported by SIPPs (December 2011)		1924 (kWh)

Following the Budget Speech 2012, the second phase of the SSDG project, for an additional capacity of 1 MW, was launched in December 2011. Out of this 1 MW, a capacity of 100 kW was earmarked for the residents of Rodrigues.

Moreover, and following representations made by applicants from Public, Educational, Religious, and Charitable (PERC) institutions, the Board decided to earmark a total capacity of 2 MW for these customer categories. However, no Feed-In tariffs would be applicable. As at the end of the year 2011, some 78 applications were received from PERC institutions, corresponding to a total capacity of 891 kW.

### Energy Efficiency

A project entitled "Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings" was initiated by the UNDP-GEF in 2009, under the direction of the Ministry of Energy and Public Utilities. A National Steering Committee (NSC), comprising all stakeholders, was constituted to study the different parameters of the project, including implementation issues. The CEB, being a major stakeholder, has been an active member in the NSC.

The major areas being examined by the NSC are as follows:

- **Energy Efficiency Bill and Building Control Bill**

The main objective of these two Bills is to improve the efficiency of energy use in Mauritius and, thereby, contribute to sustainable development and protection of the environment.

- **Energy Efficiency Code for Buildings**

The purpose of this code is to encourage the design, construction, operation, and maintenance of new and existing buildings in a manner that reduces energy consumption through passive design technologies for solar design and via cooling strategies. It also provides guidance for energy-efficient building design and encourages the application

of renewable energy in new buildings. Furthermore, it sets energy-efficient standards for mechanical and electrical building services, and construction solutions.

- **Energy Efficiency Standards and Labelling for Household Appliances**

The establishment of Minimum Energy Performance Standards (MEPS) for household appliances is the core objective of this initiative. The MEPS aims at minimising the importation and sale of non-branded low-quality appliances, and eventually transform the appliance market in Mauritius into an efficient one. Moreover, the implementation of a labelling scheme will provide customers with the data necessary for making informed purchases.

- **Energy Audit Management Scheme**

This scheme aims at creating a market for energy efficiency of non-residential buildings, both existing and future. An Energy Audit Management tool has been developed specifically for Mauritius. It will determine how well a building is performing relative to its capabilities, and assess the impact of improvement measures.

During 2011, much progress was achieved regarding the above-mentioned initiatives.

## **ENVIRONMENTAL MANAGEMENT**

As well as planning for future electricity generation expansion, due attention was given to protection of the environment and to compliance with environmental regulations. In this respect, the following initiatives were taken during the review period:

- Securing the EIA license to construct a mini-hydro power station at Midlands Dam, following the submission of the internally-prepared EIA Report to the Ministry of Environment and Sustainable Development;
- Preparation of the EIA study for submission to the authorities in connection with the construction of a Wind Farm at Bigara; and
- Conduct of an EIA study at Fort William regarding the proposed increase in storage capacity for heavy fuel oil (HFO). The EIA License was successfully obtained and a storage tank with a capacity of 5000m<sup>3</sup> and the associated HFO pipeline are due to be constructed in 2012.

It is to be noted that the national legislation, with regard to the mitigation of environmental impact, has been reinforced to bring in the concept of sustainability and environment stewardship. In this respect, the CEB will continue to oversee the implementation of necessary measures to ensure that all its power generation activities are operating within the

limits of the environmental standards and guidelines.

With a view to addressing the pressing needs of the environmental regulations on a long term basis, the CEB will consider implementing the Environmental Management System for its power generation plants, in line with the international standards of ISO 14001.



## PRODUCTION

### Demand Pattern (Energy and Power)

The total energy generated for 2011 was 33.1 GWh, representing a rise of 3.1 % over year 2010 (32.1 GWh). The bulk of the energy (91.48 %) was produced from fuel oil-based power stations. The wind turbines (both Grenade and Trèfles Wind Parks) contributed to the remaining 8.52%.

Power Station	Energy Source	Output (kWh)	(%)
Port Mathurin	Fuel Oil and Diesel Oil	9,502,526	28.69
Pointe Monnier	Fuel Oil and Diesel Oil	20,800,190	62.79
Trèfles	Wind	26,800	0.81
Grenade	Wind	2,555,390	7.71
<b>Total</b>		<b>33,127,906</b>	<b>100</b>

The maximum power demand was 6.39 MW and was recorded on 31 December. This represents an increase of 4.75% over the year 2010 (6.1 MW).

### Operation and Maintenance

#### Port Mathurin

The MAN Engines (DE 7, DE8, and DE9) cumulated a total of 94,849, 89,055, and 83,329 running hours respectively. The total energy generated was 9.25 GWh, representing 27.92% of the overall production.

Polishing of all crankpins was carried out on engines G7, G8 and G9 in April 2011 by Contractor ABC Engineering.

On their part, the MWM engines were utilised to a strict minimum and mainly in cases of emergency, owing to the high costs associated with operating on expensive light fuel oil. The total units generated by the MWM engines were 0.25 GWh, representing 0.77 % of the total production.

#### Pointe Monnier

Both engines (DE1 and DE2) performed satisfactorily, clocking 51,091 and 51,817 running hours respectively. The total energy generated was 20.8 GWh, equivalent to 62.79% of the total energy generated. Some 48 000 hours' overhaul maintenance was carried out on both DE 1 and DE 2 in August and September, respectively.

#### Grenade

The four units installed at Grenade generated a total of 2.56 GWh in 2011, representing 7.71% of the overall production for the year. It is to be noted that, since their commissioning, Units 1, 2, 3 and 4 have cumulated a total running hours of 18,645, 15,690, 9,484 and 9,657, respectively.

Scheduled outages were carried out on Wind Turbines 1 and 2 in June and December 2011 to perform the planned 6-months' maintenance. The same exercise was carried out on Wind Turbines 3 and 4 in February and August 2011.

#### Trèfles

All three units at Trèfles clocked an average of 48,000 running hours since their commissioning. The total energy produced during 2011 was 0.27 GWh, representing 0.81 % of the total production.

Maintenance was carried on all three units during the month

of March and September. An unscheduled outage occurred on Wind Turbine 3 from 31 January to 19 April, due to a faulty yaw-bearing.

### Main Projects

The main milestone of the year was the award of the contract for Pointe Monnier Phase 2 Extension Project to contractor BWSC in September. The other projects that were successfully implemented in 2011 include:

- The installation of waterproofing at the foot of three HFO Storage tanks at Pointe Monnier Power Station;
- Concrete flooring within D.O tank farm at Port Mathurin
- The refurbishment of the existing rain water harvesting system at Port Mathurin Power Station;
- The replacement of radiator coolers on both MWM Units G5 and G6 at Port Mathurin Power Station; and
- The replacement of corroded HT and LT cooling water pipes on engine G9 at Port Mathurin Power Station.

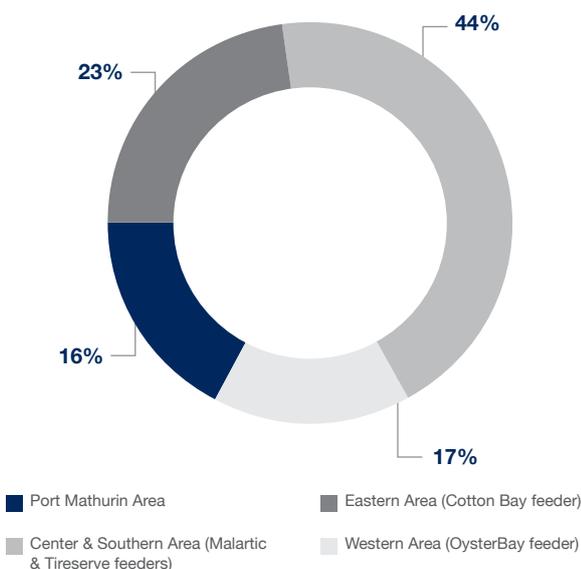
## DISTRIBUTION

### System Demand

The maximum power demand in 2011 was 6.39 MW and was recorded on 31 December 2011. The average load factor of the system for the year was 38%.

The load distribution, on a regional basis, at the time of the highest demand on 31 December is shown hereunder:

Load Distribution Islandwide for 31 December 2011



### System Performance

The overall performance of the distribution network was satisfactory in 2011.

### HV Network

The 22 kV distribution network was extended by 1.09 km to reach 149.18 km.

With a view to reducing the number of faults, caused by burnt cross-arms and poles in areas exposed to a high degree of salinity in the atmosphere, the CEB has embarked on a programme for the gradual replacement of 22 kV pin-type insulators by 33 kV insulators. In a similar vein, HT rotten poles, more than 20 years old, are also being replaced.

In order to solve the problem of feeder tripping, caused by bats, 0.35 km of HT bare conductors were replaced by insulated cable in the region of Latanier.

### LV Network

The low voltage network was extended by 0.9 km to reach 343.82 km.

### Installed Transformer Capacity

The total number of distribution transformers at the end of the year 2011 totalled 152, with an installed capacity of 13,825 KVA.

Feeders	Distribution Transformers					Total
	Ratings (KVA)					
	25	50	100	150	250	
Malartic	3	16	11	5	0	35
Oyster Bay	7	14	7	3	4	35
Cotton Bay	5	21	10	2	2	40
Port Mathurin	-	1	8	4	4	17
Ti Reserve	2	9	3	9	2	25
<b>Total</b>	<b>17</b>	<b>61</b>	<b>39</b>	<b>23</b>	<b>12</b>	<b>152</b>

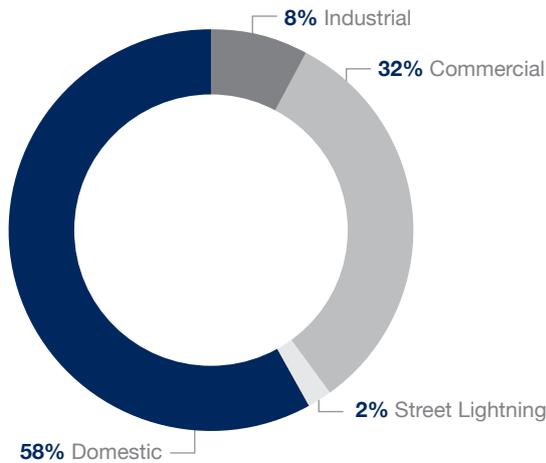
## CUSTOMER SERVICES

### Sales and Customers

The total number of customers, as at 31 December 2011, was 12,464, compared to 12,166 for the year 2010, representing an increase of approximately 2 %.

The sales of electricity totalled 26,858,539 kWh for the same period, representing an increase of 2% compared to year 2010.

#### Sales of Electricity ( Kwh)



## SAFETY AND HEALTH

During the year under review, one Safety and Health Officer was delegated to Rodrigues on a two-week assignment to inspect various work sites and carry out accident investigations, as well as train the personnel in safe methods of work and in the revised Transmission & Distribution (T&D) Safety Rules. A number of employees were also trained in how to carry out a proper and systematic risk assessment at the workplace.

## FINANCIAL PERFORMANCE

At the end of Financial Year 2011, the Rodrigues Branch made a deficit of Rs 70.36 M, compared to a deficit of Rs 64.6 M for 2010.

## FUTURE PROJECTS

Several projects have been earmarked for the near future with a view to meeting the increasing demand and ensuring the reliability of supply. They include:

- Extension of Pointe Monnier Power Station Phase 2 (On-going);
- Replacement of fence barrier at Trèfles Wind Farm and Pointe Monnier Power Station;
- Construction of a concrete basement at the foot

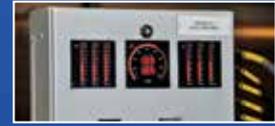
- of each wind turbine at Trèfles to facilitate the erection of scaffoldings for heavy-duty maintenance works;
- Erection of Ring Cotton Bay/Mourouk (Phase 2);
- Refurbishment of Malartic Feeder;
- Extension of network to supply new hotels;
- Upgrading of 22 kV Switchgears;
- Refurbishment of Part(1.5 km) of Oyster Bay Feeder;
- Extension of network to supply “Morcellement “projects; and
- Re-conductoring of LV network (about 1 km) island-wide.





# **MANAGEMENT DISCUSSION AND ANALYSIS**

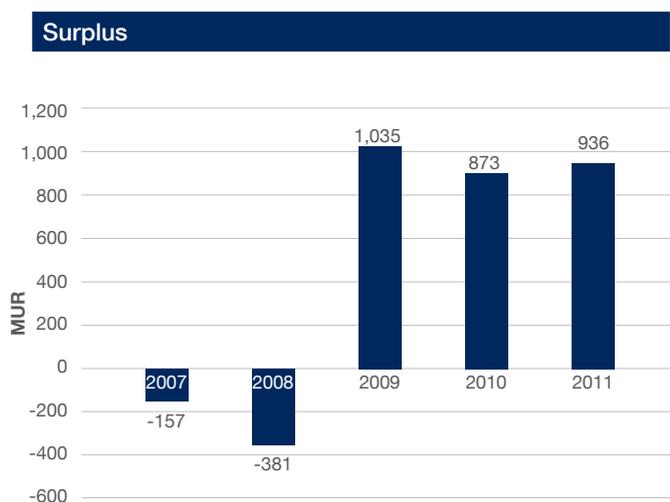






The Financial Statements of the CEB for the year ended 31 December 2011 are given on pages 69 to 95 and have been prepared, for the first time, in accordance with the International Public Sector Accounting Standards (IPSAS).

For the financial year ended 31 December 2011, the CEB reported a surplus of MUR 936 M, compared to a restated surplus of MUR 873 M for the preceding year. The trend in profitability, as shown below, gives an indication of the financial soundness of the CEB for the last three years.



The favourable financial result for the year 2011 has been achieved despite the uncertain macroeconomic environment prevailing at international level, triggered by the Euro zone crisis. Compared to the preceding year, the total revenue for the year 2011 increased by around 9.5% to attain MUR 13.4 billion, resulting mainly from increased revenue from the sales of electricity. In fact, an increase of 2.5% in total units of electricity sold, coupled with the average increase of

10% in electricity tariff as from December 2010, contributed to the favourable result in 2011.

The total expenditure reached MUR 12.5 billion, representing an increase of 9.6% over the preceding year. This was mainly due to the increase in the level of activity and in operating costs. Indeed, in addition to the increase in the units of electricity generated to cater for increasing demand, the prices of coal and fuel oil went up by an average of 22% and 33% respectively.

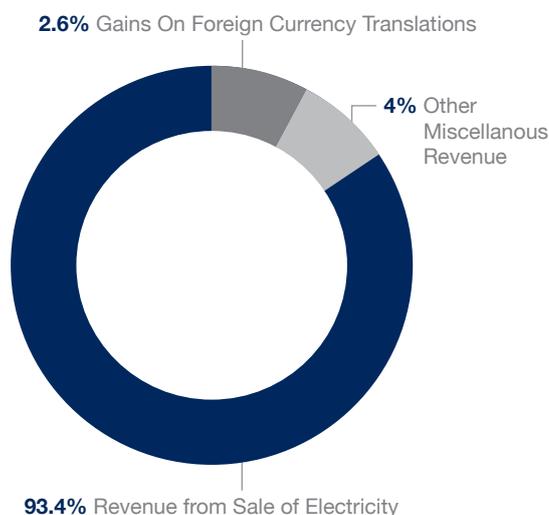
On the other hand, the depreciation of the EURO during the year 2011 and its rate at year-end contributed to some gain in foreign currency translation. With regard to finance charges, these were maintained at almost the same level as in 2010 since the deteriorating economic growth worldwide had prompted Central Banks to intervene on the money markets, stimulating economic growth by maintaining interest rates at low levels.

It is worth noting that the main costs of the CEB are driven by external factors (fuel oil price, coal price, exchange rates, interest rates and inflation), over which the utility has little control. As such, in the event of an unfavourable external environment, the profitability level can drop rapidly.

## REVENUE

The total revenue for the year amounted to MUR 13,448 M, with 93.4% relating to sale of electricity.

## Total Revenue - Year 2011



### SALE OF ELECTRICITY

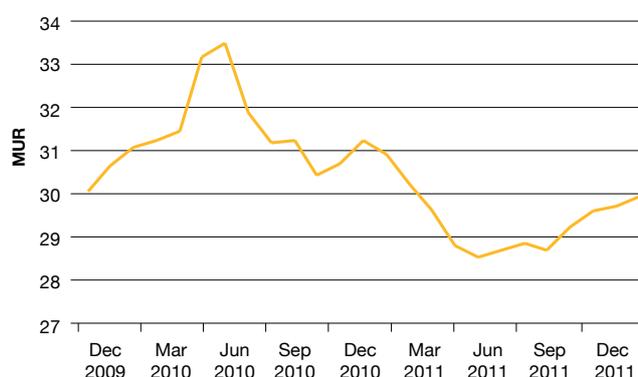
A breakdown of revenue from main customer categories during 2011, as shown below, indicates that the highest contribution in total income came from commercial customers (46%) at an average unit price of MUR 7.34 per kWh. On the other hand, the average unit revenue which was as low as MUR 2.82 per kWh for the irrigation customers and MUR 3.00 per kWh for the EPZ respectively did not even cover the average cost of generation, let alone administrative expenses and finance charges and where applicable transmission and distribution costs.

Customer Category	No. of Customers	Units Sold (kWh)	Revenue MUR	Average Price Per Unit MUR
Commercial	37,440	795,274,623	5,838,968,542	7.34
Domestic	370,696	725,544,598	4,108,802,876	5.66
General Industries	6,118	370,728,509	1,449,420,446	3.91
EPZ	150	243,650,793	732,167,177	3.00
Street Lighting	461	25,034,572	195,708,532	7.82
Freeport Licensees	11	39,184,117	152,197,970	3.88
Irrigation	528	22,511,516	63,501,643	2.82
Sugar Factories	9	3,361,103	17,679,402	5.26
Others	118	220,882	2,758,815	12.49

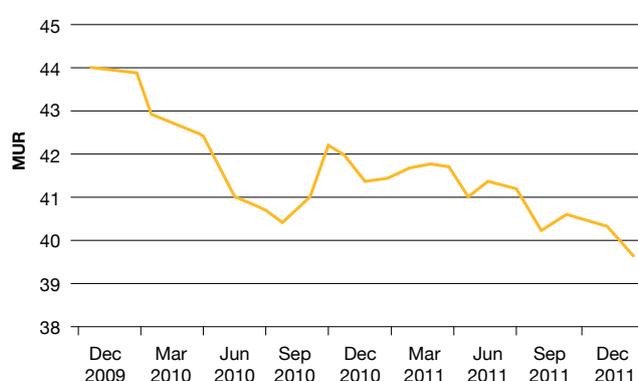
### FOREIGN CURRENCY TRANSLATIONS

The major foreign currencies in which the CEB conducts its transactions are the USD and the EURO. The movement of the MUR against the USD and the EURO during the year 2010 and 2011 is shown below.

## Average MUR/USD - 2010 & 2011



## Average MUR/EURO - 2010 & 2011



As shown, both the USD and the EURO rates have, on average, been lower in 2011 as compared to the rates in 2010.

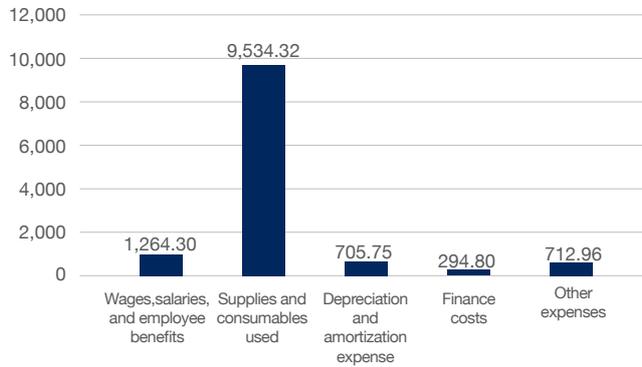
As a result, the CEB made a gain on foreign exchange translations amounting to MUR 346.7 M, representing an increase of around 37% over the previous year.

	2011	2010
Realised	Rs 194.2M	Rs 170.4M
Unrealised	Rs 152.5M	Rs 81.5M
<b>Total</b>	<b>Rs 346.7M</b>	<b>Rs 251.9M</b>

### TOTAL REVENUE EXPENDITURE

For the year ending 31 December 2011, the total expenditure of the CEB amounted to MUR 12,512 M, out of which some 76% accounted for supplies and consumables.

### Total Revenue Expenditure

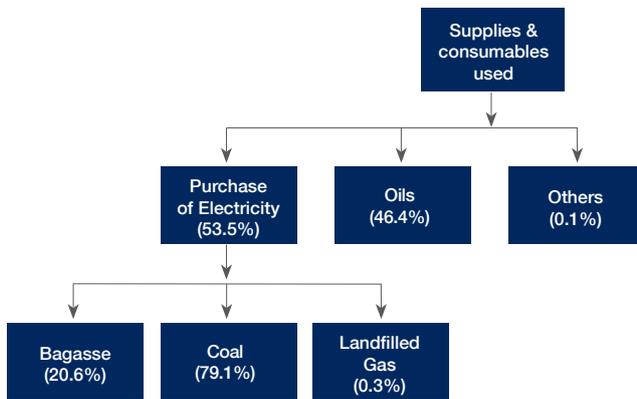


### Average price of coal - USD/MT



### SUPPLIES AND CONSUMABLES

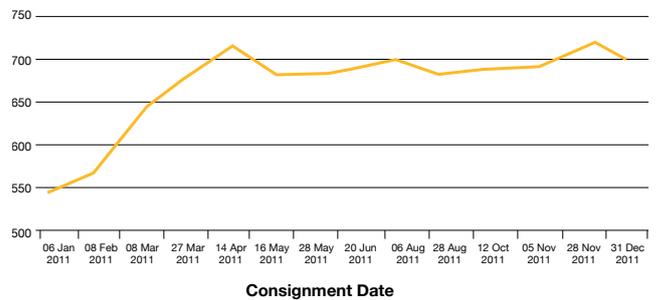
The CEB had spent more than 76% of its total expenditure in the procurement of supplies and consumables for the year 2011 for the generation of electricity as shown below.



### FUEL OIL PRICES

The price of fuel oil was much higher in 2011 as compared to 2010. The CIF prices per metric ton of the main types of fuel oil used by the CEB, namely 180CST and 380 CST, increased by 33% to reach USD 670.2 and USD 657 respectively. The fuel oil price movements and the average prices are given below:

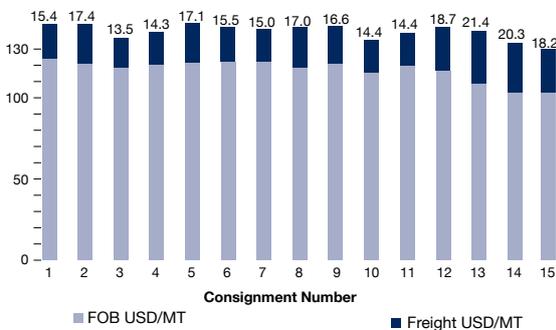
### Fuel Oil 180 CST USD/MT (CIF)



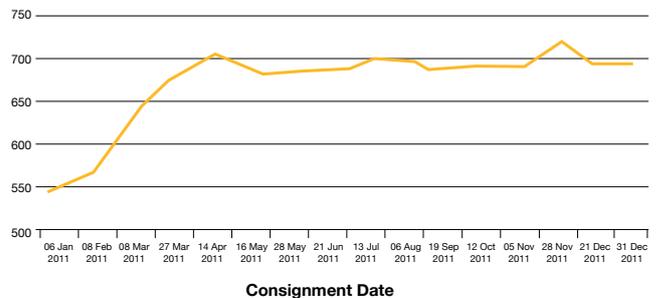
### COAL

The prices of coal paid by the CEB during the year 2011, as embedded in the purchase price of electricity from Independent Power Producers, are depicted below.

### Coal Price USD/MT -2011

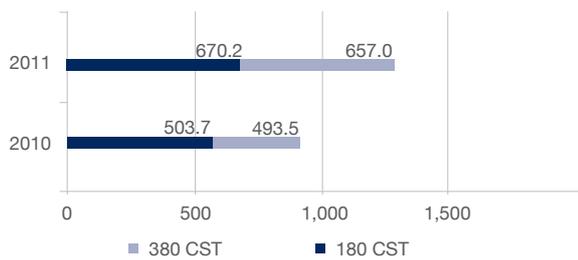


### Fuel Oil 380 CST USD/MT (CIF)



The average coal price per metric ton paid in 2011 was USD 133.96 compared to USD 110.09 in 2010, representing an increase of 22%.

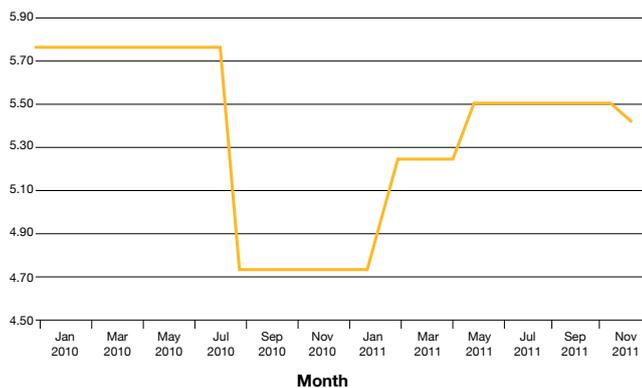
### Average CIF Cost (USD/MT) Of Fuel oil



### FINANCE COSTS

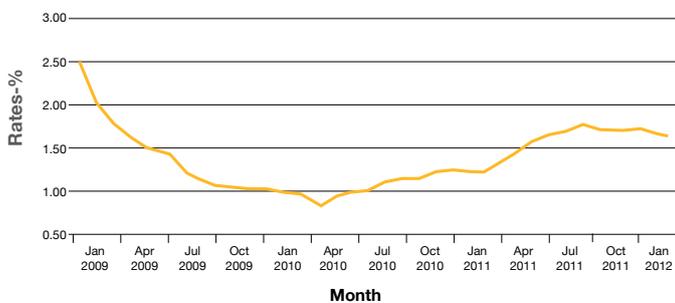
The Repo rate, the Euribor, and the Libor have a significant influence on the finance costs of the CEB. During 2011, the Repo Rate varied between 4.75% and 5.5%, which is lower than the rate of 5.75% that prevailed during the most part of the year 2010.

### Repo rate - 2010/2011 (%)

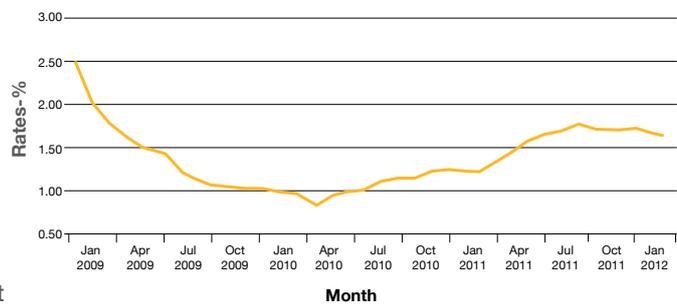


With regard to movements in foreign interest rates, both the average 6-month Euribor and the average 6-month Libor fluctuated significantly, as compared to the two preceding years as shown below.

### Euribor 6 months rates



### US libor 6 months rates



### INFLATION

The costs of operations were adversely affected by the rise in prices of goods and services, both on the local and foreign markets. For the year 2011, the inflation rate in Mauritius was 6.5%, compared to 2.9% for the year 2010.

### ENHANCING FINANCIAL RISK MANAGEMENT

The risk management programme, undertaken by the CEB since the last decade or so, was strengthened in 2011 with a view to mitigating the risks resulting from the economic downturn caused by the Eurozone crisis. Focus was maintained on key risks areas relating to interest rates, exchange rates, cash flow, and procurement of goods and services.

### Interest Rate Risk

In view of its regular overdrafts and due to a sizable proportion of foreign loans which are subject to floating interest rates, the CEB is highly sensitive to adverse movements in interest rates, both domestic and international.

During 2011, opportunities to refinance the existing loans with better terms were continuously sought with a view to obtaining lower interest rates, thereby contributing towards the reduction of finance costs. The CEB portfolio was also reviewed so as to maintain a fair balance of credit facilities and loans with fixed and variable interest rates.

### Exchange Rate Risk

To mitigate foreign exchange risks, forward purchases of foreign exchange were undertaken on a regular basis during 2011 through the bidding process. This yielded positive results owing to the fact that the local market for foreign exchange proved to be quite favourable. Moreover, it was decided to review of the currency composition of the CEB debt portfolio on a regular basis, taking into account the overall payment obligations in different foreign currencies.

**Liquidity Risk**

The management of liquidity risk was further improved through the preparation and review of regular short and medium-term cash flow forecasts. Proactive measures were also taken to ensure that funds were available to meet the cash flow requirements of the organisation. This was achieved through the efficient maintenance and management of various credit line facilities made available to the CEB.

**Procurement Risk**

The organisation's procurement policy and procedures were further streamlined to be in compliance with the Public Procurement Act and other relevant regulations. The CEB procurement framework lay emphasis on added transparency, fairness and impartiality, competitiveness, security, and confidentiality.

During the review period, intensive training was provided to a number of staff who were directly involved in the procurement process. The training aimed at keeping them abreast of the various legal provisions governing procurement of goods or services, while improving their ability to perform effectively within the legal framework.

**MEDIUM TERM OUTLOOK**

The uncertainty shrouding the price of our main cost elements is very problematic as it can shoot up our profit or loss to record levels within a very short period of time.

The lack of visibility of future oil prices will no doubt accelerate the drive for renewable energy sources and the implementation of demand side management initiatives, which are already well under way. In fact, the CEB has already implemented the Small Scale Distributed Generation (SSDG) project whereby Small Independent Power Producers are given the opportunity to produce their own electricity from renewable sources, and export any surplus to the Grid. Many larger scale projects from private promoters pertaining to the setting up of wind and photovoltaic farms are also in the pipeline.

Nonetheless, in view of the limits to energy saving and due to the intermittent nature of renewable energy, fossil fuels are likely to remain an important source of energy supply, albeit with a lower share.





# FINANCIAL STATEMENTS





# **Report of the Director of Audit**

On the Financial Statements of the Central Electricity Board  
for the year ended 31 December 2011

# Report of the Director of Audit to the Board of the Central Electricity Board

## Report on the financial statements

I have audited the financial statements of the Central Electricity Board on pages 69 to 95 which comprise the statement of financial position as of 31 December 2011, and the statement of financial performance, statement of changes in net assets/equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory information.

### **Management's responsibility for the financial statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the international Public Sector Accounting Standards. This responsibility includes: designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

### **Auditor's responsibility**

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with International Standards of Supreme Audit Institutions. Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of the accounting principles used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a reasonable basis for my audit opinion.

## Opinion

In my opinion, the financial statements on pages 69 to 95 give a true and fair view of the financial position of the Central Electricity Board as of 31 December 2011, and of its financial performance and its cash flows for the year then ended, in accordance with the International Public Sector Accounting Standards.

## Report on other legal and regulatory requirements

### **Management's responsibility**

In addition to the responsibility for the preparation and presentation of the financial statements described above, management is also responsible for ensuring that the activities, financial transactions and information reflected in the financial statements are in compliance with the laws and authorities which govern them.

### **Auditor's responsibility**

In addition to the responsibility to express an opinion on the financial statements described above, my responsibility includes expressing an opinion on whether the activities, financial transactions and information reflected in the financial statements are, in all material respects, in compliance with the laws and authorities which govern them.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

## Opinion

### **Statutory Bodies (Accounts and Audit) Act**

The Board submitted the approved 2011 financial statements for examination on 27 April 2012. Following examination of the financial statements, various amendments were required. The final amended financial statements were received at my office on 11 September 2013.

In my opinion, except for the late submission of the financial statements within the statutory date limit, in all material respects, the activities, financial transactions and information reflected in the financial statements are in compliance with the Statutory Bodies (Accounts and Audit) Act.

### **Public Procurement Act**

The Central Electricity Board is responsible for the planning and conduct of its procurement. It is also responsible for defining and choosing the appropriate method of procurement and contract type in accordance with the provisions of the Act and relevant regulations. My responsibility is to report on whether the provisions of part V of the Act regarding the bidding process have been complied with.

In my opinion, the provisions of Part V of the Act have been complied with as far as it appears from my examination of the relevant records.



**Dr R. JUGURNATH**  
Director of Audit

National Audit Office  
Level 14, Air Mauritius Centre  
President John Kennedy Street  
Port Louis

9 October 2013

# Statement of Financial Position

as at 31 December 2011

		2011	2010 Restated
<b>ASSETS</b>	<b>Notes</b>	<b>Rs</b>	<b>Rs</b>
<b>Current Assets</b>			
Cash and cash equivalents	2	821,706,256	305,122,400
Receivables	3	2,597,016,472	2,473,396,927
Inventories	4	1,289,353,777	1,156,510,457
Prepayments	5	2,575,218	2,553,175
		<b>4,710,651,723</b>	<b>3,937,582,959</b>
<b>Non-current assets</b>			
Receivables	3	36,253,545	38,980,613
Other financial assets	6	1,000,000	1,000,000
Infrastructure, plant and equipment	7	20,431,569,735	16,153,224,528
Land and buildings	8	541,867,447	457,502,465
Intangible assets	9	46,742,706	-
		<b>21,057,433,433</b>	<b>16,650,707,606</b>
<b>Total Assets</b>		<b>25,768,085,156</b>	<b>20,588,290,565</b>
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Payables	10	2,543,348,155	1,751,025,231
Short-term borrowings	11	801,504,025	832,197,472
Current portion of long-term borrowings	12	617,445,509	1,238,463,579
Short-term provisions	13	33,560,233	117,263,247
		<b>3,995,857,922</b>	<b>3,938,949,529</b>
<b>Non-current liabilities</b>			
Payables	10	1,126,862,780	992,624,154
Long-term borrowings	12	6,355,341,936	4,606,698,890
Long-term provisions	13	233,253,731	154,880,363
Employee benefits	14	1,746,186,000	1,659,150,000
		<b>9,461,644,447</b>	<b>7,413,353,407</b>
<b>Total liabilities</b>		<b>13,457,502,369</b>	<b>11,352,302,936</b>
<b>Net assets</b>		<b>12,310,582,788</b>	<b>9,235,987,629</b>
<b>NET ASSETS/EQUITY</b>			
Capital contribution	15	670,856,196	670,856,196
Reserves		6,363,284,011	4,591,553,486
Accumulated surpluses		5,276,442,581	3,973,577,947
<b>Total net assets/equity</b>		<b>12,310,582,788</b>	<b>9,235,987,629</b>



**B. Narro**  
Chairperson



**S. Appanah (Mrs.)**  
Board Member

# Statement of Financial Performance

as at 31 December 2011

		2011	2010 Restated
	Notes	Rs	Rs
<b>Revenue</b>			
Fee, fines, penalties and licenses	16	213,245,781	204,690,950
Revenue from exchange transactions	17	12,627,827,350	11,609,380,288
Other revenue	18	607,076,240	468,953,699
<b>Total Revenue</b>		<b>13,448,149,371</b>	<b>12,283,024,937</b>
<b>Expenses</b>			
Wages, salaries, and employee benefits	19	1,264,300,794	1,363,075,986
Supplies and consumables used	20	9,534,324,496	8,277,569,965
Depreciation and amortization expense	21	705,752,501	914,180,856
Other expenses	22	712,961,927	562,940,603
Finance costs	23	294,795,185	292,398,146
<b>Total Expenses</b>		<b>12,512,134,903</b>	<b>11,410,165,556</b>
<b>Surplus for the period</b>		<b>936,014,468</b>	<b>872,859,381</b>

# Statement of Changes in Net Assets/Equity

for the year ended 31 December 2011

	Contributed Capital	Revaluation Reserve	Accumulated Surpluses	Total
<b>Balance as at December 31, 2009</b>	<b>670,856,196</b>	<b>5,001,351,159</b>	<b>2,605,149,034</b>	<b>8,277,356,389</b>
Depreciation Adjustment	-	(409,797,673)	409,797,673	-
Other Adjustment	-	-	85,771,858	85,771,858
Surplus for the period	-	-	872,859,381	872,859,381
<b>Balance at December 31, 2010 Carried forward</b>	<b>670,856,196</b>	<b>4,591,553,486</b>	<b>3,973,577,946</b>	<b>9,235,987,629</b>
<b>Balance at December 31, 2010 Brought forward</b>	<b>670,856,196</b>	<b>4,591,553,486</b>	<b>3,973,577,946</b>	<b>9,235,987,629</b>
Gain on revaluation	-	2,122,329,686	-	<b>2,122,329,686</b>
Depreciation Adjustment	-	(350,599,162)	350,599,162	-
Other Adjustment	-	-	16,251,005	<b>16,251,005</b>
Surplus for the period	-	-	936,014,468	<b>936,014,468</b>
<b>Balance at December 31, 2011</b>	<b>670,856,196</b>	<b>6,363,284,011</b>	<b>5,276,442,581</b>	<b>12,310,582,788</b>

# Cash Flow Statement

for the year ended 31 December 2011

	2011	2010 Restated		Total
	Rs	Rs	Rs	Rs
<b>Cash flows from Operating Activities</b>				
<b>Profit / (Deficit) for the year</b>	-	936,014,468	-	872,859,381
<b>Adjustment for:</b>				
Depreciation	705,752,501	-	930,431,861	-
Exchange difference	(152,463,611)	-	(81,469,138)	-
Finance costs	294,795,185	-	292,398,146	-
Amortization of capital contribution	(243,188,727)	-	(208,413,116)	-
Investment Income	(17,191,281)	-	(8,650,691)	-
Provision for pension costs	87,036,000	674,740,067	106,259,000	1,030,556,062
<b>Operating surplus before working capital changes</b>	-	<b>1,610,754,535</b>	-	<b>1,903,415,443</b>
<b>Changes in operating assets and liabilities</b>				
(Increase) in inventories	(132,843,321)	-	(95,332,304)	-
(Increase) in receivables	(120,914,520)	-	(89,077,118)	-
Increase in accounts payables	825,517,973	571,760,133	172,699,035	(11,710,387)
<b>Cash from operating activities</b>	-	<b>2,182,514,668</b>	-	<b>1,891,705,056</b>
<b>Returns from investments and servicing of finance</b>				
Interest paid	-	(294,795,185)	-	(292,398,146)
<b>Net cash from operating activities</b>	-	<b>1,887,719,483</b>	-	<b>1,599,306,911</b>
<b>Cash flows from Investing Activities</b>				
Interest received	17,191,281	-	8,650,691	-
Acquisition of tangible fixed assets	(2,637,722,370)	-	(1,999,194,557)	-
	-	<b>(2,620,531,089)</b>	-	<b>(1,990,543,866)</b>
<b>Cash flows from Financing Activities</b>				
Loans received	2,417,307,158	-	2,098,975,346	-
Loans repaid	(1,080,141,644)	-	(1,378,253,426)	-
	-	<b>1,337,165,514</b>	-	<b>720,721,920</b>
Foreign Exchange Adjustment		(57,076,604)	-	8,093,161
	-	<b>547,277,304</b>	-	<b>337,578,126</b>
<b>Net change in cash and cash equivalents</b>				
Cash and Cash equivalents as at 1 January	(527,075,073)	-	(864,653,199)	-
<b>Cash and cash equivalents as at 31 December</b>	20,202,231	-	(527,075,073)	-
	-	<b>547,277,304</b>	-	<b>337,578,126</b>

# Notes to the Financial Statements

for the year ended 31 December 2011

## 1. (a) Legal Form and Activities

The Central Electricity Board (CEB) is a parastatal body wholly owned by the Government of Mauritius and reporting to the Ministry of Energy and Public Utilities. Established in 1952 and empowered by the *Central Electricity Board Act* of 25 January 1964, CEB's business is to "prepare and carry out development schemes with the general object of promoting, coordinating and improving the generation, transmission, distribution and sale of electricity" in Mauritius and Rodrigues Island.

The CEB's registered office and principal place of business is Royal Road, Curepipe.

## (b) Statement of Compliance

The Financial Statements have been prepared in compliance with the accounting requirements of the International Public Sector Accounting Standards (IPSAS) and with the early application of IPSAS 28, IPSAS 29 & IPSAS 30.

## (c) Summary Of Significant Accounting Policies

A summary of the significant accounting policies, all of which have been applied consistently throughout the year is set out below:

### (i) Basis of Accounting

The Financial Statements have been prepared on a going concern basis. Except where otherwise stated, the historical cost has been used in the preparation of the financial statements.

### (ii) Comparative Figures

Comparative figures have been restated where necessary.

### (iii) Revenue recognition

Revenue comprises income from the sale of energy and arises from energy generation, transmission and distribution services.

#### ***The sale is recognised when:***

- a contract exists
- delivery has taken place (or the service provided)
- a quantitative price has been established or can be determined, and
- the receivables are likely to be recovered.

Delivery is measured based on cyclical meter readings.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

## (iv) Leasing

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

## OPERATING LEASE

### CEB as a lessor

Rental income from operating leases is recognised on a straight line basis over the term of the relevant lease.

### CEB as a lessee

Rentals payable under operating leases are charged to Statement of Financial Performance on a straight-line basis over the term of the relevant lease. Benefits received and receivable as an incentive to enter into an operating lease are also spread on a straight-line basis over the lease term.

## FINANCE LEASE

### CEB as a lessee

Assets held under finance leases are recognised as assets at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the Statement of Financial Position as a finance lease obligation.

Lease payments are apportioned between finance charges and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged directly to Statement of Financial Performance.

# Notes to the Financial Statements

for the year ended 31 December 2011

## (v) Functional Currency and Foreign Currencies

Functional currency is the currency of the primary economic environment in which an entity operates and is normally the currency in which the entity primarily generates and expends cash.

The functional currency of the CEB is the Mauritian rupees (MUR). Transactions in foreign currencies are recorded in Mauritian rupees at the rate of exchange ruling at the date of the transactions. Monetary assets & liabilities at the Statement of Financial Position date which are expressed in foreign currencies are translated into Mauritian rupees at the rate of exchange ruling at the Statement of Financial Position date. Exchange gains and losses are dealt with through Statement of Financial Performance.

## (vi) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in the Statement of Financial Performance of the period in which they are incurred.

## (vii) Grant Receivable

Asset-related grants are treated as deferred income and amortised over a ten-year period, whereas income-related grants are recognised in the period they become receivable.

## (viii) Employees Benefits (Retirement benefit costs)

### State Plan

Contributions to the National Pension Scheme are charged to Statement of Financial Performance in the period in which they fall due.

### Defined benefit pension plan

The CEB operates a defined benefit pension plan. The plan is funded by contributions from employees and employer. The employees used to contribute 6% of pensionable salaries, which were effectively paid by the CEB on their behalf since 1993. However, with the implementation of the new salary structure and conditions of service, effective as from July

2009, employees who have opted for the new conditions of service are contributing 9% to 13.5% of their pensionable salaries. The CEB's rate of contribution is determined by independent actuaries.

The cost of providing benefits is determined using the Projected Unit Credit Method with independent actuarial calculations being carried out at each Statement of Financial Position date. Actuarial gains and losses that exceed 10% of the greater of the present value of the CEB's obligation and the fair value of plan assets are amortised over the expected average remaining working lives of the participating employees. Past services cost is recognised immediately to the extent that the benefits are already vested, and otherwise is amortised on a straight-line basis over the average period until the amended benefits become vested.

The superannuation recognised in the Statement of Financial Position represents the present value of the defined benefit obligation as adjusted for unrecognised actuarial gains and losses and unrecognised past service costs, and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to the unrecognised actuarial losses and past service costs, plus the present value of available refunds and reductions in future contributions to the plan. The current service cost and any past service cost are included as an expense together with the associated interest cost, net of expected return on plan assets.

### Defined contribution pension scheme

Employees joining the CEB since January 2004 were required to join a new defined contribution pension scheme, which came into operation as from July 2006. However, with the implementation of the new salary structure and conditions of service, effective as from July 2009, this Scheme will be wound up and that members of the Scheme be made to join the defined benefit plans, as appropriate.

### (ix) Employee leave entitlement

Employee entitlements to annual leave and long service leave are recognised when they accrue to employees. An accrual is made for the estimated liability for annual leave and long-service leave payable as a result of services rendered by employees up to the Statement of Financial Position date.

# Notes to the Financial Statements

for the year ended 31 December 2011

## (x) Property, Plant and Equipment

Property, Plant and Equipment are stated at cost or valuation less accumulated depreciation and any accumulated impairment losses.

The generation, transmission and distribution assets and land and buildings are periodically revalued. The latest valuation has been carried by an independent professional valuer, Parsons Brinkerhoff Consultants Ltd of South Africa on Property, Plant and Equipment as at 31 December 2011. Valuation has been done on the basis of 'Existing Use Value' on the assumption that the assets for which current replacement value is sought will be used for the purpose of which it was originally intended.

The approach used by the valuers considered Replacement Cost New (RCN), Adjusted Replacement Cost New (ARCN) and the Depreciated Replacement Cost (DRC). ARCN is arrived at after reducing RCN by the amounts of obsolescence and DRC is computed after reducing ARCN by the amount of depreciation based on the ratio of estimated remaining economic life to the estimated total economic life of the assets.

The concept of Optimised Depreciated Replacement Cost has also been adopted in course of valuation, which assumes replacement with modern equivalent assets performing the same function as existing assets. Fully depreciated assets, but still in use, have also been revalued and assigned an extended life time.

Any revaluation increase arising on the revaluation of such assets is credited to a revaluation reserve, except to the extent that it reverses a revaluation decrease for the same asset previously recognised in Statement of Financial Performance, in which case the increase is credited to Statement of Financial Performance to the extent of the decrease previously charged. A decrease in carrying amount arising on the revaluation of such assets is charged to Statement of Financial Performance to the extent that it exceeds the balance, if any, held in the revaluation reserve relating to a previous revaluation of that asset.

Depreciation on revalued assets is charged to Statement of Financial performance. On the subsequent sale or retirement of a revalued asset, the attributable revaluation surplus remaining in the revaluation reserve is transferred directly to retained earnings. In addition, some of the surplus is transferred to retained earnings as the asset is used by the Board. In such a case, the amount of the surplus transferred is the difference between depreciation based on the revalued

carrying amount of the asset and depreciation based on the asset's original cost.

Assets in the course of construction are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalized. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Depreciation is charged so as to write off the cost or valuation of assets, other than freehold land and properties under construction, over their estimated useful lives, using the straight-line method as follows:

	<b>Years</b>
Plant and Machinery	20 – 50
Civil Works	25 – 50
Transmission & Distribution Assets	20 – 50
Furniture	10
Computer Equipment	3
Vehicles	5 – 7
Non-Operational Buildings	60

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets or, where shorter, the term of the relevant lease.

The gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in the Statement of Financial Performance.

Major plant spares parts previously included in inventories have been reclassified as Property, Plant and Equipment.

## (xi) Intangible Assets

Computer software that is not considered to form an integral part of any hardware equipment is recorded as intangible assets. The software, which has been fully depreciated, was revalued in 2011 with an extended life time of 4 years.

# Notes to the Financial Statements

for the year ended 31 December 2011

## **(xii) Impairment**

At each reporting date, the CEB reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss.

If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the CEB estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of time value of money and the risks specific to the asset for which the estimates of future cash flows have been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in Statement of Financial Performance, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of impairment loss is recognised immediately in Statement of Financial Performance unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

## **(xiii) Financial Assets**

Financial assets are classified as loans and receivables; available-for-sale financial assets. Financial assets include cash and cash equivalent, trade receivables, other receivables, loans and investment. The classification depends on the nature of the financial assets and is determined at the time of initial recognition.

## ***Loans and receivables***

Trade receivables, loans and other receivables that have fixed or determined payments that are not quoted in an active market are classified as loans and receivables. Trade, loans and other receivables are measured at initial recognition at fair value and are subsequently measured at amortised cost using the effective interest rate method if the time value of money is significant. Gains and losses are recognised as income when the loans and receivables are derecognised or impaired, as well as through the amortisation process.

## ***Available-for-sale financial assets***

Available-for-sale financial assets are those non-derivative financial assets that are not classified as loans and receivables. After initial recognition, available-for-sale financial assets are measured at fair value, with gains or losses recognised as a separate component of equity until the investment is derecognised or until the investment is determined to be impaired, at which time the cumulative gain or loss reported in equity is included in the Statement of Financial Performance.

The fair value of quoted investments is determined by reference to bid prices at the close of business at Statement of Financial Position date. Where there is no active market, fair value is determined using valuation techniques. Where fair value cannot be reliably estimated, assets are carried at cost.

## ***Impairment of financial assets***

At each Statement of Financial Position date, CEB assesses whether a financial asset or group of financial assets is impaired.

If there is objective evidence that an impairment loss on loans and receivables carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flow discounted at the financial asset's original effective interest rate.

The carrying amount of the asset is reduced, with the amount of the loss recognised in the Statement of Financial Performance. If an available-for-sale financial asset is impaired, an amount comprising the difference between its cost (net of any principal payment and amortisation) and its fair value is transferred from equity to Statement of Financial Performance.

# Notes to the Financial Statements

for the year ended 31 December 2011

## **(xiv) Cash and cash equivalents**

Cash and cash equivalents comprise cash on hand and demand deposits and are subject to an insignificant risk of changes in value.

## **(xv) Inventories**

Inventories are measured at the lower of cost (weighted average method) and net realisable value. Cost includes all costs of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution.

## **(xvi) Financial liabilities and equity**

Financial liabilities and equity instruments issued by the CEB are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument. An equity instrument is any contract that evidences a residual interest in the assets of the CEB after deducting all of its liabilities

Equity instruments issued are recorded at the proceeds, net of direct issue costs.

## **(xvii) Financial Liabilities**

Financial liabilities are classified as other financial liabilities measured at amortised cost and the classification is determined at initial recognition.

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. After initial recognition, other financial liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis, whenever material. The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period.

Interest-bearing bank loans and overdrafts are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method. Any difference between the proceeds (net of transaction costs) and the settlement or redemption of borrowings is recognised over the term of the borrowings in accordance with the CEB's accounting policy for borrowing costs.

## **(xviii) Provisions**

Provisions are recognised when the CEB has a present obligation as a result of a past event, and it is probable that the CEB will be required to settle that obligation. Provisions are measured at the directors' best estimate of the expenditure required to settle the obligation at the Statement of Financial Position date, and are discounted to present value where the effect is material.

## **(xix) Critical judgements and key sources of estimation uncertainty**

The preparation of financial statements in accordance with IPSAS requires the directors and management to exercise judgement in the process of applying the accounting policies. It also requires the use of accounting estimates and assumptions that may affect the reported amounts and disclosures in the financial statements. Judgements and estimates are continuously evaluated and are based on historical experience and other factors, including expectations and assumptions concerning future events that are believed to be reasonable under the circumstances. The actual results could, by definition therefore, often differ from the related accounting estimates.

Where applicable, the notes to the financial statements set out areas where management has applied a higher degree of judgement that have a significant effect on the amounts recognised in the financial statements, or estimations and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

The key assumptions concerning the future and other key sources of estimation uncertainty at the Statement of Financial Position date include retirement benefit obligations.

Financial assets and liabilities are recognised on the Statement of Financial Position when the CEB has become party to the contractual provisions of the financial instruments.

# Notes to the Financial Statements

for the year ended 31 December 2011

<b>2. CASH AND CASH EQUIVALENTS</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Bank deposits	357,587,171	284,736,294
Cash balances	464,119,085	20,386,106
<b>Cash &amp; Cash equivalents</b>	<b>821,706,256</b>	<b>305,122,400</b>
<b>3. RECEIVABLES</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Trade Debtors	2,001,339,779	2,152,029,680
Impairment	(30,830,253)	(110,585,474)
	<b>1,970,509,526</b>	<b>2,041,444,206</b>
VAT	364,137,585	278,508,520
Staff loans for vehicles	55,522,717	54,307,996
Others	243,100,189	138,116,819
	<b>662,760,491</b>	<b>470,933,335</b>
<b>Total</b>	<b>2,633,270,017</b>	<b>2,512,377,540</b>
<b>Receivables within 12 months</b>	<b>2,597,016,472</b>	<b>2,473,396,927</b>
<b>Receivables after 12 months</b>	<b>36,253,545</b>	<b>38,980,613</b>

Trade debtors include electricity bills amounting to Rs 1,238 M for December 2011 consumption and delivered in January & February 2012. No surcharge is levied on trade receivables for the first 20 days from date of delivery of invoice.

Surcharge is payable at 5 per cent on the outstanding balance. An amount of Rs 30.8 M is considered to be impaired in 2011.

The staff loans bear interests at the rate of 7.5% per annum and is repayable over a period of 6 or 7 years.

<b>4. INVENTORIES</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
<i>Inventories comprise the following items:</i>		
Fuel and lubricating oil	332,615,932	254,473,228
Spare parts for power stations	413,022,611	388,799,601
Transmission and distributions	454,734,153	437,456,701
Others	13,830,598	13,545,359
Sub total	1,214,203,294	1,094,274,889
Rodrigues	75,150,483	62,235,568
	<b>1,289,353,777</b>	<b>1,156,510,457</b>

Major spare parts exceeding Rs 500,000 in value have been identified and verified whether of capital nature. An amount of Rs 109.1 M worth of stock for 2011 has been capitalised and analysed into Generation Rs 70.6 M, Transmission & Distribution Rs 35.7 M and Rodrigues Rs 2.8 M.

# Notes to the Financial Statements

for the year ended 31 December 2011

<b>5. PREPAYMENTS</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Total prepayments	2,575,218	2,553,175
	<b>2,575,218</b>	<b>2,553,175</b>

<b>6. OTHER FINANCIAL ASSET</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Investment	1,000,000	1,000,000
	<b>1,000,000</b>	<b>1,000,000</b>

1000 ordinary shares of Rs 1,000 each have been subscribed in a private company, the CEB Investment Company Ltd. This company, which is fully owned by the CEB, has been incorporated on 24 April 2007 with a view to participate, with a 26% shareholding, in a forthcoming coal fired project together with CT Power Ltd, a public limited company incorporated in Malaysia through The (Mauritius) CT Power, a private limited company.

As at 31.12.2011, there has been no transactions conducted by CEB Investment Company Ltd.

## 7. SCHEDULE OF INFRASTRUCTURE, PLANT AND EQUIPMENT

	Cost as at 31.12.2010	Additions In the year 31.12.2011	Disposal 31.12.2011	Revaluations	Total Cost after Revaluation as at 31.12.2011	Total Depreciation Charge for year 2011	Total Acc Depreciation On Disposal for year 2011	Accumulated Depreciation as at 31.12.2010	Accumulated Depreciation as at 31.12.2011	Carrying Amount as at 31.12.2010	Carrying Amount as at 31.12.2011
<b>GENERATION ASSETS</b>											
Thermal power station	13,950,506,555	198,734,875	(324,510,762)	747,907,539	14,572,638,207	383,581,981	(332,879,472)	6,442,913,093	6,477,364,403	7,507,593,482	8,095,273,804
Hydro power station	4,444,142,237	98,049,072	-	591,854,133	5,134,045,441	59,016,794	-	3,063,549,314	3,122,566,108	1,380,592,922	2,011,479,333
Wind Park	63,015,186	26,947,221	-	89,962,407	3,312,228	3,312,228	-	9,055,656	12,367,884	53,959,530	77,594,522
<b>Total Generating Assets</b>	<b>18,457,663,978</b>	<b>323,731,167</b>	<b>(324,510,762)</b>	<b>1,339,761,672</b>	<b>19,796,646,055</b>	<b>445,911,003</b>	<b>(332,879,472)</b>	<b>9,515,518,063</b>	<b>9,612,298,395</b>	<b>8,942,145,914</b>	<b>10,184,347,659</b>
<b>TRANSMISSION ASSETS</b>											
Transmission network	944,113,642	34,003,644	-	56,938,156	1,035,055,441	17,013,591	-	365,133,508	382,147,099	578,980,133	652,908,342
Major substations	2,110,121,695	49,644,455	-	130,534,889	2,290,301,040	27,980,069	-	1,234,003,308	1,261,983,377	876,118,388	1,028,317,663
System Control	179,874,470	6,188,716	-	17,987,448	204,050,635	8,963,910	-	59,449,394	68,413,304	120,425,077	135,637,331
<b>Sub Total</b>	<b>3,234,109,808</b>	<b>89,836,815</b>	-	<b>205,460,493</b>	<b>3,529,407,116</b>	<b>53,957,570</b>	-	<b>1,658,586,210</b>	<b>1,712,543,779</b>	<b>1,575,523,598</b>	<b>1,816,863,336</b>
<b>DISTRIBUTION ASSETS</b>											
Distribution network	8,290,542,781	236,264,458	-	414,573,945	8,941,381,184	137,892,012	-	3,771,523,641	3,909,415,653	4,519,019,140	5,031,965,532
<b>Total Transmission &amp; Dist Assets</b>	<b>11,524,652,569</b>	<b>326,101,273</b>	-	<b>620,034,438</b>	<b>12,470,788,300</b>	<b>191,849,581</b>	-	<b>5,430,109,851</b>	<b>5,621,959,432</b>	<b>6,094,542,738</b>	<b>6,848,828,868</b>
<b>Total Generating, Trans &amp; Dist Assets</b>	<b>29,982,316,566</b>	<b>649,832,440</b>	<b>(324,510,762)</b>	<b>1,959,796,110</b>	<b>32,267,434,355</b>	<b>637,760,584</b>	<b>(332,879,472)</b>	<b>14,945,627,914</b>	<b>15,234,257,828</b>	<b>15,036,688,652</b>	<b>17,033,176,527</b>
<b>Other Assets</b>											
Furniture & Office Equipment	65,019,292	9,313,450	-	-	74,332,743	2,835,804	-	48,679,955	51,515,759	16,339,337	22,816,983
Motor Vehicles	146,649,069	13,147,630	(23,504,846)	7,685,000	143,976,854	15,138,441	(23,189,825)	95,188,375	87,136,992	51,460,694	56,839,862
Computer Equipment	110,613,955	12,919,498	(1,023,953)	11,125,359	133,634,859	13,254,991	(1,023,953)	82,076,476	94,307,514	28,537,479	39,327,345
Tools & Instruments	174,863,121	10,024,405	-	-	184,887,526	11,584,910	-	143,434,933	155,019,843	31,428,188	29,867,683
Asset Under Construction	837,207,842	2,303,182,727	-	-	3,140,390,569	-	-	-	-	837,207,842	3,140,390,569
Major Sparts	-	151,562,336	-	-	151,562,336	-	-	-	-	151,562,336	109,150,766
<b>Total other assets</b>	<b>1,334,353,280</b>	<b>2,500,150,046</b>	<b>(24,528,799)</b>	<b>18,810,359</b>	<b>3,828,784,886</b>	<b>42,814,146</b>	<b>(24,213,777)</b>	<b>369,379,739</b>	<b>387,980,108</b>	<b>1,116,535,875</b>	<b>3,398,393,208</b>
<b>Low value assets</b>	-	<b>81,828</b>	-	-	<b>81,828</b>	<b>81,828</b>	-	-	<b>81,828</b>	-	-
<b>Total Infrastructure, Plant &amp; Equipment</b>	<b>31,316,669,846</b>	<b>3,150,064,315</b>	<b>(349,039,561)</b>	<b>1,978,606,469</b>	<b>36,096,301,069</b>	<b>680,656,559</b>	<b>(357,093,249)</b>	<b>15,315,007,653</b>	<b>15,622,319,764</b>	<b>16,153,224,528</b>	<b>20,431,569,735</b>

## 8. SCHEDULE OF LAND AND BUILDING

	Cost as at 31.12.2010	Additions In the year 31.12.2011	Disposal 31.12.2011	Revaluations	Total Cost after Revaluation as at 31.12.2011	Total De- preciation Charge for year 2011	Total Depre- ciation On Disposal for year 2011	Accumulated Depreciation as at 31.12.2010	Accumulated Depreciation as at 31.12.2011	Carrying Amount as at 31.12.2010	Carrying Amount as at 31.12.2011
Land full ownership	331,829,285	-	-	41,408,400	373,237,685	-	-	-	-	331,829,285	373,237,685
Buildings	245,097,653	12,480,413	-	34,398,352	291,976,418	3,922,183	-	119,424,472	123,346,656	125,673,181	168,629,763
<b>Total Land &amp; Buildings</b>	<b>576,926,938</b>	<b>12,480,413</b>		<b>75,806,752</b>	<b>665,214,103</b>	<b>3,922,183</b>		<b>119,424,472</b>	<b>123,346,656</b>	<b>457,502,465</b>	<b>541,867,447</b>

## 9. SCHEDULE OF INTANGIBLE ASSET

	Cost as at 31.12.2010	Additions In the year 31.12.2011	Disposal 31.12.2011	Revaluations	Total Cost after Revaluation as at 31.12.2011	Total Amortiza- tion Charge for year 2011	Total Amortiza- tion On Disposal for year 2011	Accumulated Amortization as at 31.12.2010	Accumulated Amortization as at 31.12.2011	Carrying Amount as at 31.12.2010	Carrying Amount as at 31.12.2011
Implementation of MIS	162,496,855	-	-	67,916,465	230,413,320	21,173,758	-	162,496,856	183,670,614	-	46,742,706
<b>Total Intangible Assets</b>	<b>162,496,855</b>			<b>67,916,465</b>	<b>230,413,320</b>	<b>21,173,758</b>		<b>162,496,856</b>	<b>183,670,614</b>		<b>46,742,706</b>

1. The plant & Equipment has been revalued as at 31. 12. 2011 by independent valuer, Parsons Brinckerhoff Consultants, using a net replacement cost basis having regard to the latest market values available. This resulted in a revaluation surplus of Rs 2.122 billion.

Had the assets been reported at historical costs, (Excluding the last revaluation) the Net Book Value would have been approximately Rs11.5 billion.

The Board has pledged its Property, Plant and Equipment as security for the debentures and finance leases. Borrowing costs capitalised amounted to Rs 31.5 M during the period.

# Notes to the Financial Statements

for the year ended 31 December 2011

<b>10. PAYABLES</b>	<b>2011</b>	<b>2010 Restated</b>
	<b>Rs</b>	<b>Rs</b>
Provision for loose bagasse	41,391,293	46,471,179
Interest on government loans	224,225,941	269,543,145
Wages and Salaries due	25,664,873	14,047,709
MBC TV Licence Fee	33,238,763	37,340,409
Retention Money on Contracts	10,827,972	12,899,264
Other creditors and accruals	2,207,999,313	1,370,723,525
Deposits from customers	424,419,004	397,299,911
Deferred Income – Capital Contribution received	702,443,776	595,324,243
	<b>3,670,210,935</b>	<b>2,743,649,385</b>
<b>Payable within one year</b>	<b>2,543,348,155</b>	<b>1,751,025,231</b>
<b>Payable after one year</b>	<b>1,126,862,780</b>	<b>992,624,154</b>
<b>11. SHORT-TERM BORROWINGS</b>	<b>2011</b>	<b>2010 Restated</b>
	<b>Rs</b>	<b>Rs</b>
Bank overdraft	51,504,025	144,384,472
Overnight facility	750,000,000	687,813,000
	<b>801,504,025</b>	<b>832,197,472</b>
	<b>2011</b>	<b>2010</b>
<b>The average interest rates paid were as follows:</b>		
Bank overdraft and overnight facility	3.36%	3.49%

Bank balances and cash comprise cash held by the Board and short term bank deposits with an original maturity of three months or less. The carrying amount of these assets approximates their fair value.

Bank overdrafts are payable on demand and bear an average effective interest of 3.36%. The overdrafts are guaranteed by Government.

# Notes to the Financial Statements

for the year ended 31 December 2011

<b>12. LONG-TERM BORROWINGS</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Current	-	-
Term loans	617,445,509	1,238,419,152
Debentures	-	-
Finance Lease	-	44,427
<b>Borrowings due within one year</b>	<b>617,445,509</b>	<b>1,238,463,579</b>
Non-current	-	-
Term loans	6,355,341,936	4,606,698,890
<b>Borrowings due after one year</b>	<b>6,355,341,936</b>	<b>4,606,698,890</b>
<b>TOTAL INDEBTEDNESS AS AT 31 DECEMBER</b>	<b>6,972,787,445</b>	<b>5,845,162,469</b>
<b>Term loans due after one year are repayable as follows:</b>		
Between two and five years	2,456,804,881	2,074,921,122
After five years	3,898,537,055	2,531,777,768
	<b>6,355,341,936</b>	<b>4,606,698,890</b>

During the year 2011, borrowing costs capitalised amounted to Rs 31,473,839.

# Notes to the Financial Statements

for the year ended 31 December 2011

## 12. SCHEDULE OF BORROWINGS

DESCRIPTION	LOANS RECEIVED				LOANS REDEEMED				INSTALLMENTS				
	As At 1-Jan-11 Re-stated	As At 1-Jan-11	In 2011	Currency Variation	As At 31-Dec-11	As At 1-Jan-11	In 2011	As At 31-Dec-11	As At 31-Dec-11	Due But Not Paid	Repayable Within One Year	Repayable in years 2-5	Repayable after Year 5
<b>Govt Loans:</b>													
<b>Local Loans</b>													
Development Loans	21,174,381	131,452,775	-	-	131,452,775	110,278,394	5,975,630	116,254,024	15,198,751	7,140,000	1,077,875	4,311,500	2,669,376
Champsagne Project	8,402,204	60,000,000	-	-	60,000,000	51,597,796	8,402,204	60,000,000	-	-	-	-	-
Kuwait Fund - 132 KV	196,770,546	218,633,940	-	-	218,633,940	21,863,394	14,575,596	36,438,990	182,194,950	72,877,980	14,575,596	58,302,384	36,438,990
Jin FEI -project	296,021,250	296,021,250	-	-	296,021,250	-	14,801,063	14,801,063	281,220,188	-	28,122,019	224,976,150	28,122,019
Fort Victoria Phase 2	-	-	376,000,000	-	376,000,000	-	47,000,000	47,000,000	329,000,000	-	47,000,000	188,000,000	94,000,000
Pte Monier (Rod)	-	-	24,600,000	-	24,600,000	-	-	-	24,600,000	-	1,230,000	4,920,000	18,450,000
<b>Foreign Loans</b>													
GOVT-(KFW) ROD	9,123,106	78,736,422	-	(270,209)	78,466,213	69,613,316	4,664,383	74,277,699	4,188,514	-	4,188,514	-	-
GOVT-(KWF) FG3	374,425,134	424,274,494	-	(820,606)	423,453,888	49,849,360	343,924,589	393,773,949	29,679,939	5,934,299	23,745,640	-	-
GOVT-(NIB) -FG	127,224,000	297,796,500	-	(6,204,000)	291,592,500	170,572,500	22,320,000	192,892,500	98,700,000	98,700,000	-	-	-
BADEA	211,450,892	278,175,608	-	(7,115,363)	271,060,245	66,724,716	18,408,000	85,132,716	185,927,529	-	18,270,400	78,791,100	88,866,029
Fort Victoria Phase 2	-	-	1,792,967,000	(78,991,000)	1,713,976,000	-	-	-	1,713,976,000	-	-	357,078,333	1,356,897,667
Pte Monier (Rod)	-	-	74,343,600	(4,226,400)	70,117,200	-	-	-	70,117,200	-	-	11,686,200	58,431,000
<b>Sub Total</b>	<b>222,223,132</b>	<b>1,078,983,024</b>	<b>1,867,310,600</b>	<b>(97,627,578)</b>	<b>2,648,666,046</b>	<b>356,769,892</b>	<b>389,316,972</b>	<b>746,076,864</b>	<b>2,102,589,181</b>	<b>104,634,299</b>	<b>46,204,554</b>	<b>447,555,633</b>	<b>1,504,194,696</b>
<b>Other Loans (Foreign)</b>													
EIB	48,118,446	83,765,875	-	(2,499,509)	81,266,366	35,647,429	6,874,064	42,521,493	38,744,873	-	7,357,621	29,430,484	1,956,768
KFW-FORT VIC	83,407,646	307,036,429	-	(4,332,603)	302,703,826	223,628,784	11,915,378	235,544,162	67,159,663	-	11,193,278	44,773,111	11,193,275
New St Louis Loan-NIB	470,851,096	673,982,370	-	(25,940,645)	648,041,725	203,131,275	42,804,645	245,935,920	402,105,805	-	40,210,580	160,842,322	201,052,902
Barclays Euro Loan (2.83%)	229,915,527	346,941,405	-	-	346,941,405	117,025,878	229,915,527	346,941,405	-	-	-	-	-
HSBC Fort -Victoria1	1,428,367,576	1,428,367,576	34,040,577	(79,139,881)	1,383,268,272	-	144,668,611	144,668,611	1,238,599,661	-	123,859,966	495,439,864	619,299,830
<b>Sub Total</b>	<b>2,260,660,291</b>	<b>2,840,093,655</b>	<b>34,040,577</b>	<b>(111,912,639)</b>	<b>2,762,221,593</b>	<b>579,433,366</b>	<b>436,178,225</b>	<b>1,015,611,591</b>	<b>1,746,610,002</b>	<b>-</b>	<b>182,621,445</b>	<b>730,485,780</b>	<b>833,502,776</b>
<b>Other Loans (Local)</b>													
CEB Pension Funds-Staff	752,779,384	844,279,384	57,403,350	-	901,682,734	91,500,000	29,000,000	120,500,000	781,182,734	-	-	-	781,182,734
CEB Pension Funds-MW	-	-	-	-	-	-	-	-	-	-	-	-	-
CEB Pension Funds-Manual	414,965,314	421,965,314	32,066,663	-	454,031,977	7,000,000	18,000,000	25,000,000	429,031,977	-	-	-	429,031,977
Consumers Development Loans	64,338,219	480,302,885	19,572,615	-	499,875,500	415,964,666	19,564,827	435,529,493	64,346,007	-	19,668,570	-	44,677,437
Barclays Bank plc	33,333,341	200,000,000	-	-	200,000,000	166,666,659	27,083,333	193,749,992	6,250,008	-	6,250,008	-	-
SBM	22,851,914	32,261,526	-	-	32,261,526	9,409,612	16,130,763	25,540,375	6,721,151	-	6,721,151	-	-
New St Louis Loan-HSBC	96,000,000	160,000,000	-	-	160,000,000	64,000,000	16,000,000	80,000,000	80,000,000	-	16,000,000	64,000,000	-
8.1% 3year Bond	500,000,000	500,000,000	-	-	500,000,000	-	-	-	500,000,000	-	-	500,000,000	-
HSBC St Louis(refin Bar&BDM)	209,377,318	209,377,000	-	-	209,377,000	-	-	-	171,308,397	-	38,068,603	133,239,793	-
HSBC Fort victoria	246,220,746	246,220,748	6,313,352	-	252,534,100	-	-	-	252,534,100	-	25,253,410	101,013,640	126,267,050
<b>Sub Total</b>	<b>2,339,866,236</b>	<b>3,094,406,857</b>	<b>115,355,980</b>	<b>-</b>	<b>3,209,762,837</b>	<b>754,540,937</b>	<b>163,847,527</b>	<b>918,388,464</b>	<b>2,291,374,374</b>	<b>-</b>	<b>111,961,742</b>	<b>798,253,433</b>	<b>1,381,159,198</b>
<b>5,845,118,040</b>	<b>7,719,591,501</b>	<b>2,417,307,158</b>	<b>(209,540,217)</b>	<b>9,927,358,442</b>	<b>1,874,473,779</b>	<b>1,080,097,217</b>	<b>2,954,570,996</b>	<b>6,972,787,445</b>	<b>184,652,279</b>	<b>-</b>	<b>432,783,231</b>	<b>2,456,804,881</b>	<b>3,898,537,055</b>
<b>12. OBLIGATIONS UNDER FINANCE LEASE</b>													
Leases	44,427	23,930,879	-	-	23,930,879	23,886,452	44,427	23,930,879	-	-	-	-	-

# Notes to the Financial Statements

for the year ended 31 December 2011

The term loans are guaranteed by the Government. As at 31 December 2011, loans taken from the Government amounted to Rs 2,935 M and the Government Guarantees for loans taken by the CEB amounted to Rs 2,725 M.

The annual average interest rate paid on the loans was 4.13% (2010:4.73%)

The Directors estimate that the fair values of the borrowings are equivalent to their carrying amounts.

## Analysis of borrowings by currency:

Currency	2011	2010
	Rs	Rs
Mauritian Rupee	3,123,588,262	2,862,279,044
US Dollars	185,927,529	211,450,891
EURO	3,534,891,715	2,269,783,400
Kuwait Dinars	29,679,939	374,425,134
Danish Kroner	98,700,000	127,224,000
<b>Total</b>	<b>6,972,787,445</b>	<b>5,845,162,469</b>

Loans of Rs 1.5 billion were arranged at fixed interest rates and Rs 5.4 billion were arranged at floating rates.

## OBLIGATIONS UNDER FINANCE LEASE

Present value of minimum lease payments	2011	2010
	Rs	Rs
<b>The obligations under finance lease are analysed as follows:</b>		
Amounts due within one year	-	44,427
Amounts due between two and five years	-	-
	-	<b>44,427</b>
Less amount due for settlement within 12 months	-	(44,427)
<b>Amount due for settlement after 12 months</b>	<b>-</b>	<b>-</b>
Minimum Lease Payments	-	-
Amounts payable under finance leases	-	-
Within one year	-	45,008
Between two and five years	-	-
	-	<b>45,008</b>
Less future finance charges on finance leases	-	(581)
	<b>-</b>	<b>44,427</b>

The finance leases are secured by floating charges on the assets of the Board.

The Board enters into finance leasing arrangements for certain of its vehicles. All leases are denominated in Mauritian rupees and the average term of finance leases entered into is 5 years. The interest rate inherent in the leases is fixed at the contract date for all of the lease term. The average effective interest rate contracted is approximately 10.4% per annum.

# Notes to the Financial Statements

for the year ended 31 December 2011

13. PROVISIONS	2011	2010
	Rs	Rs
Carrying Amounts	266,813,964	272,143,610
Short-term provisions	33,560,233	117,263,247
<b>Long-term provisions</b>	<b>233,253,731</b>	<b>154,880,363</b>

## 14. EMPLOYEE BENEFITS

The Board operates a Defined Benefit Plan for its employees. The assets of the Funds are held independently and administered by the CEB Staff Pension Fund and the CEB Manual Workers Pension Fund.

	2011	2010
	Rs	Rs
<b>Amounts recognised in the Statement of Financial Position at end of year:</b>		
Present value of funded obligations	4,847,160,000	4,482,064,000
<b>Fair value of plan assets</b>	<b>(2,226,880,000)</b>	<b>(1,943,237,000)</b>
	<b>2,620,280,000</b>	<b>2,538,827,000</b>
Unrecognised actuarial gains/(losses)	(874,094,000)	(879,677,000)
<b>Position at end of year</b>	<b>1,746,186,000</b>	<b>1,659,150,000</b>
<b>Amounts recognised in the Statement of Financial Performance:</b>		
Current service cost	126,954,000	117,550,000
Contributions by employees	(45,981,000)	(47,713,000)
Interest on obligation	439,564,000	407,023,000
Expected return on plan assets	(200,693,000)	(184,708,000)
Actuarial losses/(gains) recognised in period	28,765,000	39,853,000
Past service cost		135,720,000
Curtailment/settlement loss/(gain)		(135,720,000)
<b>Total included in 'employee benefits expense'</b>	<b>348,609,000</b>	<b>332,005,000</b>
<b>Actual return on plan assets</b>	<b>153,153,000</b>	<b>128,390,000</b>
<b>Changes in Present Value of the Obligation</b>		
Present value of obligation at start of period	4,482,064,000	3,821,002,000
Interest cost	439,564,000	407,023,000
Current service cost	126,954,000	117,550,000
Past service cost		135,720,000
Benefits paid	(177,064,000)	(164,728,000)
Actuarial (gain) / loss on obligation	(24,358,000)	165,497,000
<b>Present value of obligation at end of period</b>	<b>4,847,160,000</b>	<b>4,482,064,000</b>

# Notes to the Financial Statements

for the year ended 31 December 2011

	2011	2010
	Rs	Rs
<b>Changes in Fair Value of the Plan Assets</b>		
Fair value of plan assets at start of period	1,943,237,000	1,706,116,000
Expected return on plan assets	200,693,000	184,708,000
Contribution to plan assets	307,554,000	273,459,000
Benefits paid out of plan assets	(177,064,000)	(164,728,000)
Actuarial gain / (loss) on plan assets	(47,540,000)	(56,318,000)
<b>Fair value of plan assets at end of period</b>	<b>2,226,880,000</b>	<b>1,943,237,000</b>
Contributions by employer	261,573,000	225,746,000
<b>Major Asset Categories as percentage of Plan Assets</b>		
Secured loans	1.5%	2.0%
Loans to CEB	54.2%	61.0%
Other dues from CEB	22.4%	-
Loans to members	2.0%	2.0%
Other investment	19.9%	35.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Principal actuarial assumptions at end of year:</b>		
Discount rate	9.50%	10.00%
Expected rate of return on plan assets	9.50%	10.00%
Future salary increases (Staff/Manual)	7.5% / 7%	8% / 7.5%
Future pension increases	5.00%	5.50%
Annual proportion of employees leaving service	As per latest valuation report	
Actuarial table for employee mortality	A6770_2 (Ult) / PA (90) rated downby 2 yrs	
<b>Financial Position:</b>		
At 1 January	1,659,150,000	1,552,891,000
Net expense recognised in Statement of Financial Performance	348,609,000	332,005,000
Contributions and direct benefits paid	(261,573,000)	(225,746,000)
<b>As at 31 December</b>	<b>1,746,186,000</b>	<b>1,659,150,000</b>
<b>Amounts for the current and previous four periods</b>		
Present value of defined benefits obligations	(4,847,160,000)	(4,482,064,000)
<b>Fair value of plan assets</b>	<b>2,226,880,000</b>	<b>1,943,237,000</b>
Surplus / (deficit)	(2,620,280,000)	(2,538,827,000)
Experience adjustments on Plan Assets	(47,540,000)	(56,318,000)
<i>Retirement benefit obligations have been based on an actuarial report from Feber Associates dated 6 September 2012.</i>		

## 15. CAPITAL CONTRIBUTION

This represents advances from the Government which will eventually be converted into equity.

# Notes to the Financial Statements

for the year ended 31 December 2011

<b>16. FEES, FINES, PENALTIES AND LICENSES</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Rechargeable services	48,381,635	54,415,784
Late Payment Surcharge	102,242,513	90,083,198
MBC TV Licence fee	3,600,000	3,600,000
Other sundry receipts	44,986,487	42,960,809
Penalties From IPP	14,035,146	13,631,159
	<b>213,245,781</b>	<b>204,690,950</b>

<b>17. REVENUE FROM EXCHANGE TRANSACTIONS</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Sales of electricity	12,561,205,402	11,544,925,129
Rental of meters	66,621,948	64,455,159
	<b>12,627,827,350</b>	<b>11,609,380,288</b>

<b>18. OTHER REVENUE</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Realised gains	194,232,621	170,420,754
Unrealised gains	152,463,611	81,469,138
Amortisation of capital contribution	243,188,727	208,413,116
Interest on Bank deposits and other bank balances	17,191,281	8,650,691
	<b>607,076,240</b>	<b>468,953,699</b>

<b>19. WAGES, SALARIES, AND EMPLOYEE BENEFITS</b>	<b>2011</b>	<b>2010</b>
<b>Aggregate remuneration comprised:</b>	<b>Rs</b>	<b>Rs</b>
Wages & Salaries	899,078,315	947,798,368
Other Costs	365,222,479	415,277,618
<b>Total</b>	<b>1,264,300,794</b>	<b>1,363,075,986</b>

The average monthly number of employees (including executive directors) was:

	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Manual Workers	1025	1067
Staff	885	885
<b>Total</b>	<b>1910</b>	<b>1952</b>

# Notes to the Financial Statements

for the year ended 31 December 2011

<b>20. SUPPLIES &amp; CONSUMABLES USED</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Heavy Oil	4,116,195,680	3,113,923,514
Light Oil	61,353,402	73,313,243
Lubrication Oil	107,075,438	95,139,864
Kerosene	144,414,691	210,253,085
Materials	4,234,243	5,257,101
Bagasse Transfer Price	64,198,252	64,432,499
Purchase Of Electricity - Coal	4,036,932,249	3,759,162,718
Purchase Of Electricity - Bagasse	986,014,961	956,087,941
Purchase of Electricity - Land filled Gas	13,905,580	
	<b>9,534,324,496</b>	<b>8,277,569,965</b>
<b>21. DEPRECIATION AND AMORTIZATION EXPENSE</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Infrastructure, Plant and Equipment	680,656,560	909,623,966
Land and Buildings	3,922,183	4,556,890
Intangible Asset	21,173,758	
	<b>705,752,501</b>	<b>914,180,856</b>
<b>22. OTHER EXPENSES</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Distribution costs	123,196,463	63,424,269
Pension Obligation	87,036,000	106,259,000
Others	502,729,465	393,257,334
	<b>712,961,927</b>	<b>562,940,603</b>
<b>23. FINANCE COSTS</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Interest On Loan	267,374,591	260,915,560
Interest On Overdraft	27,420,594	31,482,586
	<b>294,795,185</b>	<b>292,398,146</b>

## 24. RELATED PARTY TRANSACTIONS

The immediate and ultimate controlling party of the Board is the Government of Mauritius.

The Board also purchased fuel oil amounting to Rs 4.2 billion from State Trading Corporation which is fully owned by the Government.

Loans due to the Government are disclosed in the schedule of loans in note 11. Interest payable on these loans for 2011 amounted to Rs 11.8 million.

Loans due to CEB Staff Pension Fund and CEB Manual Workers Pension Fund totalled Rs 781.2 M.

# Notes to the Financial Statements

for the year ended 31 December 2011

## *Remuneration of key management personnel*

Remuneration of Directors and other members of key management during the year was as follows:

	2011	2010
	Rs	Rs
Short term benefits	19,477,938	20,794,794

## **25. COMMITMENTS**

In the course of its generation and supply activities, the Board has entered into long-term contracts.

The minimum energy and capacity payment in 2011 is estimated at Rs 5,200 M.

## **26. OPERATING LEASE ARRANGEMENTS**

<b>CEB as a lessee</b>	2011	2010
	Rs	Rs
Minimum lease payments under operating leases recognised as an expense in the year	-	7,148,986

# Notes to the Financial Statements

for the year ended 31 December 2011

## 27. PROVISIONS

	Back Pay	Passage Benefits	Vacation leave	Total
Carrying Amount as at 01 January	86,851,517	70,664,347	114,627,746	272,143,610
Additional Provision / Adjustment		36,048,469	22,224,618	58,273,087
Amount utilised during the year	9,161,653	23,428,953	31,012,127	63,602,734
Carrying amount as at 31 December	77,689,864	83,283,863	105,840,236	266,813,964

1. The provision for back pay relates to the implementation of a new salary structure and conditions of service.
2. Passage benefit is provided to eligible employees as part of their contract of employment. It is calculated as a percentage of employees' salaries and is earned during active employment. The amount earned is accrued and the accrual cleared as and when employees take their passage benefit entitlement.
3. The provision for unpaid vacation leave relates to vacation leave accruing and payable to employees at year end.

## 28. FINANCIAL INSTRUMENTS AND FINANCIAL RISK FACTORS

### Significant accounting policies

Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognised, in respect of each class of financial asset, financial liability and equity are disclosed in note 2 to the financial statements.

### Categories and classification of financial instruments

The accounting classification of each category of financial instruments and their carrying amounts are set out below:

	2011					2010				
	Note	Loans & Receivables	Available for Sale	Other Financial Liabilities	Carrying amount	Loans & Receivables	Available for Sale	Other Financial Liabilities	Carrying amount	
<b>Financial Assets</b>		Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	
Cash & cash equivalent	2	821,706	-	-	821,706	305,122	-	-	305,122	
Receivables	3	2,633,270	-	-	2,633,270	2,512,378	-	-	2,512,378	
Other financial asset	6	-	1,000	-	1,000	-	1,000	-	1,000	
<b>Financial Liabilities</b>										
Payables	10	-	-	3,670,211	3,670,211	-	-	2,743,649	2,743,649	
Short term borrowings	11	-	-	801,504	801,504	-	-	832,197	832,197	
Borrowings	12	-	-	6,972,787	6,972,787	-	-	5,845,162	5,845,162	
		<b>3,454,976</b>	<b>1,000</b>	<b>11,444,502</b>		<b>2,817,500</b>	<b>1,000</b>	<b>9,421,009</b>		

The carrying amounts of the financial instruments are either the fair value or approximate fair value.

# Notes to the Financial Statements

for the year ended 31 December 2011

The fair values of financial assets and financial liabilities are determined as follows:

- (a) The fair value of financial assets and financial liabilities with standard terms and conditions and traded on active liquid markets is determined with reference to quoted market prices
- (b) The fair value of other financial assets and financial liabilities is determined in accordance with generally acceptable pricing models based on discounted cash flow analysis using prices from observable current market transactions and dealer quotes for similar instruments.

## *Financial risk management objectives*

A Treasury Section has been set up within the Finance Department since 2006 with a view to ascertaining that the CEB is adequately equipped in mitigating risks that are inherent in an ever-changing environment. The CEB's Treasury co-ordinates access to domestic and international financial markets, monitors and manages the financial risks relating to the operations of CEB through internal risk reports which analyse exposures by degree and magnitude of risks. It focuses on the mitigation of financial risk through the use of financial instruments while continuously managing the cash flow efficiently.

It is the Chief Financial Officer (CFO) who oversees the management of business risks with the assistance of the Treasury Section. Market risk (including currency risk and interest rate risk), credit risk and liquidity risk are monitored repeatedly to ensure that these risks are adequately dealt with in accordance with the appropriate policies and procedures set up by the CEB.

The whole process falls under the scrutiny of the Risk and Audit Committee, a subcommittee of the Board.

## *Market Risk*

The CEB is primarily exposed to the financial risks arising from natural business exposures such as changes in foreign currency exchange rates and interest rate risks.

Exposure to interest rate and foreign currency risk is managed through market intelligence, currency purchases on both spot and forward basis and sensitivity analysis.

Currently, the CEB does not utilise any financial or derivative instruments for hedging its financial risks.

## *Foreign Currency Risk*

A large portion of the CEB's operational costs such as the costs of spares, equipment and fuel oil supplies and finance costs is in foreign currency and the major currencies in which these costs are incurred are Euros and the US dollars.

The CEB is therefore exposed to the risk that the exchange rate of the Mauritian rupee relative to these currencies may change in a manner which has a material effect on the reported values of the assets and liabilities.

The carrying amounts of CEB's foreign currency denominated monetary assets and monetary liabilities at reporting date are as follows:

	Liabilities		Assets	
	2011	2010	2011	2010
	Rs'000	Rs'000	Rs'000	Rs'000
Euro	3,534,892	2,269,783	290,720	125,727
Kuwait Dinars	29,680	374,425	-	-
USD	186,309	660,158	196,158	97,414
Danish Kroner	98,700	127,224	-	-
<b>Total</b>	<b>3,849,581</b>	<b>3,431,590</b>	<b>486,878</b>	<b>223,140</b>

# Notes to the Financial Statements

for the year ended 31 December 2011

There were no material monetary assets and liabilities in other foreign currencies.

## Foreign currency sensitivity analysis

CEB is mainly exposed to fluctuations in the exchange rates of the Euro and the USD. The table below, details the sensitivity to a 5% increase and decrease in the MUR against the EURO and the USD. The sensitivity rate of 5% has been chosen because it represents management's assessment of the reasonably possible variation in foreign exchange rates.

The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the period end for a 5% change in foreign currency rates.

	Foreign Exchange Risk (5%)		
	Carrying Amount	Profit	
		5%	-5%
	Rs'000	Rs'000	Rs'000
<b>Financial Assets</b>			
- Euro	290,720	14,536	(14,536)
- USD	196,158	9,808	(9,808)
<b>Financial Liabilities</b>			
- Euro	3,534,892	176,745	(176,745)
- USD	186,309	9,315	(9,315)
<b>Total Increase / (Decrease)</b>		<b>210,404</b>	<b>(210,404)</b>

## Interest Rate Risk

CEB is exposed to interest rate risk, as it has to borrow funds at both fixed and floating interest rates.

The currency profile of CEB's borrowings and their effective interest rates are summarised below:

Currency	Borrowings 2011			Borrowings 2010		
	Rs '000	%	Interest Rates (% p.a)	Rs'000	%	Interest Rates (% p.a)
MUR	3,123,588	44.8	0-10	2,862,235	49.0	0-8.25
USD – Fixed Interest Rate	185,928	2.7	3.00	211,451	3.6	3
EURO – Fixed Interest Rate	110,093	1.6	2-3	570,487	9.8	2-3
EURO – Floating Interest Rate	3,424,799	49.1	Euribor+0.2/1.5	1,699,297	29.1	Euribor +0.2/1.5
Kuwait Dinars – Fixed Interest Rate	29,680	0.4	4.00	374,425	6.4	4.00
Danish Kroner – Variable Interest Rate	98,700	1.4	Libor +1	127,224	2.2	Libor +1
	<b>6,972,787</b>			<b>5,845,118</b>		

## Interest rate sensitivity analysis

CEB is mainly exposed to fluctuations in the movement of interest rates in MUR and EURO. The table below, details the sensitivity to a 1% increase and decrease in the rate of interest of MUR borrowings and a +50bp/-50bp in the interest rate of Euro borrowings.

# Notes to the Financial Statements

for the year ended 31 December 2011

These sensitivity rates have been chosen because it represents management's best estimates of the possible change in the respective interest rates and the analysis includes only some outstanding financial liabilities as at 31 December 2011.

	Interest Rate Risk				
	Carrying Amount	Profit			
		1%	-1%	+50/bp	-50/bp
Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	
<b>Borrowings</b>					
- MUR	3,123,588	31,236	(31,236)	-	-
- Euro (Floating Interest Rate)	3,424,799	-	-	17,124	(17,124)
<b>Total Increase/(Decrease)</b>		<b>31,236</b>	<b>(31,236)</b>	<b>17,124</b>	<b>(17,124)</b>

## Credit Risk

Credit risk is the risk that a customer or counter party to a financial instrument will fail to perform or fail to pay amounts due causing financial loss to CEB. The CEB does not have a significant concentration of credit risks; its credit risk is primarily attributed to trade receivables.

CEB has a credit policy that is designed to ensure that consistent processes are in place throughout the organisation to measure and control credit risk. CEB attempts to mitigate credit risk by charging a 5% surcharge on invoices that are not settled within the due dates. All CEB customers provide a cash deposit, based on the load connected and tariff, as security deposit and the electricity supply is disconnected in case of non-payment. In normal circumstances, the CEB has recourse to disconnection of supply to ensure prompt settlement of overdue electricity bills. The supply of electricity to Commercial and Industrial customers is automatically identified for disconnection if any amount remains outstanding two months after consumption and the corresponding period for Domestic Customers is three months after consumption. If the debt remains unsettled 15 days after physical disconnection of supply the electricity account is closed, the under-mentioned exercise is followed in order to recover outstanding debts.

- (a) One month after closure of accounts, reminders are sent to those debtors.
- (b) After an additional period of one month, unsettled cases are referred to a Solicitor for judicial recovery

CEB does not typically renegotiate the terms of trade receivables; however, if a renegotiation does take, the outstanding balance is included in the analysis based on the original payments terms. There were no significant renegotiated balances outstanding at 31 December 2011 or 31 December 2010.

With respect to the trade receivables that are neither impaired nor past due, there are no indications as of the reporting date that the debtors will not meet their payment obligations.

As at 31 December 2011, the maximum credit exposure was Rs 1,970 M (2010 – Rs 2,041 M), as analyzed below:

Trade Receivables as at 31 December		2011	2010
	Note	Rs M	Rs M
Debtors for invoicing made in Jan & Feb 2012	(a)	1,238.0	1,316.0
Within 30 days		194.1	177.4
31–60 days		120.5	117.7
61–90 days		63.7	56.8
More than 90 days	(b)	354.2	373.5
<b>Total</b>		<b>1,970.5</b>	<b>2,041.4</b>

Note:

- (a) Sales for December 2011 are invoiced and delivered to customers in 2012.
- (b) The amounts include cases of underbilling which have not yet been paid (Rs 114.3 M in 2011 and Rs 98.4 M in 2010).

# Notes to the Financial Statements

for the year ended 31 December 2011

## *Liquidity Risk*

Liquidity risk refers to the possibility of default by the CEB because of unavailability of funds to meet both its operational and capital requirements.

In order to manage this risk, short-term, medium-term and long-term cash flow forecasts are regularly prepared and this ensures that proactive action is taken to ensure that funds are always available to meet the organisation's obligations. This is achieved through the efficient maintenance and management of various credit line facilities.

<b>29. CAPITAL COMMITMENTS</b>	<b>2011</b>	<b>2010</b>
	<b>Rs</b>	<b>Rs</b>
Capital Expenditure budgeted in relation to the acquisition of property, plant and equipment	4,739,115	4,247,275

At 31 December 2011, the CEB had a capital budget of Rs 4,739 million in respect of acquisition of property, plant and equipment. The CEB's management is confident that future revenue and funding will be sufficient to cover this expenditure.

## **30. CONTINGENT LIABILITIES**

A customer of the CEB instigated proceedings against it for alleged defects in the supply of electricity which, it is claimed, were the cause of a major fire in the customer's premises on 20 September 2000. Total losses to the customer have been estimated at Rs 131 million and this amount is being claimed from the CEB.

The CEB's legal advisers do not consider that the suit has merit, and they recommended that it be contested.

No provision has been made for this in the financial statements as CEB's management do not consider that there is any probable loss.

# Schedule A

## Income from Sales of Electricity

(Mtius) Year 2011

TARIFF	UNIT SOLD KWH	REVENUE RS	AVERAGE PRICE PER UNIT RS
<b>Domestic</b>			
110	193,015,696	1,006,635,240	5.215
110A	5,743,066	17,970,281	3.129
120	393,622,101	2,174,848,071	5.525
140	132,789,161	867,213,677	6.531
<b>Sub-Total</b>	<b>725,170,024</b>	<b>4,066,667,270</b>	<b>5.608</b>
<b>Commercial</b>			
215	174,031,801	1,765,286,757	10.143
217	357,387,276	2,459,042,371	6.881
225	255,369,420	1,612,982,019	6.316
245	507,268	3,061,901	6.036
250	5,422,608	22,053,663	4.067
<b>Sub-Total</b>	<b>792,718,373</b>	<b>5,862,426,711</b>	<b>7.395</b>
<b>Industrial</b>			
315	29,356,967	162,167,058	5.524
313	249,138,215	950,571,820	3.815
317	82,134,103	276,666,463	3.368
320	1,409,209	4,582,958	3.252
323	92,233,327	322,959,428	3.502
325	146,502,036	403,668,960	2.755
330	13,605,445	40,317,129	2.963
340	7,800,242	31,874,334	4.086
350	31,383,875	118,882,728	3.788
421	3,361,103	17,512,025	5.210
422	-	-	-
<b>Sub-Total</b>	<b>656,924,522</b>	<b>2,329,202,902</b>	<b>3.546</b>
<b>Industrial (Irrigation)</b>			
515	22,514,514	62,908,379	2.794
<b>Street Lighting</b>			
510	25,034,619	193,856,058	7.744
<b>Temp. Supply</b>			
610	220,563	2,728,750	12.372
<b>Special and non-classified</b>	<b>5,652,241</b>	<b>43,497,210</b>	<b>7.696</b>
<b>Total</b>	<b>2,228,234,856</b>	<b>12,561,261,875</b>	<b>5.637</b>

# Schedule B

## Analysis of Revenue Expenditure

for the year ended 31 December 2011

	2011	2010 Restated
<b>GENERATION COST &amp; PURCHASE OF ELECTRICITY</b>		
Generation Expenses Hydro	50,092,070	46,353,366
Direct Overheads (Hydro)	108,937,364	100,806,646
Generation Expenses Thermal	4,429,039,210	3,492,629,706
Direct Overheads (Thermal)	294,232,484	272,271,961
Purchase of Electricity - Coal	4,036,932,249	3,759,162,718
Purchase of Electricity - Bagasse	1,050,213,213	1,020,520,440
Purchase of Electricity - landfill gas	13,905,580	-
<b>Total Generation Costs</b>	<b>- 9,983,352,169</b>	<b>- 8,691,744,838</b>
<b>DISTRIBUTION COST</b>		
Distribution Expenses	123,196,463	145,341,754
Contractors Fees	75,685,764	93,446,956
Salaries and Related Expenses	445,246,268	427,564,558
Legal & Professional Expenses	-	781,500
<b>Total Distribution Cost</b>	<b>- 644,128,495</b>	<b>- 667,134,768</b>
<b>ADMINISTRATIVE EXPENSES</b>		
Administrative expenses	689,048,620	533,094,410
Pension Obligations	87,036,000	106,259,000
Directors Fees	1,207,944	1,253,835
Bank Charges	3,473,783	2,882,016
Legal & Professional Expenses	14,236,865	7,312,837
Bad Debts & Impairment of Trade Debtors	30,830,253	115,869,041
Provision for Back Pay	-	65,000,000
Provision for passage benefits	36,048,469	13,035,809
Provision for vacation leave	22,224,618	-
<b>Total Administrative Expenses</b>	<b>884,106,552</b>	<b>844,706,948</b>
<b>Financial</b>		
Net Interest on Loans	267,374,591	260,915,560
Net Interest on Overdraft	27,420,594	31,482,586
Interest on Bank deposits	-	-
	<b>294,795,185</b>	<b>292,398,146</b>
<b>Depreciation of Assets</b>		
Generation Assets	445,911,003	445,911,003
Distribution Assets	191,849,583	245,807,151
Building and Other Assets	67,991,915	222,462,702
	<b>705,752,501</b>	<b>914,180,856</b>
<b>Total Revenue Expenditure and Provisions</b>	<b>12,512,134,903</b>	<b>11,410,165,556</b>

# Schedule C

## Depreciation of Asset

for the year ended 31 December 2011

	AMOUNT (RS)	AMOUNT(RS)
<b>Generation Assets</b>		
Thermal Power Station	383,581,981	
Hydro Power Station	59,016,794	
Wind Park	3,312,228	
<b>Sub-Total</b>		<b>445,911,003</b>
<b>Transmission Assets</b>		
Transmission Network	17,013,591	
Major Substation	27,980,069	
System Control	8,963,910	
<b>Sub-Total</b>		<b>53,957,570</b>
<b>Distribution Assets</b>		
Distribution Networks	137,892,013	
<b>Sub-Total</b>		<b>137,892,013</b>
<b>Land, Buildings and Other Assets</b>		
Buildings	3,922,183	
Furniture and Office Equipment	2,917,632	
Motor Vehicles	15,138,441	
Computer Equipment	34,428,749	
Tools & Instruments	11,584,910	
<b>Sub-Total</b>		<b>67,991,915</b>
<b>Total</b>		<b>705,752,501</b>

# Schedule D

## Selected Statistical Data

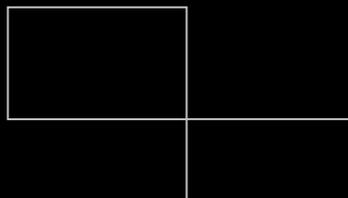
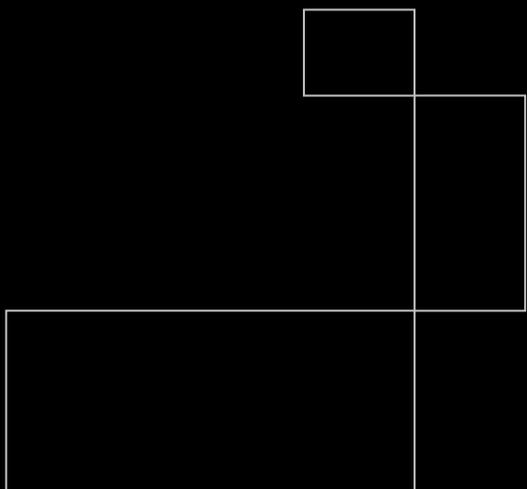
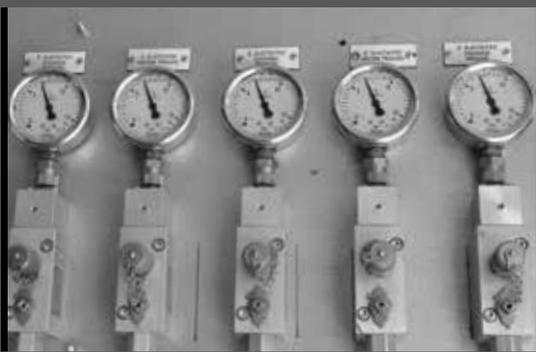
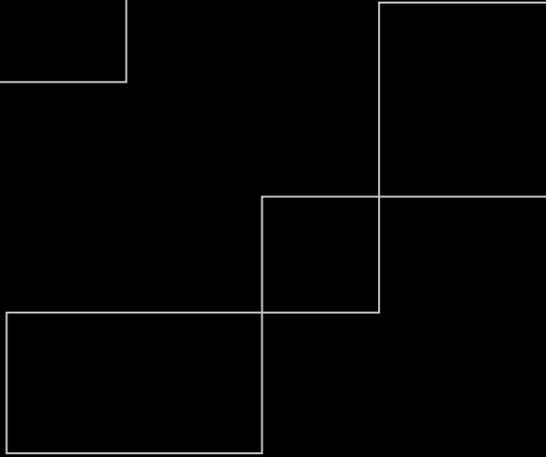
for the year ended 31 December 2011

		2011		2010 Restated	
		% OF		% OF	
		Revenue	Rs	Revenue	Rs
During the year ended 31 December					
<b>REVENUE AROSE FROM:</b>					
1.	Sales of electricity	93.40%	12,561,205,402	93.99%	11,544,925,129
2.	Meter rent	0.50%	66,621,948	0.52%	64,455,159
3.	Miscellaneous income	4.29%	577,133,293	3.72%	456,580,842
	Investment Income	0.00%	-	0.07%	8,650,691
4.	Amortisation of grants	1.81%	243,188,727	1.70%	208,413,116
5.	Making a total turnover of	100.00%	13,448,149,371	100.00%	12,283,024,936
6.	Expenditure on generation, transmission and distribution and administration aggregated	88.18%	11,858,283,448	85.12%	10,455,476,445
7.	Balance before depreciation and interest	11.82%	1,589,865,923	14.88%	1,827,548,491
8.	Depreciation of fixed assets	5.25%	705,752,501	7.44%	914,180,856
9.	Balance after depreciation	6.57%	884,113,422	7.44%	913,367,635
10.	Interest on loans & Gain/Loss on Exchange	-0.39%	(51,901,046)	0.33%	40,508,254
11.	Net Surplus for the year	6.96%	936,014,468	7.11%	872,859,381
<b>Other Data</b>					
12.	Sales GWH		2,231.20		2,173.91
13.	Maximum effective capacity at year end MW		620.55		623.55
14.	Peak demand MW		412.49		404.10
15.	Average selling price RS/KWH		5.64		5.31
16.	Net loan indebtedness/total capitalization		0.36		0.39
17.	Coverage of Interest TIMES		4.60		4.47
18.	Return (PBIT) on average net fixed assets in operation %		6.40		7.05
19.	Debt service coverage TIMES		0.89		0.69
20.	Operating ratio %		95.03		95.02

# Schedule E

## Financial Statistics over Ten Years

Financial year ended 31 December	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. Units exported during the year	Gwh	1,715.10	1,796.70	1,901.20	1,970.00	2,051.00	2,160.00	2,269.00	2,337.53	2,391.60
2. Units sold during the year	Gwh	1,491.70	1,607.00	1,703.90	1,775.50	1,879.00	1,975.00	2,054.00	2,069.23	2,228.23
3. Losses	Gwh	223.40	189.70	197.30	194.50	172.00	185.00	175.00	168.30	163.37
4. Number of consumers at 31 December	Thousand	330.30	338.60	357.50	368.30	376.60	385.30	394.12	400.45	415.53
5. INCOME/REVENUE										
Sales of electricity	Rs Millions	4,520.30	4,953.60	5,352.10	5,771.70	6,769.94	7,513.86	10,063.47	10,664.12	11,544.93
Rental of meters	Rs Millions	23.40	25.40	27.10	24.60	28.33	29.60	60.73	62.70	64.46
Miscellaneous	Rs Millions	299.10	218.20	209.30	242.60	271.53	302.63	429.57	430.60	421.75
<b>Total</b>		<b>4,842.80</b>	<b>5,197.20</b>	<b>5,588.50</b>	<b>6,038.90</b>	<b>7,069.80</b>	<b>7,846.09</b>	<b>10,563.77</b>	<b>11,157.42</b>	<b>12,031.14</b>
6. EXPENDITURE										
Generation costs	Rs Millions	1,261.40	1,471.10	1,744.00	2,305.30	2,777.49	2,695.38	3,329.86	3,170.70	3,912.06
Purchase of electricity	Rs Millions	1,415.10	1,388.50	1,513.80	2,054.20	2,836.44	3,397.29	4,771.61	4,528.39	4,779.68
Distribution costs	Rs Millions	294.80	338.60	239.50	535.70	595.20	581.88	662.96	542.22	667.13
Depreciation of Generation, Transmission and distribution assets	Rs Millions	550.20	527.10	804.20	844.00	849.71	773.64	926.94	937.42	914.18
<b>Total</b>		<b>3,521.50</b>	<b>3,725.30</b>	<b>4,301.50</b>	<b>5,739.20</b>	<b>6,858.84</b>	<b>7,448.19</b>	<b>9,691.37</b>	<b>9,178.74</b>	<b>10,273.06</b>
7. GROSS OPERATING SURPLUS	Rs Millions	1,321.30	1,471.90	1,287.00	299.70	210.95	397.90	862.40	1,978.69	1,768.22
8. (a) Administration, Establishment & Other Costs										
incl. Additional depreciation in respect of revaluation	Rs Millions	385.10	395.70	532.40	364.19	325.08	384.54	483.43	849.99	844.71
(Gain)/Loss on Exchange	Rs Millions	383.80	(28.30)	383.80	(28.20)	582.30	(283.01)	313.64	(266.08)	(251.89)
(c) Interest on Loan & Overdraft	Rs Millions	444.90	362.60	288.20	285.90	410.43	446.15	360.24	292.40	294.80
9. Retained profit/(Loss)	Rs Millions	179.60	613.30	82.70	(322.19)	(1,106.85)	(156.80)	(880.82)	1,034.54	872.86
10. NET ASSETS										
Fixed assets less depreciation	Rs Millions	12,474.10	12,509.90	12,777.80	13,295.90	12,986.99	15,576.03	15,159.67	15,541.96	16,610.73
Current assets less Current Liabilities	Rs Millions	(745.60)	(361.75)	(173.78)	(1,016.21)	(1,617.59)	(1,824.29)	(2,303.87)	(730.91)	(1,37)
<b>Total</b>		<b>11,728.50</b>	<b>12,128.15</b>	<b>12,604.02</b>	<b>12,279.69</b>	<b>11,369.41</b>	<b>13,751.74</b>	<b>12,855.80</b>	<b>14,811.06</b>	<b>16,609.36</b>
11. Net Capital Expenditure for year	Rs Millions	417.40	562.81	761.14	1,357.63	540.84	373.94	510.32	1,319.72	2,637.72
12. Financed by										
Outside sources	Rs Millions	220.40	248.30	624.10	1,094.79	221.30	128.50	128.50	710.91	1,294.57
Internal Sources	Rs Millions	197.00	314.50	172.30	262.80	319.54	245.44	381.82	608.81	704.62
13. Gross Operating Surplus to Net Assets	%	11.27	12.14	10.21	2.44	1.86	2.89	6.71	13.36	10.58
14. Gross Operating Surplus to Turnover	%	27.28	28.32	23.03	5.17	3.10	5.27	8.52	18.45	15.14
15. Net Profit or (loss) to Turnover	%	3.71	11.80	1.48	(5.56)	(16.28)	(2.08)	(3.76)	9.64	7.52
16. Generation & Purchase Cost(excl dep) to Turnover	%	55.27	55.02	58.29	44.68	79.64	80.77	80.02	71.77	74.87
17. Transmission and Distribution Cost to Turnover	%	6.09	6.52	4.28	9.24	8.76	7.71	6.55	5.05	5.75
18. Depreciation of Generation Transmission & Distribution Asset to Turnover	%	11.36	10.14	14.39	14.56	12.50	10.26	9.16	8.74	7.87
19. Admin, Establishment & other costs to turnover	%	7.95	7.61	9.53	6.28	4.78	5.10	4.78	7.92	7.28
20. Interest on Loans/Overdraft to Turnover	%	9.19	6.98	5.16	4.39	4.83	4.65	3.28	2.71	2.52
21. Net Return on Average Net Fixed Assets in operation	%	8.45	8.81	8.38	(2.59)	(8.42)	(1.10)	(2.48)	6.74	5.43
22. Units lost to Units exported	%	13.03	10.56	10.38	9.87	8.39	8.56	9.48	7.52	7.02





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