

ANNUAL REPORT 2012



## Building Up Our Generation Capacity



CENTRAL ELECTRICITY BOARD

## 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  
Photovoltaic

Generation 2012:  
2,495 GWh

## Commercial

## Customers

Customers 2012: 414,005  
Sales 2012: 2,267 GWh

## Industrial

## Residential

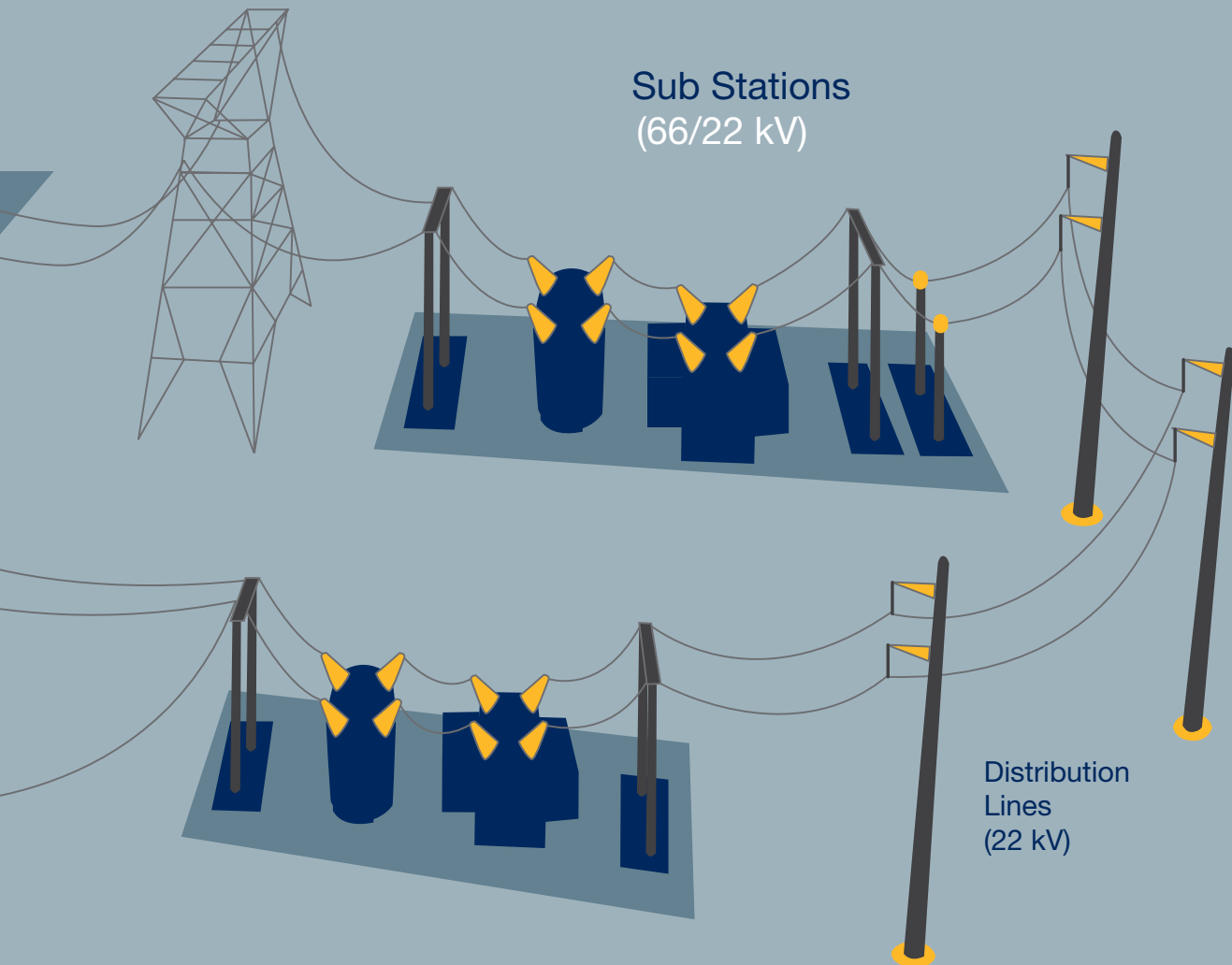
Distribution  
(LV) Lines

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

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 volatile prices of energy sources on the world market, resulting in increasing costs of production, the CEB will be faced with the difficult task of maintaining a fair balance between the 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 mindful of energy conservation and environmental protection.





# 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 2012 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 three 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 2012 was 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 implementation 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 their performance and addressing their 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 the 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.





**5) Abdool Feroze Acharauz**  
Member with experience in Agricultural, Industrial, Commercial, Financial, Scientific or Administrative Matters (up to 23 November)  
**Age : 48**

**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) Sarupanand Kinnoo**  
Representative of the Institution of Engineers (up to August)  
**Age : 58**

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

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

**6) Rohit Mungra**  
Representative of the Central Water Authority  
**Age : 63**

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

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



**8) Claude Wong So, OSK**  
Representative of the Institution of Engineers (as from September)  
**Age : 59**

**Qualifications:** BSc Civil Engineering, University of Nairobi, Kenya; MSc Occupational Hygiene, University of Newcastle Upon Tyne, U.K; Fellow Institution of Engineers Mauritius (FIEM); Fellow Institution of Occupational and Safety Management Mauritius (FIOISHM); Retired Fellow Institution of Occupational Safety UK (FIOSH)

**Position:** President of Institution of Engineers Mauritius, Chairman of Airport of Rodrigues Ltd



**9) Shivdutt Bheechook**  
Member with experience in Agricultural, Industrial, Commercial, Financial, Scientific or Administrative Matters  
**Age : 67**

**Qualifications:** M.A Economics

**Position:** Chairman Irrigation Authority



**10) Dhinnesh Ramduny**  
Representative of the Electricity Advisory Committee  
**Age : 60**

**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 Narayan**  
Representative of the Electricity Advisory Committee  
**Age : 54**

**Qualifications:** Cert. in Design

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

## 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 2012 are given above. None of the Directors, who held office at the end of the financial year, had any interest in the affairs of the CEB.

Board meetings are scheduled annually in advance. Special meetings are convened as necessary to address specific issues. The attendance of members at the 15 Board meetings (including 3 special meetings) held during the reporting period is shown hereunder.

BOARD MEETINGS 2012	No. of Meetings Attended	Overall Percentage (%)
Balraj Narroo, MSK (Chairman)	15	100
Shiam Krisht Thannoo	14	93
Dr. P. M. K. Soonarane	15	100
S. Kinnoo (up to August)	5 of 11	45
C. Wong So, OSK (as from September)	2 of 4	50
K. Seebundhun	11	73
S. Bheechook	14	93
F.A. Acharauz (up to 23 November)	12 of 13	92
R. Mungra	14	93
D. Ramduny	12	80
B. Narayen	15	100

#### Directors' Remuneration

During the year 2012, the fees paid to Directors amounted to Rs 393,100 (excluding the Chairman and General Manager).

The Chairman 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 Human Resource (HR) Committee, and the Audit and Risk Committee. Each Committee operates within its defined terms of reference that set 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.

Twelve Finance Committee meetings were held during the year 2012.

FINANCE COMMITTEE MEETINGS 2012	No. of Meetings Attended	Overall Percentage (%)
R. Mungra (Chairman)	12	100
Dr. P. M. K. Soonarane	12	100
K. Seebundhun	8	67
S. Kinnoo (up to August)	3 of 7	43
C. Wong So, OSK (as from September)	1 of 3	33
S.K. Thannoo	10	83



### 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 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 rates, exchange rates and commodity prices, and forecasts; and
- Providing advice on financing arrangements and structure.

In 2012, the Audit and Risk Committee met on three occasions.

AUDIT AND RISK COMMITTEE MEETINGS 2012	No. of Meetings Attended	Overall Percentage (%)
K. Seebundhun (Chairman)	3	100
S. Bheechook	3	100
D. Ramduny	2	67
F.A. Acharauz (up to 23 November)	3	100

### HR Committee

The HR 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.

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

HR COMMITTEE MEETINGS 2012	No. of Meetings Attended	Overall Percentage (%)
F. Acharauz (Chairman) (up to 23 November)	12	92
Dr. P. M. K. Soonarane	12	92
B. Narayan	13	100
S. Bheechook	12	92
S.K. Thannoo	13	100

### Major Decisions of the Board during 2012

- Endorsement of the recommendation of the Finance Committee to provide an additional channel for the payment of electricity bills through internet banking.
- Approval for the issue of a Letter of Intent to Suzlon/Padgreen for a proposed 29.4 MW wind-farm at Curepipe Point.
- Approval for the allocation of a total capacity of 2 MW to Public, Educational, Charitable, and Religious institutions (PECR), under the Small Scale Distributed Generation (SSDG) scheme, as follows:

Category	Maximum allocation (kW)
Public	600
Educational	1,050
Charitable	150
Religious	200
<b>TOTAL</b>	<b>2,000</b>

- Approval for the payment of electricity bills through mobile phones, in collaboration with Mauritius Telecom and the SBM.
- Approval for the signing of a new Memorandum of Agreement (MoU) between the CEB and Municipal/District Councils to co-ordinate the management of street lighting systems, following the expiry of the initial MoU in 2010.
- Approval for the increase of pension benefits to retired employees, following the recommendation of Management.
- Approval for the erection of a new Green Building of 3-4 levels at La Mivoie.
- Approval to extend the opening hours of Customer Service Centres on Saturdays from 8.30 to 12.00 hours, on a pilot basis.
- Approval of the Energy Supply and Purchase Agreement for the 29.4 MW wind-farm at Curepipe Point (Plaine Sophie), between the CEB and the Consortium Suzlon-Padgreen.
- Approval to make changes to the SAP configuration in order to be fully compliant with IAS 16 standard.
- Approval for the acquisition of the NTC Headquarters at Ebène.
- Consideration of the implementation of pre-paid supply of electricity to customers belonging to “vulnerable groups”.
- Consideration of the replacement of conventional meters by more expensive ones for high revenue consumers, whilst ensuring that upfront investment and operational costs are recovered.

## **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 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 for, 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

*General Manager*

**Age : 46**

**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



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## 2) Gérard Hébrard, O.B.E.

*Deputy General Manager*

**Age : 63**

**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 : 59**

**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 : 60**

**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



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## 6) Jadoonundun Charitar

*Chief Internal Auditor*

**Age : 63**

**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

## 5) Darma Veragoo

*Chief Financial Officer (up to Feb) Treasurer (Mar -Nov)*

*Ag. Human Resources Manager (as from Dec)*

**Age : 60**

**Qualifications:** FCCA

**Experience:** Joined CEB in 1986  
1986-1990: Chief Internal Auditor/Financial Controller  
1990-1992: Personnel Manager  
1992-2003: Chief Internal Auditor/Financial Controller  
2003-2006: Management Accountant  
Jan 2005-Feb 2008: Ag. Chief Financial Officer  
Mar 2008-Feb 2012: Chief Financial Officer  
Mar 2012-Nov 2012: Senior Accountant  
Ag. Human Resources Manager as from Dec 2012



## 7) Ibrahim Nobeebux

*Human Resources Manager*

*(up to Nov 2012)*

**Age : 51**

**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 Mauritius 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 : 43**

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

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



**10) Chavan Dabeedin**  
Corporate Administration Manager  
**Age : 46**

**Qualifications:** B. Tech (Hons), MBA, MSc, EPSE Bath U.K, MIET, MIEEE, MIDGTE, CRPE

**Experience:** Joined CEB in Feb 1992 as Trainee Engineer; Appointed Engineer in Aug 1995; Appointed Senior Engineer in Sep 2002; Appointed Principal Engineer in Nov 2007; Appointed Corporate Administration Manager in Aug 2008; General Manager Nov 2008 – Nov 2010

**9) Shamshir Mukoon**  
Corporate Planning & Research Manager  
**Age : 50**

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



**11) Shyam Abacousnac**  
Information Technology / MIS Manager  
**Age : 43**

**Qualifications:** BSc Computer Science; MSc Software Engineering

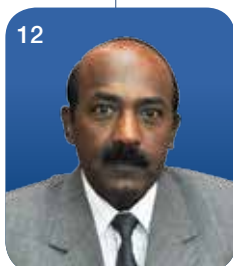
**Experience:** Research Officer, National Computer Board 1997-2001; Systems-Analyst, Development Bank of Mauritius Ltd 2001-2002; IT Manager, State Trading Corporation 2002-2006; IT Manager, Wastewater Management Authority 2006-2009; Joined CEB as IT/MIS Manager in March 2009



**12) Vishwanath Jhummon**  
Corporate Administration Manager (up to June)  
Non-Utility Generation Manager (as from July)  
**Age : 60**

**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



**13) Christabel Ahon**  
Acting Non-Utility Generation Manager (up to June)  
**Age : 41**

**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 Nov 2010 - June 2012



**14) Pharad Kurreemun**  
Acting Chief Financial Officer (up to February); Officer-in-Charge Supply Chain (as from December)  
**Age : 51**

**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 Chief Financial Officer Mar 2011-Feb 2012; Officer in Charge Supply Chain as from Dec 2012



**15) Li Yun Fong Kin Cheong Patrick**  
Officer-in-Charge Finance Dept (as from March)  
**Age : 56**

**Qualifications:** FCCA

**Experience:** Joined CEB in 1990 as Principal Accounts Asst; Appointed Accountant (Production Dept) in 2003; Jan 2006 - Nov 2009: Supervising Officer, Internal Audit Dept Dec 2009 - Mar 2011: SAP Controller Apr 2011 - Feb 2012: Management Accountant Officer-in-Charge Finance Dept as from Mar 2012





## 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 of 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 103 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 2012.

### 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 2012, some 10,910 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 2012 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 start to end by one and the 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 mis-statement; 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
<b>Risk Management</b>	<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 is restricted to authorized personnel</li> <li>✓ Safe custody of bank cheques</li> <li>✓ All cheques bear 'A/C PAYEE ONLY'</li> <li>✓ All payments are supported by original documents</li> <li>✓ All documents are stamped 'PAID' and filed after payments</li> </ul>
<b>Transparency</b>	<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>
<b>Accountability</b>	<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>
<b>Integrity Management</b>	<ul style="list-style-type: none"> <li>✓ Information system records all users who accede to 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 meeting 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 approval has been obtained.

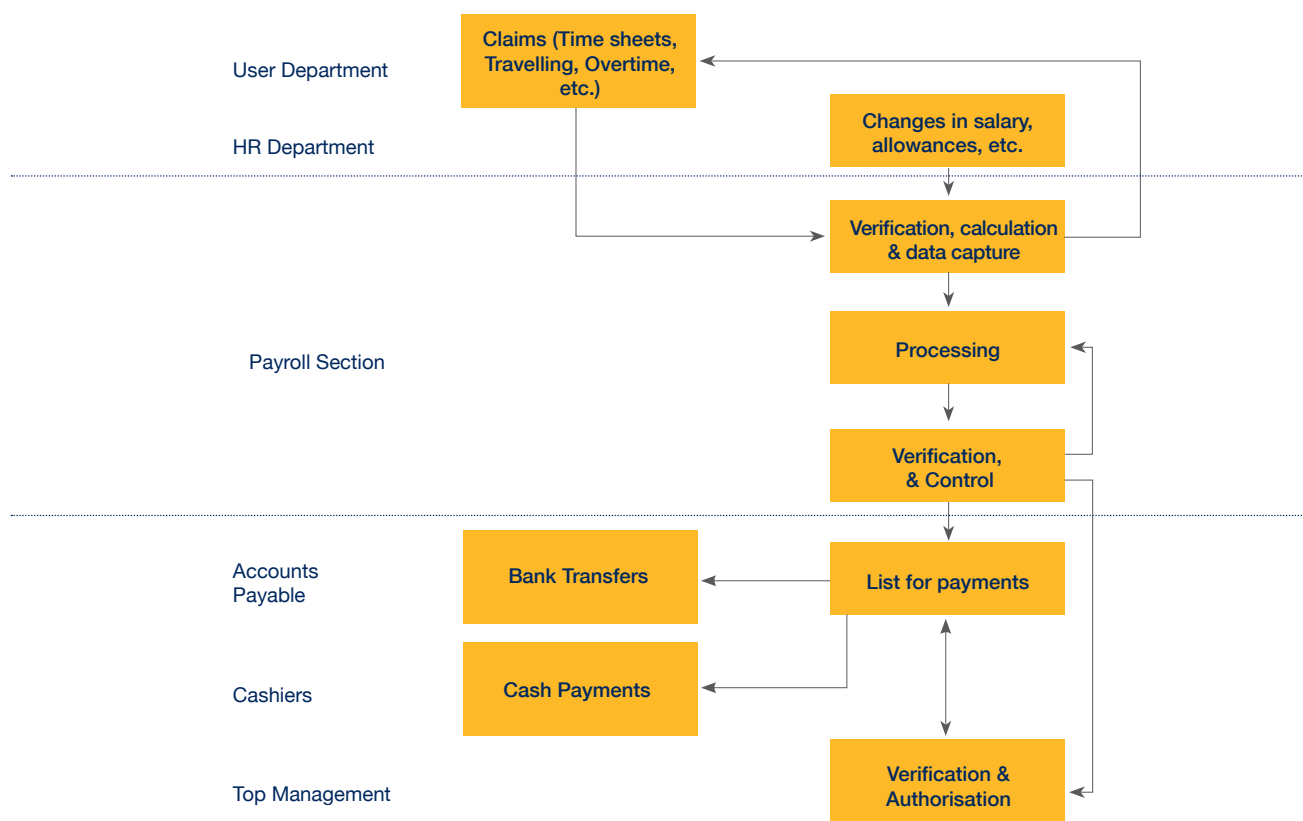
### Meter Reading, Billing, Cash Collection and Debtors Management

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 or 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 any corrupt practice 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 in order 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 in-built system to detect and reveal any tampering thereof. More importantly, all movements 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.

# General Manager's Review



**It gives me great pleasure, as the new General Manager of the Central Electricity Board (CEB), to present the Annual Report and Accounts for the year ended 31 December 2012.**

**Gérard Hébrard, O.B.E.**  
**General Manager**

Being the sole provider of electricity, the utility's contribution may be the most significant of all towards supporting the socio-economic development of the Republic of Mauritius, which is yet another reason for the heightened sense of mission that has characterised our activities over the year 2012.

## **Building Up our Generation Capacity**

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.

The commissioning of Phase II of Fort Victoria Power Station redevelopment in July 2012 is, no doubt, a significant step towards ensuring a secure and sufficient supply of energy in the short-to-medium term. It shows the determination of the CEB to remain at the forefront and core of power generation. It is worth recalling that the first phase of the Fort Victoria Power Station redevelopment, comprising the installation of two generation sets of a total capacity of 30 MW, was completed in October 2010. As for the second phase of redevelopment, it has accommodated an additional four engines of 15 MW each, taking the total capacity of the new power plant to 90 MW. It is indeed very gratifying to note that, after fading into oblivion for several years, the Fort Victoria Power Station has once again become a major actor in the energy generation sector. In line with our commitment to environmental protection, numerous control

measures have been taken on board, both at the design and construction stages of the new power plant. To this end, the facility has been equipped with modern features optimised for low emissions and waste incineration, as well as a 65-metre high stack and state-of-the-art sludge treatment technology. In Rodrigues, an additional unit of 2.5 MW at Pointe Monnier Power Station was commissioned and put in service in November 2012.

With these investments in new generating capacity, I am confident that the CEB will be able to safely cater for the projected growth in demand in the short-to-medium term for Mauritius and Rodrigues.

## **Tapping into the Renewable Energy Potential**

While we have made heavy investment into building up the generation capacity during the year under review, we have, in parallel, come up with various initiatives to further increase our renewable energy usage in order to reduce our dependence on fossil fuels.

The Small Scale Distributed Generation (SSDG) project, which was launched in December 2010, really gathered momentum during 2012. 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 main objective is to increase the renewable energy share in the generation portfolio while democratising the national electrical grid. The response from the public has, indeed, been beyond our expectations and we have, 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 was opened to the public in 2012, including 100 kW in Rodrigues. An additional capacity of 2 MW was likewise set aside for Public, Educational, Charitable and Religious (PECR) entities.

Other larger scale projects, mainly from private promoters and pertaining to solar power and wind energy, are also well on track and are due to be on the Grid in 2014. It is worth noting that the Grenades Wind Park in Rodrigues has, in 2012, contributed to almost 12% of total energy to the grid, highlighting the potential of renewable energy.

### **Consolidating the Transmission and Distribution Network**

On the transmission and distribution side, various projects were implemented with a view to improving the quality and reliability of supply, as well as minimising system losses and power outages. New substations and networks were commissioned and the existing ones were consolidated.

The maximum demand for the year reached 430.2 MW and was recorded at 14.00 hours on Tuesday 19 December 2012, representing an increase of 4.3% over the previous year. The overall system losses were contained to 7.95%, which compares favourably to the figure of 8.1% attained in 2011. This good performance can be attributed to the deployment of greater quality transformers and metering devices, but it is also the outcome of our rigorous policy to fight the illegal abstraction of electricity. In the years to come, we plan to revisit the technical integrity of our transmission and distribution systems, through a systematic upgrade of the network in both urban and rural areas.

### **Maintaining our Financial Strength**

As regards the financial health of the CEB, it has always been of paramount importance. We are well aware of how important it is for an organisation that offers a critical service to the nation to be financially sound and capable of supporting itself. Our aim is to achieve a good balance between providing a reliable and affordable service, and consolidating a stable and financially sound organisation. I wish to report that we will end the year 2012 with a surplus of Rs 299 million. We have, thus, been able to achieve profitability for the past four years after a long period of financial downturn, thanks to favourable macroeconomic conditions but also due to the various reform measures implemented at organisational level. We should, however, always exercise great caution in the management of our finances as our cost of production and our overall cost of sales bear elements on which we have little control. The significant drop in our surplus for 2012, as compared to the previous year, bears testimony to our vulnerability to external factors.

### **Enhancing our Customer Services**

While implementing measures to meet our obligations as the country's sole electricity provider, the focus has also been on the enhancement of customer services. I wish to report that, at the year-end, our customer base reached a total of 426,823 in Mauritius and Rodrigues, a measure of the enormous challenges we have to face on a daily basis to ensure a quality service delivery.

In spite of several constraints, we made further headway in enhancing our service quality, while strongly promoting a customer service culture within the organisation. Various business processes were streamlined and key performance indicators were set accordingly to improve service delivery and instill better customer responsiveness. We also pursued the renovation programme of our main customer service centres island-wide, with the completion of works at Rose Hill, Rose Belle and Port Louis.

### **Using Technology Effectively**

One noteworthy achievement in the technology domain in 2012 was the successful implementation of the remote meter-reading scheme, covering around one thousand of our biggest customers and corresponding to some 30% of our total revenue. I wish to point out that this project is a totally in-house initiative and will help the CEB to significantly improve its revenue collection. The new billing approach will be progressively expanded to other customer categories in the near future.

During the year, we also upgraded our SAP System with a view to consolidating the performance of existing applications, and allowing for the incorporation of new ones such as a Human Resource Management and Asset Management. Our aim 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.

In a similar vein, the SCADA System at our System Control Section, which is a crucial tool for systems operation, was upgraded to a state-of-the-art technology to improve load flow monitoring in our networks, thus enabling a more efficient performance.

### **Valuing our Employees**

The major event during 2012 was the finalisation of the job evaluation and compensation review exercise, covering period July 2013 to June 2017, and scheduled for release next year. The overall aim of the Board is to restore the utility's specificity in terms of pay and benefits, and reestablish the attractiveness of the CEB as an employer of choice.

Another important activity that was initiated in 2012 was the conduct of an organisation-wide training needs analysis. This study will enable the identification of performance gaps at all levels and, subsequently, allow the channeling of resources to required areas through appropriate training programmes or alternative management solutions.

In the years to come, we shall continue to invest in the development of our human resources, while promoting a climate based on mutual trust and respect. Our goal is to create a working environment where all CEB employees feel that their contributions are recognised and valued, and where everyone has the opportunity to develop and grow professionally.

### Planning for the Future

As the enabler of the continued socio-economic development of Mauritius, the CEB must, at all times, plan strategically for the long term so as to ensure a reliable, affordable, and sustainable electricity supply to the country.


In this respect, much headway was made in the finalisation of the Integrated Electricity Plan (IEP), covering the period 2013-2022. This comprehensive plan, the second of its kind, will be released next year. It gives an overview of CEB's broad strategies towards meeting the energy challenges of Mauritius and Rodrigues, both short-term and long-term. It will allow the utility to carefully plan the allocation of our country's power systems resources, while effectively balancing the supply and demand of electricity for the coming decade through least-cost investment. It will also address emerging challenges such as compliance with environmental norms and increasing the share of renewable energy.

### Looking Forward with Increasing Confidence

In 2012, we celebrated a momentous occasion with the CEB turning 60 years old. The 40th anniversary of the electrification of Rodrigues was equally an important milestone.

A quick walk down the memory lane of our history from 1952, when all started in our first headquarters in Ritter Street, Port Louis, gives evidence of the giant strides we have made to transform our organisation to where it is today. Over the years, we have, in fact, lighted the way to the socio-economic development of the Republic of Mauritius by bringing the benefits of electricity to every sphere of modern life.

As we look forward, we are confident on the prospects of building a sustainable energy future and ensuring that the demand for reliable, affordable, and environmentally sound energy is met in a timely manner. Building on our solid human and organisational capabilities, we are convinced that we are well equipped to meet all challenges head on and assist the country in its new phase of development.



**Gérard Hébrard, O.B.E.**  
**General Manager**

*Note: Mr Gérard Hébrard was appointed as General Manager of the CEB on 13 April 2015.*

## Key Facts 2012

Total Assets (Rs M)	26,441
Surplus (Rs M)	299
Net Cash from Operating Activities (Rs M)	673
Capital Expenditure (Rs M)	1988
Employees (number)	1981
Customers (number)	426,823
Electricity Sales (MWh)	2,294,361
Nominal Capacity (MW) (including IPPs)	773
Effective Capacity (MW) (including IPPs)	679
Power Lines (all voltages) (km)	9,446

*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 2012, the share of CEB's production totalled 44.6% of the total energy generated, with the remaining 55.4% being supplied by Independent Power Producers (IPPs). The main project in the generation sector was the commissioning, in July, of the second phase of the Fort Victoria Power Station Redevelopment. The coming into operation of four additional engines of 15 MW each has taken the total capacity of the new power plant at Fort Victoria to 90 MW, and would enable the CEB to cater for the projected growth in demand in the coming years.

#### DEMAND PATTERN (ENERGY AND POWER)

The total energy generated was 2,495.45 GWh representing an increase of 2.56 % over last year. The CEB plants generated nearly 1,112.055 GWh, and purchases amounted to around 1,383.4 GWh. The maximum power demand was 430.24 MW and was recorded on 19 December at 14 00 hrs, representing an increase of 17.75 MW (4.3%) over the maximum demand of 2011 (412.49 MW). It is to be noted that the contribution of Small Scale Distributed Generators (SSDG) totalled 0.23 GWh in 2012.

The various outputs are tabulated below.

Sector	Energy Source	Output (GWh)	%
Hydro	Water	74.07	2.97
Thermal	Fuel Oil & JET A1	1,037.98	41.59
Purchase (CPP)	Bagasse	3.69	0.15
Purchase (IPP)	Coal & Bagasse	1,361.69	54.57
Purchase (landfill)	Landfill gas	17.80	0.71
Purchase (SSDG)	Renewable	0.23	0.01
<b>Total</b>		<b>2,495.46</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 656.5 GWh, i.e. 59 % of CEB's generation and 26.3 % of total energy generated.

The table below shows the cumulative running hours of each unit as at 31 December 2012.

Unit	Running Hours	
	During 2012	Since Commissioning
G1	6,854	139,681
G2	6,781	139,708
G3	7,059	115,802
G4	6,893	96,095
G5	7,871	92,866

Units 1 and 2 clocked nearly 140, 000 running hours and are in service since 1992. They have an average operating hours of around 7000/year.

Units 3, 4 and 5 have an average of 7200 running hours/yr. No major problem was encountered on these units and it is expected that Units 4 & 5 at FGPS would cross a total of 100,000 running hours by the end of December 2013.

Scheduled maintenance was successfully carried out on all units. Hyundai's Engineers were on site in October 2012 to inspect cracks on bedplate of Units 4 and 5 and the matter is still being pursued with HHI (the engine builder) and MAN B&W Denmark (the engine designer).

The capital projects that were successfully implemented during 2012 were:

- Replacement of critical engine parts that had run for over 100,000 hours on Units 1, 2 and 3 as advised by equipment manufacturers;
- Cleaning, inspection and painting of three HFO tanks; and
- Replacement of dome-lights in engine rooms.

### Fort Victoria Power Station

The total Energy produced was 215.7 GWh, i.e. 8.6 % of the total energy generated.

The two Wartsila Units from FVPS Phase 1 Redevelopment Project, which were commissioned in October 2010, performed satisfactorily and generated some 75.8 GWh during 2012. The second phase of the Fort Victoria Power Station Redevelopment, which comprised the installation of four units of 15 MW each, was successfully implemented and the engines were commissioned in July 2012. The total

energy produced as at the close of the year was 132.9 GWh.

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

Unit	Running Hours	
	During 2012	Since Commissioning
1	2,800	10,663
2	3,205	11,126
3	2,653	2,653
4	2,648	2,648
5	2,568	2,568
6	2,357	2,357

Scheduled maintenance was carried out on both G1 and G2, prior to the expiry of their respective warranty periods, and no abnormalities were found. Both alternators were thoroughly inspected and re-varnished by ABB and BWSC, following corona discharge that was found on the windings just before the end of the warranty period.

The MAN B&W Engine G11 was operated for 906 hours only during 2012 and the energy produced was 6.8 GWh. No major problem was encountered on this engine.

The contract for repair of the alternator of MAN B&W Engine G12, which experienced a major breakdown in June 2009, was awarded to BWSC and includes replacement of the stator and damaged poles. The repair work is expected to be completed by February 2013.

Another capital project which was implemented 2012 was the Design and Construction of a 5000 m<sup>3</sup> HFO Tank at Fort William Depot.

### Saint Louis Power Station

Total energy production was 154.81 GWh, i.e 6.2 % of the total energy generated. The Wartsila units generated 119.75 GWh and the Pielstick engines generated 35.0 GWh.

The Pielstick generating sets, though having reached the end of their serviceable life (137 000-163 000 running hours), operated satisfactorily except for Pielstick Unit 6 which had three poles of its alternator damaged. The Board, at its meeting of the 25 July 2012, approved the recommendation of Management to decommission Unit 6. The serviceable parts of the engine would be used on the remaining engines which are still in operation. A major overhaul was carried out on Unit No 4, as scheduled.

The Wartsila units performed satisfactorily, clocking an average of 3,500 operating hours each.

The major capital project implemented at Saint Louis Power Station during the year was the rehabilitation of the stack of the standby set.

### **Nicolay Power Station**

The three gas turbine units clocked an average of 487 operating hours for the year 2012, generating 10.98 GWh, i.e 0.44 % of the total energy generated.

A major upgrading work was carried out on Unit 1 whereby the initial Mark IV controller unit was replaced by a new Mark VI unit supplied by GE USA. The controller was tested and commissioned by BHEL-GE (India).

The other major works that were carried out at Nicolay Power Station in 2012 include the refurbishment of Unit 3 inlet filter housing and inlet duct, and the commissioning of a new CO2 fire suppression system.

### **Hydro**

The generation from hydro power stations was only 74.1 GWh, due to poor rainfall across the country till mid-March 2012.

The scheduled maintenance of all power stations was successfully carried out during the year. Following major upgrading works at La Ferme, the turbine unit was re-commissioned in April 2012, under the supervision of Engineers from Gordon Gilkes, UK.

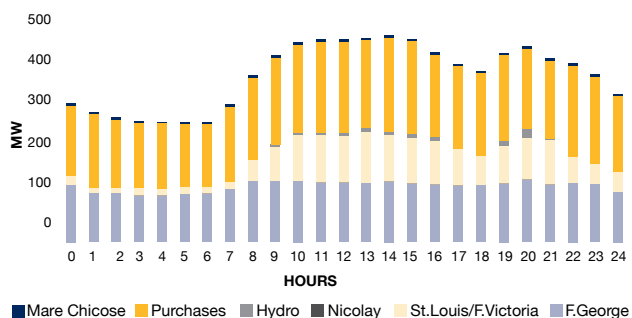
The construction works for Midlands Dam micro-hydro project were started in February 2012, after receiving the required clearance from the Water Resources Unit. The progress of works was, however, affected by rains and spillage from Midlands Dam during the first six months of the year. Following the completion of the Power House, installation of electro-mechanical equipment by Exmont teams was initiated in December and commissioning of the power station is expected in March 2013.

The other capital projects that were implemented in 2012 include:

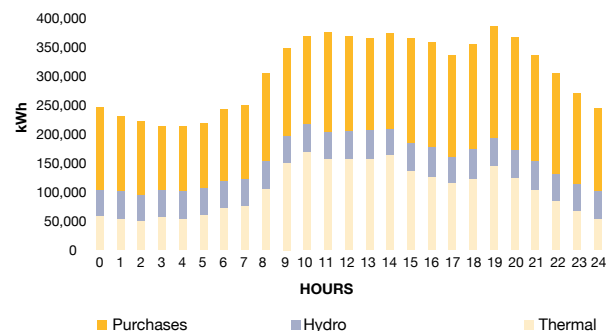
- Rehabilitation of winch track at Tamarind Falls Dam;
- Feasibility study for increasing the capacity of Sans Souci Dam (ongoing);
- Protection of penstock and retaining wall at La Nicolière Power Station;
- Upgrading of Governor System at Champagne Power Station (ongoing);
- Replacement of Alternator at Ferney Power Station (ongoing);
- Commissioning of turbine unit at La Ferme Power Station;
- Construction of retaining wall at Pierrefonds Dam – La Ferme Power Station; and
- Protection of penstock at Réduit Power Station.



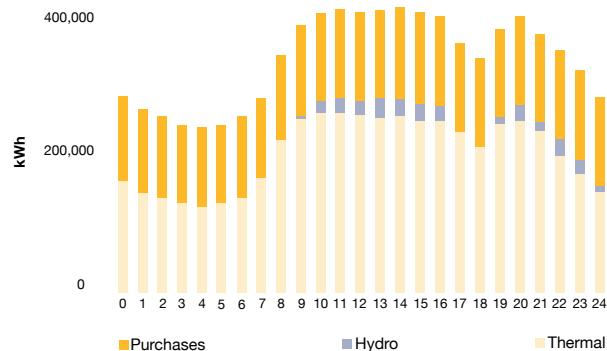
#### Highest Maximum Demand 430.24 MW - 19.12.2012 at 14h00



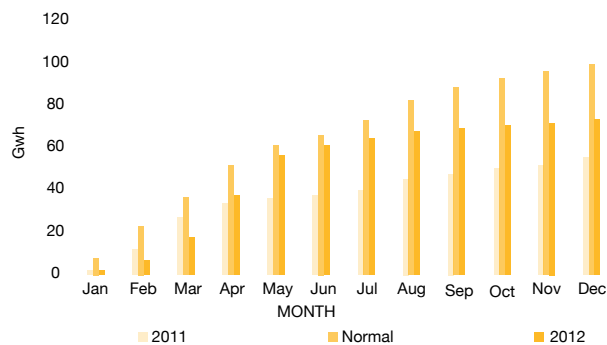
#### Highest Hydro Production 1, 135, 549 kWh - 19.04.2012



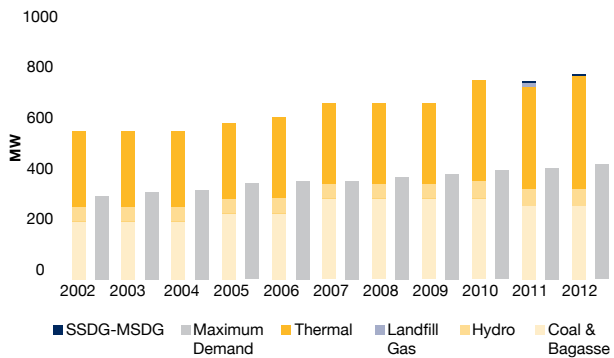
#### Highest Thermal Production 4, 930, 065 kWh - 10.02.2012



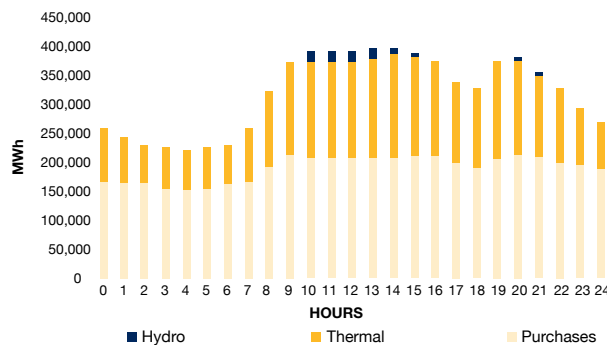
#### Cummulative Hydro Production 2012



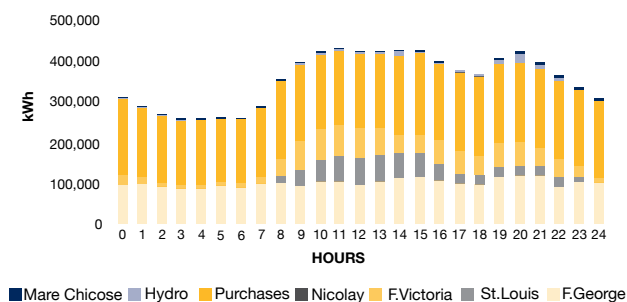
#### Installed Capacity and Maximum Demand 2002-2012



#### Highest Purchases 4, 744, 311 kWh - 10.01.2012



#### Maximum Units Generated 8, 622, 649 kWh - 20.12.2012





## ENERGY PURCHASES

The total energy purchases for the year 2012 from Independent Power Producers (IPPs) and Continuous Power Producers (CPPs) totalled 1,383.4 GWh, corresponding to an increase of about 3.5% as compared to the year 2011. Overall, the IPPs and CPPs accounted for 55.4% of the total energy sent out to the Grid.

Only one CPP operated during the crop season 2012, namely Médine Limited. It is to be noted that Compagnie Usinière de Mon Loisir Limitée ceased its operations as from crop season 2012, following the approval of closure by the Ministry of Agro Industry and Food Security. All the canes of the Mon Loisir factory area are now milled at Belle Vue Milling Company Limited.

In July 2012, the parent companies of Fuel Steam and Power Generation Co. Ltd (“FSPG”) and Consolidated Energy Limited (“CEL”), i.e., Flacq United Estates Limited (“FUEL”) and Deep River-Beau Champ Limited (“DRBC”) carried out a merger exercise, leading to the formation of Alteo Limited. Deep River Beau Champ sugar factory is planning to cease its operations after crop 2013, subject to the authorisation of the relevant authorities. This planned closure will impact on CEL’s ability to meet its contractual obligations under its Power Purchase Agreement.

Sotravic Ltée, which generates energy from landfill gas, started its commercial operations in November 2011, with two gas engines of 1 MW each. The installation of a third engine was started in 2012 and its commissioning is planned for February 2013.

In August 2012, the CEB signed an Energy Supply and Purchase Agreement (ESPA) with Consortium Suzlon-Padgreen Co. Ltd in respect of the setting up of the Curepipe Point Wind-farm project. The Wind-farm, which will be located at Plaine Sophie, will have a nameplate capacity of 29.4 MW and will comprise fourteen wind turbines. The Consortium has already provided its development security and has submitted its application for an EIA Licence. The wind farm is scheduled to be commissioned within 24 months as from the execution date of the ESPA.

Following the general breakdown of 13 December 2011, several meetings were held with IPPs to find a solution in achieving islanding mode during major disturbances on the network as well as to proceed with a review of protection settings of IPP generating units. In this respect, the IPPs, through their consultant, came forward with new protection settings proposals which were mostly accepted by all parties. The IPPs have, in principle, agreed to proceed with their implementation at their next annual shutdown. However, some particular settings were not approved because they were not in line with the PB Power Protection Report of 2006. It became apparent that a revision of settings for the complete 66kV network was required. In this respect, the services of Consultant PB Power were sought to conduct further studies, and same is scheduled to start in February 2013.



# PLANT CAPACITIES AND UNITS GENERATED & EXPORTED 2012

	Plant Capacity (MW)	Effective Capacity (MW)	Units Generated (kWh)	Units Generated %	Units Exported (kWh)
<b>Hydro CEB</b>					
Champagne	30.00	28.00	31,869,000	1.277	31,625,100
Ferney	10.00	10.00	22,620,100	0.906	22,531,274
Tamarind Falls	11.00	7.50	8,182,250	0.328	8,084,810
Magenta	0.94	0.85	1,261,950	0.051	1,261,950
Le Val	4.00	4.00	4,467,977	0.179	4,411,641
Cascade Cecile	1.00	0.90	2,165,112	0.087	2,152,653
Réduit	1.20	1.00	2,029,590	0.081	2,018,550
La Ferme	1.20	1.20	676,451	0.027	662,589
La Nicolière F.C	0.35	0.35	800,538	0.032	797,420
<b>Total Hydro</b>	<b>(A) 59.69</b>	<b>53.80</b>	<b>74,072,968</b>	<b>2.968</b>	<b>73,546,087</b>
<b>Thermal CEB</b>					
St. Louis	100.90	72.90	154,816,512	6.205	147,358,406
Fort Victoria	109.60	107.00	215,662,526	8.642	211,778,015
Nicolay	78.40	75.00	10,983,800	0.440	10,495,847
Fort George	138.00	133.00	656,524,700	26.308	628,153,00
<b>Total Thermal</b>	<b>(B) 426.90</b>	<b>387.90</b>	<b>1,037,987,538</b>	<b>41.595</b>	<b>997,785,268</b>
<b>Total CEB</b>	<b>(A+B) 486.59</b>	<b>441.70</b>	<b>1,112,060,506</b>	<b>44.563</b>	<b>1,071,331,355</b>
<b>Thermal Purchases</b>					
CTSAV	90.00	74.00	491,708,853	19.704	491,708,853
Beau Champ*	28.40	22.00	125,998,880	5.049	125,998,880
Belle Vue**	71.20	62.00	356,735,429	14.295	356,735,429
F.U.E.L***	36.70	27.00	161,701,706	6.480	161,701,706
CTDS	32.50	30.00	225,533,519	9.038	225,533,519
Médine	10.00	6.00	3,689,880	0.148	3,689,880
Sotravac Ltd	2.20	2.00	17,795,811	0.713	17,795,811
SSDG - MSDG	1.45	1.45	260,592	0.010	260,592
<b>Total Purchases Thermal</b>	<b>(C) 272.45</b>	<b>224.45</b>	<b>1,383,424,670</b>	<b>55.437</b>	<b>1,383,424,670</b>
<b>Grand Total</b>	<b>(A+B+C) 759.04</b>	<b>666.15</b>	<b>2,495,485,176</b>	<b>100</b>	<b>2,454,756,025</b>

Effective Capacity	Crop	Inter Crop
Beau Champ*	11	22
Belle Vue**	46	62
F.U.E.L***	20	27
CTSAV	65.5	74



# Transmission and Distribution



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 2012 are highlighted below.

## SYSTEM PERFORMANCE

The general performance of the Transmission and Distribution system was satisfactory for the year under review.

The networks were subject to some disturbances caused by the passage of cyclone Giovanna in proximity of the country. These disruptions were, however, promptly cleared.

On 8 September 2012, a fire outbreak which started in sugar cane fields in the region of Piton soon spread up to the Belle Vue Harel/Beau Plan regions due to heavy winds. One of our 66 kV tower lines (Dumas/Belle Vue) located in these sugar cane fields was affected by this fire and this resulted in the tripping of the 66 kV lines Belle Vue/Dumas 1 & 2. The tripping of the 66 kV lines, did not, however, cause any major disturbance on the CEB grid as the faults on the 66 kV lines did not occur simultaneously.

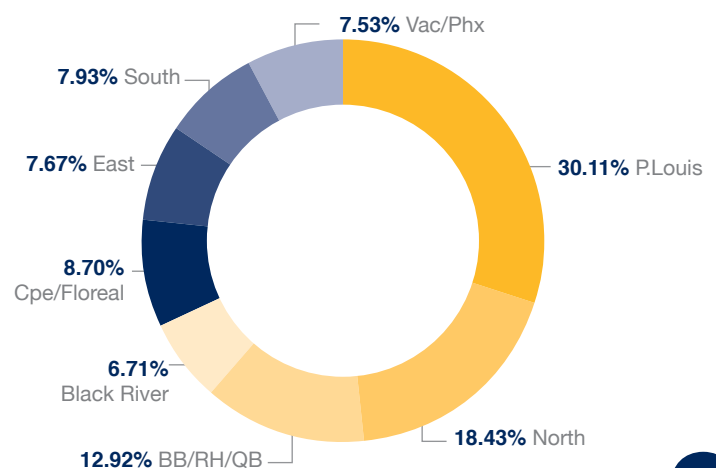
Another tripping of our 66 kV lines, namely the 66 kV Champagne–Union Vale and Combo–Union Vale lines, was recorded on 6 November 2012 due to fire in sugar cane fields.

## System Maximum Demand

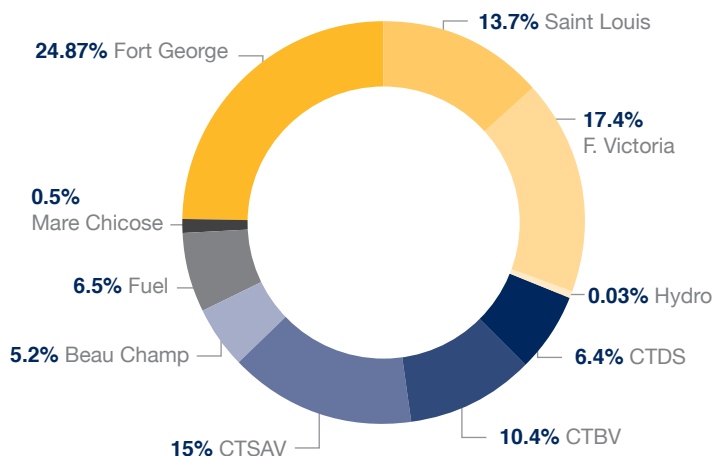
The maximum demand for the year 2012 reached 430.2 MW on Tuesday 19 December at 14.00 hours. This represents an increase of 4.3% on the previous year. It is worth noting that the average increase in demand over the period 2006-2011 was around 2.4 %.

The approximate load distribution over the island on a regional basis at the time of the highest demand, and the generating plants contribution at the time of the highest demand are shown hereunder.

% Load Distribution per Region for the Maximum Demand

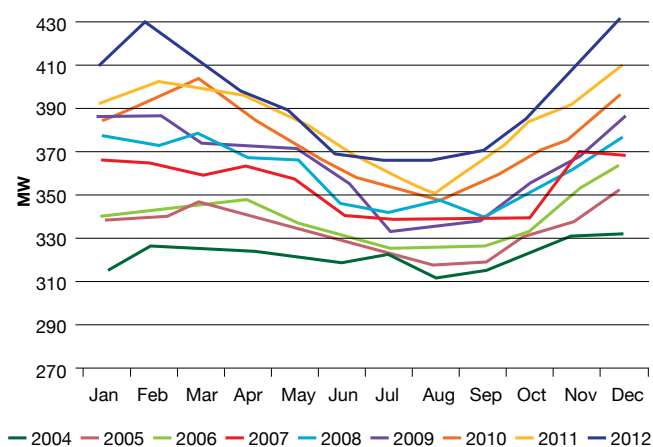


### Load Contribution per Generating Unit for the Maximum Demand

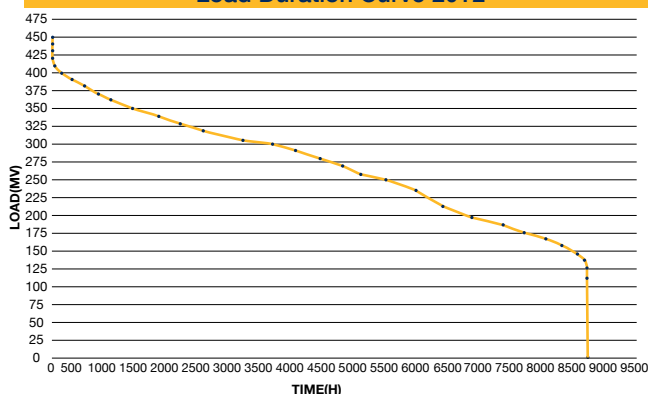


The monthly maximum demand curves for the period 2004-2012 and the load duration curve for the year 2012 were as follows.

### Monthly Maximum Demand for Period 2004-2012



### Load Duration Curve 2012



The average load factor, based on monthly average data, for the year 2012 was 72.1 %. This represents an increase of 8.2 % on the average load factor computed for the five previous years which stood at 72.78 %.

The average load factor for the year, based on daily data, was 78.8%. Henceforth, computation of load factor will be performed on daily data instead of monthly average data.

### 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 2,319 MVA, whilst for the distribution substations, the total installed capacity reached 1,591 MVA, thus making a total of 3,910 MVA installed on the system.

#### Growth of Network

In the course of the year, the overhead transmission and distribution network was extended by 174 km, thus bringing the total length of overhead lines to 8,351 km. This figure includes 5.2 km extension of the 66 kV overhead transmission lines.

The underground transmission and distribution network was increased by 37 km during the year to bring the total route length to 600 km, which includes 19 km of 66 kV underground cables.

The grid lengths, as at December 2012, 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)	290	2,787	5,273
Length of underground cables (km)	19	393	188

#### System Losses

The overall system losses for the year under review were 7.65%. The figures for the last five years are reproduced for comparison.

Year	2008	2009	2010	2011	2012
Losses (%)	9.44	8.7	8.1	7.95	7.65

## 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 2012.

### 66 kV Networks

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

The existing 66 kV Wootton – Champagne, Henrietta – St Louis, Henrietta – Chaumiere, Dumas – Belle Vue – Amaury – FUEL lines, which are more than 30 years old, require proper refurbishment in order to extend their working life. During the year under review, major reconstruction works were scheduled for the systematic replacement of corroded members in order to strengthen and increase the life span of the existing lines. Corrosion protection treatment and replacement were also carried out, subject to the availability of power cuts.

In line with the recommendations of USTDA Consultants, specialised training was provided to our technicians on how to enhance the structural integrity of the tower line infrastructure.

#### *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 47.5 km of overhead network and 5 km of underground cables were laid and energized. At the end of 2012, the outstanding works consisted of approximately 3 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. The CEB was informed in mid-2012 that the Government had reviewed its decision and that the hotel project had been cancelled. Further to this decision, the CEB resumed with the stringing of overhead conductors at La Prairie.

Excavation works and laying of underground cables were carried out over approximately 1.2 km from Coteau Raffin to Corniche Bay, following granting of way-leave by the RDA in late 2012.

At Fort Victoria, laying of 66 kV UG cables is expected to be completed in the second half of 2013. The energizing of line at 66 kV will be carried out after completion of these works.

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

The requirement of 45 MW of power in 2014 for the Jinfei project necessitates the erection of about 8 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. Some 2.6 km of double circuit overhead line were laid in 2012, taking the total length to approximately 5.5 km. The underground cables, earmarked for this project, were reassigned to the Fort Victoria re-development project, which would necessitate the laying of new underground cables between St Louis and Fort Victoria in replacement of the existing old oil-filled cables. Formalities for the procurement of underground cables have been initiated and the cables are expected to be received in early 2014. The underground cable works are scheduled to start in 2014.

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

The La Tour Koenig 66/22 kV substation will be energised from the existing 66 kV St. Louis – Chaumiere lines and will involve the erection of 0.5 km overhead network and the laying of some 1.3 km of underground cables. Civil works associated with the laying of pipes were completed in 2010. However, on account of the urgency of the Fort Victoria Re-development Project, the earmarked cables for La Tour Koenig Substation were re-allocated to the Fort Victoria re-development project. Formalities for the procurement of 66 kV cables have been initiated and the cables are expected to be received in early 2014. Cable laying is now scheduled to be carried out in early 2015.

#### *OPGW on Transmission lines*

The purpose of optical ground wire (OPGW) 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 2012, the stringing of OPGW on the existing 66 kV network from Henrietta to Combo and at Montagne Canon (on new Combo – Case Noyale 66 kV network), over distances of 25 km and 1.5 km respectively, was carried out. At the close of the year, the length of OPGW totalled 183 km, corresponding to 56% of total length contemplated.

#### **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 line will relieve load on the Champagne – Wooton line, while ensuring continuity in the evacuation of power, in case the Champagne – Wooton line should fail. The new line, of route length of about 25 km, is presently at the survey and design stage. Survey works have already been carried out and way-leave formalities for the erection of poles and stringing of conductor are in progress.

Following studies carried out by the Corporate Planning and Research Department and based on forthcoming Generation Plans, construction of this line is no longer urgent in the short-to- medium term and can be deferred.

#### **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 start of works have been re-scheduled for 2013, due to delay in procurement procedures.

#### **66 kV line from Belle Vue to Sottise**

Construction of a second 66 kV line from Belle Vue substation to Sottise substation will help reinforce the 66 kV transmission grid and improve reliability of power supply to the Northern part of the island. The route length of the proposed line is about 10 km. Survey works have been completed. Wayleave formalities were initiated in 2012 and are expected to be completed by mid-2013. Implementation works will involve the undergrounding of existing 22 kV networks along the proposed corridor and are scheduled to start in 2014 and to be completed during the same year.

#### **66 kV line from Fort Victoria to Neotown**

The requirement of 60 MW of power in 2016 for the Neotown project will necessitate the laying of about 1.3 km of 66 kV underground cables from the proposed 66 kV substation at Fort Victoria to the new 66/22 kV substation which will be

erected at Les Salines. Wayleave formalities were completed in 2012 and excavation works and laying of UPVC pipes were also carried out. Formalities for the procurement of underground cables were initiated and are expected to be received in early 2014. Cable laying is scheduled to start in 2015 and completed in 2016.

#### **Upgrading of 66 kV Henrietta - Combo**

Refurbishment works, which consist of replacement of rotten poles and upgrading of conductors over a distance of 4 km in the region of Grand Bassin on the existing Henrietta – Combo network, were initiated in 2012 and are expected to be completed in 2013, subject to availability of power cuts.

Replacement of poles and re-conductoring works were carried over a distance of 1.43 km from Roche Blanc to Plaine Sophie. Upgrading of the remaining stretch of 2.6 km is scheduled to be carried out and completed in 2013.

#### **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 were completed. Civil works are expected to start in 2014.

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

This substation is being constructed 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.

Civil works related to the construction of the substation were completed in 2012. The installation of the substation equipment is scheduled for end of 2013 and the commissioning of the substation is scheduled for 2014.

##### **66 kV Dumas and Union Vale Substations**

Following the failure of through-wall bushings on 18 July 2010, the Dumas substation was bypassed once again. Consequently, it was decided to replace all such bushings at Dumas and Union Vale substations.

The replacement at Dumas substation was carried out in November 2011 and the substation became fully operational in February 2012, after removal of all bypass and commissioning of the newly installed through-wall bushings.



At Union Vale substation, replacement of through wall bushings on all 66 kV bays was completed in June 2012.

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

This new substation has been erected to provide power to the IRS Anahita project, while helping to relieve the existing 22 kV feeders and improving reliability of supply to the Eastern part of the island.

The power transformers TXCB1 and TXCB2 were successfully commissioned in 2012. Switching operations were carried out for the transfer of some of the existing 22 feeders from FUEL Substation to the newly commissioned Anahita Substation.

#### **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 2013.

#### **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.

Installation of the substation equipment, which started in September 2010, was continued in 2012. However, the progress of works was hampered by other more urgent ongoing projects at Fort Victoria, Wooton and Anahita substations. It is also to be noted that several equipment were damaged and conductors were stolen during a theft in September 2012 at La Tour Koenig Substation. The commissioning of the substation has now been re-scheduled for mid-2015.

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

Civil works on the 66 kV bay, associated with the upgrading of the second power transformer from 20/30 MVA to 36/45 MVA, were completed in mid-2012. The power transformer was commissioned in November.

At Union Vale Substation, installation of one additional 20/30 MVA power transformer was re-scheduled for 2013. 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.

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

There is a necessity for replacing Oil Circuit Breakers that are more than 20 years old and not operating correctly. In 2012, twelve old 66 kV circuit breakers were replaced by SF6 gas-insulated ones. The replacement programme will be pursued in 2013.

#### **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 was received in February 2012. Commissioning of the substation was scheduled for mid-2012.

Installation of switchgear panels started in April and the substation was commissioned in October 2012.

#### **66 kV Switching Substation at Fort Victoria**

This project is associated with the evacuation of power from the Fort Victoria re-development project and also to cater for the supply to the Neotown project at Les Salines. The tender for consultancy services, in connection with design studies for the proposed switching substation, was awarded in 2012. Implementation is scheduled to start in 2013 and is expected to be completed in 2015.

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

During the year under review, the Construction and Maintenance (C&M) Section carried out the retrofitting of all 22 kV switchgear panels at Rose Hill Substation.

#### **Capacitor Banks at 22 kV Major Substations**

Capacitor banks are installed so as to minimize transmission of reactive power, improve voltage levels, improve power factor and minimize losses on the network.

During the year under review, capacitor banks were commissioned at Amaury, Sottise, and Wooton substations.

### **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 to 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 2012 with a view to improving the reliability and quality of supply, and reducing line losses:

1. Ring between Feeder Triolet-Sottise and Feeder Triolet-Belle Vue (1 km)

2. Ring from La Sourdine to Camp La Hache L'Escalier on Feeder Union – Combo (2 km)
3. Ring Switchgear Oberoi on Dedicated Airport Feeder and Shandrani Feeder (0.6 km UG)
4. 22 kV ring Dagotière – Verdun (0.9 km)
5. 22 kV ring Providence – Melrose (0.8 km)

It is to be noted that cable laying works in connection with the erection of an additional feeder from Ebène to supply the Mall of Mauritius complex at Bagatelle, which started in 2011, were completed in 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 2012:

1. Rerouting of part of existing 22kV line from Ferney to GRSE (4.5 km)
2. Undergrounding of Cote d'Or Feeder (1.5 km)
3. Reconstruction of part of Le Val – Wooton Feeder at Union Park (0.5km)
4. Reconstruction of spur St Hubert on Feeder Ferney – Union Vale - Le Val (0.5 km)
5. Reconstruction and upgrading of HT network at Gebert (1.5km)
6. Reconstruction of HT network from Nouvelle France to Union Park (1km)

### **Conversion of 6.6 kV feeders to 22 kV**

In the context of our line losses reduction targets, the following projects were implemented in 2012:

1. Conversion of 6.6 kV networks at Supreme Court and Astor Court, Port Louis.
2. Conversion of 6.6 kV BAT, consisting of three phases. Phase 1 of the project has been completed and all line fittings have been upgraded from 6.6 kV to 22 kV.
3. Conversion of Barracks Feeder (3 Tx converted).
4. Part of Commercial Feeder has been converted and seven transformers upgraded.
5. Part of Stanley Feeder has been converted and seven transformers upgraded.

### **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 1,051 HT and LV poles were replaced island-wide during the year under review.

### **Removal of Life-threatening Situations**

The above-mentioned scheme was introduced in late 2012 with a view to eliminating potential sources of danger associated with houses erected in close proximity to our HT and LV networks. These situations are usually brought about by factors such as scarcity of land available for construction purposes, and costs involved with displacement/insulation of network at the site concerned.

Inspections were carried out island-wide in 2012 to make an audit of the above dangerous situations for appropriate remedial measures. Moreover, financial assistance to customers for displacement/insulation of network was under consideration.

### **SYSTEM CONTROL**

#### **Installation of Multiplexer DXC5000**

One multiplexer was commissioned in 2012 at Sottise Substation, thus bringing the total number of multiplexers in service to twelve.

#### **Remote Terminal Unit**

The SCADA system communicates with Remote Terminal Units (RTUs) located at all substations. These RTUs were originally supplied by Microsol. It was becoming very difficult to get spares because the corresponding cards had gone out of production.

In 2012, the Microsol RTUs were replaced by RTU C264, supplied by Areva, at Vacoas, St Jean, Poudrière, Fort Victoria, La Source, Le Val, and Médine substations.

#### **General Breakdown Restoration Procedures**

Following the general breakdown of 13 December 2011, where criticism was raised regarding the delay in the restoration of supply, the System Control was assigned the responsibility to develop guidelines that would be used for power restoration in the event of a general breakdown.

These guidelines were released in November 2012 and consist of a comprehensive set of procedures and instructions to be adhered to in case of a general breakdown.

### **MAJOR DISTRIBUTION PROJECTS**

Major electrical infrastructural works were performed in 2012 to supply the important consumers mentioned below:

- a) New SICOM Building (1 MVA)
- b) Laurelton Diamond (1 MVA) – Rose Belle
- c) VIP Commercial Centre (1 MVA) – Goodlands
- d) Gamma Civic Beemanique (2 MVA)
- e) Circle Square (1.5 MVA) - Forbach
- f) Mall of Mont Choisy Shopping Mall (1.5 MVA)
- g) La Croisette (11 MVA)
- h) Kendra Commercial Centre (St Pierre) (800 kVA)

- i) Temporary Supply to JINFEI (Mobile MV Panel near Riche Terre Site) (2 MVA)
- j) ATOL New Passenger Terminal – SSR International Airport Terminal Expansion Project (7.5 MVA)
- k) Matala (2 MVA)
- l) Dolphin Coast La Balise (2.5 MVA)
- m) Les Creolias Hotel at Calodyne (1.6 MVA)
- n) Lilmo Pamplemousses (2 MVA)
- o) Flacq Shopping Mall (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	2011	2012
SAIDI *	Hours	North	1.77	1.17
		Centre	2.51	3.52
		South	4.79	3.61
SAIFI **	Index	North	0.84	0.48
		Centre	0.80	1.08
		South	1.68	1.76

**\*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 devices for monitoring specific equipment and network analyser were also used to detect any abnormal performance of equipment and ensure the quality of supply.

#### 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 2012, some 550 MDI metering installation were inspected by the Meter Laboratory of the CEB. Cases of anomalies in registration, due to tampering, wrong connections or faulty equipment, were detected and remedial actions taken.

During the year, a total of 1,136 and 43 Automatic Meter

Reading (AMR) meters were installed in Mauritius and Rodrigues respectively, bringing the total number of installed AMR meters to 1,488. These meters are monitored on a monthly basis and are 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 was not the case with traditional meters.

In line with Government's policy of eradicating poverty, the Meter Laboratory, in collaboration with the Mauritius Telecom, was actively involved in the development and implementation of a pilot project regarding pre-paid metering.

The Meter Laboratory was also involved in the implementation of a new Energy Audit scheme. The installation, on a pilot project basis, of AMR meters in feeder panels at substation levels on 22 kV feeders will help to monitor feeder loadings, determine losses on the network and, in certain specific cases, help to determine cases of fraudulent abstraction of electricity.



# 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.

In the year 2012, 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 414,005 customers, representing a 2% increase over the previous year.

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 to provide a prompt and efficient service to customers.

## **CUSTOMER SERVICES AND INTERACTIONS**

All customer contacts throughout the island are managed by the Customer Services and Interactions Section, which regroups 15 walk-in centres, 3 stand-alone Cash Offices, and the 130 Helpdesk.

The following projects were implemented to enhance customer services delivery 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 2012 with a view to facilitating access to our services by customers, while providing a pleasant working environment to our employees.

During the year, our office at Poudrière was totally refurbished while retaining its historic appeal. In a similar vein, the existing Cash Office at Rose Belle was moved to the Vieux Moulin Commercial Centre so as to provide better accessibility and services to our customers. Renovation of Mahebourg Office was also initiated and works are expected to be completed in April 2013.

## **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 ( $KPI_{fins}$ ) 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 ( $KPI_{p2m}$ ) 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 2012.

Year 2012	No. of Requests for New Connections	Cumulative No. of requests for New Supply	$KPI_{fins}$	$KPI_{p2m}$
January	1840	1840	3.3	3.7
February	1924	3764	4.1	5.2
March	2098	5862	3.7	4.5
April	2014	7876	3.6	3.9
May	2227	10,103	3.8	3.4
June	1925	12,028	3.1	2.7
July	1965	13,993	3.5	3.2
August	2013	16,006	4.1	4.1
September	3452	19,458	3.7	4.9
October	2464	21,922	4.2	4.3
November	2172	24,094	4.3	3.5
December	1829	25,923	5	4

The average KPIs for the period 2009-2012 are given hereunder.

Year	No. of Requests for New Connections	Average $KPI_{fins}$	Average $KPI_{p2m}$
2009	24,148	7.5	7.5
2010	23,126	5.8	5.5
2011	23,298	4.5	4.4
2012	25,923	4.0	4.0

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.

#### New Applications

Some 25,923 new applications for electricity supply were received in 2012, representing an increase of 11% on the figure for 2011.

#### CEB 130 Helpdesk

The CEB is one of the few organisations in Mauritius providing emergency repairs on a 24/7 basis. During the year 2012, the CEB 130 Helpdesk successfully handled some 194,890 inbound calls in connection with emergency repairs, enquiries and other requests for information.

The business processes of the Helpdesk were also 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.

#### Enhancement of CEB's Enterprise Resource Planning (ERP)

The upgrading of the existing ERP system (SAP) was carried out during the year with a view to streamlining our business processes and enabling a swifter service delivery.

#### Extension of Business Hours on Saturdays

The CEB has, since September 2012, extended its operating hours to include Saturdays at a number of Customer Service Centres, on a pilot basis. Customers who are not able to undertake their transactions (payment of bills and application for electricity services) during weekdays can now benefit from the extended operating hours.

#### "Operation Coup de Poing" - Disconnection for Non-payment

The above exercise, amounting to the disconnection of outstanding accounts, was carried out on specific days of every month with a view to improving debt recovery. It has enabled the CEB to recover some Rs 33 million in 2012.



### Customer Satisfaction Survey

A customer satisfaction survey was carried out in 2012 to assess customers' perceptions on the quality of service being offered by the CEB. A sample of 500 customers was targeted in the survey and feedback was sought on critical areas such as contact with employees, office environment, and existing processes for service delivery.

A Customer Satisfaction Index of around 67.7 % was registered. Improvement areas were also identified and these will be addressed by the CEB with a view to providing a better service to our customers.

### 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 103 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 2012.

### 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 2012, some 10,910 households were classified under the "social tariff" category.

## REVENUE MANAGEMENT

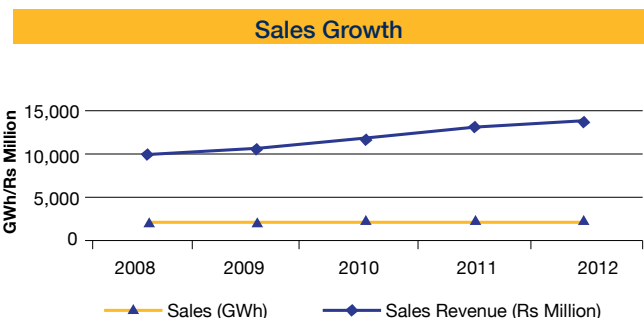
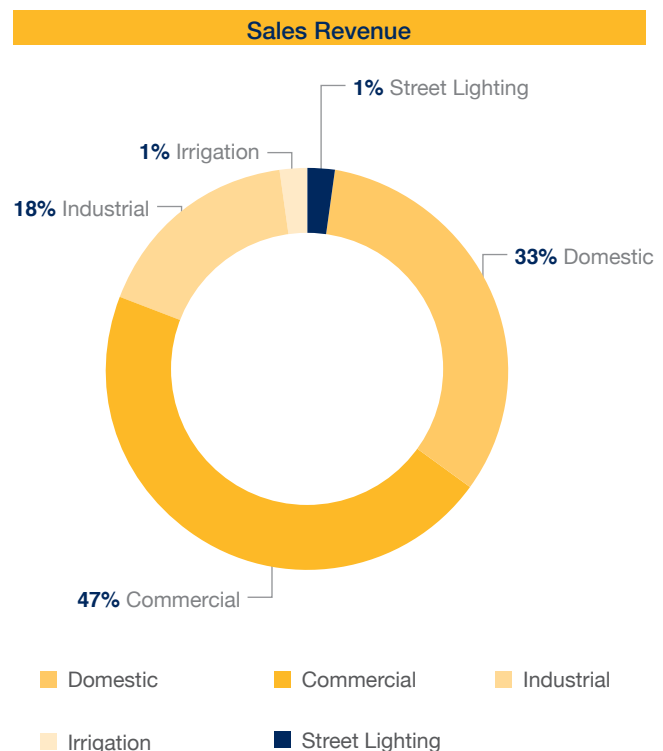
The Revenue Management Unit deals with all customer-related financial functions namely Meter Reading, Billing, Cash Collection and Debt Recovery.

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 5 million meter readings were carried out to enable billing of electricity consumption and the sales revenue generated was Rs 13 billion. This figure represents an increase of 4.8 % on the previous year.

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



### Under-Billing

During 2012, the revenue recovered from under-billing cases, due to technical problems in metering equipment and inappropriate tariff assignments, was of the order of Rs 4.4 million.

### Projects

The main projects implemented by the Revenue Management Unit during 2012 are listed below:

#### ***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 2012. An additional 25 electromechanical meters were substituted, taking the total to 325 replaced meters since the implementation of the project.

#### ***Automatic Meter Reading (AMR)***

The number of customers equipped with AMR meters has doubled during 2012 to attain 1,059, representing 35 % of our total sales. It is to be noted that this project has been implemented with in-house capabilities and has contributed to the improvement in cash flow through the reduction in time lag between consumption and billing.

#### ***Disconnection Warning Message***

Disconnection message tags were attached to electricity invoices delivered during the months of April and May 2012, with a view to sensitising customers on the need for timely settlement of their invoices, thus avoiding disconnection of supply for non-payment.

#### ***Diversifying Payment Channels***

In addition to traditional payment modes at the cash desks of the CEB, the counters of Mauritius Post, electronic channels such as Internet Banking (SBI & MCB), and SBM Billpay, electricity bills can now be settled by SMS through the Orange Money Platform.

### 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 2012, around 670 confirmed cases of illegal abstraction of electricity were detected and a total amount of

Rs 38,473,855 was recovered.

Revenue Collected from Fraud Cases				
Year	Domestic Tariff (Rs)	Commercial Tariff (Rs)	Industrial Tariff (Rs)	Total (Rs)
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
2012	23,201,076	13,813,140	1,459,639	38,473,855

The awareness campaign against the illegal abstraction of electricity was pursued so as to inform customers and the public at large of the legal consequences of electricity theft. 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	2008	2009	2010	2011	2012
<b>Domestic</b>	110/111	123 873	124 758	124 612	125 101	125 432
	120/121	179 501	184 700	189 423	195 188	201 673
	140/141	36 843	38 299	39 654	40 942	42 602
	<b>S/Total</b>	<b>340 217</b>	<b>347 757</b>	<b>353 689</b>	<b>361 231</b>	<b>369 707</b>
	209/210/215	33 327	33 674	34 332	34 888	35 587
	211/212/213/217	1 229	1 295	1 373	1 472	1 560
	221/223/225/245/250	74	82	108	116	135
	<b>S/Total</b>	<b>34 630</b>	<b>35 051</b>	<b>35 813</b>	<b>36 476</b>	<b>37 282</b>
<b>Commercial</b>	309/310/315	5 747	5 567	5 406	5 193	5 080
	311/313/341	648	668	681	700	731
	312/317	185	167	149	139	127
	320	4	3	2	2	2
	321/323/351	15	18	18	19	22
	322/325	7	7	7	7	7
	330/340	8	7	7	8	8
	350	4	5	4	5	6
	411/421	12	12	10	9	9
	412/422	1	-	-	-	-
	<b>S/Total</b>	<b>6 631</b>	<b>6 454</b>	<b>6 284</b>	<b>6 082</b>	<b>5 992</b>
<b>Industrial</b>	Irrigation	465	478	493	504	525
	<b>S/Total</b>	<b>465</b>	<b>478</b>	<b>493</b>	<b>504</b>	<b>525</b>
<b>St. Lighting</b>	510	362	396	422	458	499
	<b>S/Total</b>	<b>362</b>	<b>396</b>	<b>422</b>	<b>458</b>	<b>499</b>
	<b>GRAND TOTAL</b>	<b>382 305</b>	<b>390 136</b>	<b>396 701</b>	<b>404 751</b>	<b>414 005</b>



# SALES OF ENERGY (kWh) PER TARIFF

Category	Code	2008	2009	2010	2011	2012
	110/111	183 620 858	188 290 805	194 054 333	196 295 708	200 947 620
	120/121	340 799 730	356 228 479	372 488 661	382 187 780	398 918 764
	140/141	113 114 389	120 818 242	128 769 114	131 512 846	137 130 583
<b>Domestic</b>	<b>S/Total</b>	<b>637 534 977</b>	<b>665 337 526</b>	<b>695 312 108</b>	<b>709 996 334</b>	<b>736 996 967</b>
	209/210/215	148 771 677	156 682 954	165 190 210	171 297 446	169 213 270
	211/212/213/217	341 358 626	345 155 938	351 774 154	354 106 814	358 574 622
	221/223/225	171 561 185	190 535 666	218 429 411	255 369 420	267 829 845
	245	720 967	610 405	575 561	485 351	436 123
	250	2 119 401	2 672 928	3 614 383	5 422 608	13 670 468
<b>Commercial</b>	<b>S/Total</b>	<b>664 531 856</b>	<b>695 657 891</b>	<b>739 583 719</b>	<b>786 681 639</b>	<b>809 724 328</b>
	309/310/315	29 994 055	29 415 788	29 775 877	28 934 729	28 659 044
	311/313/341	219 142 884	221 458 832	242 898 421	247 542 144	253 193 300
	312/317	126 677 003	95 035 081	85 202 457	82 134 103	75 821 359
	320	6 883 153	1 587 638	1 222 407	1 409 209	1 224 998
	321/323/351	71 331 350	78 014 085	85 822 069	92 233 327	97 311 917
	322/325	160 903 691	151 449 328	156 972 316	146 502 036	146 835 785
	330	10 798 446	11 568 086	12 465 746	13 605 445	13 880 448
	340	7 732 269	6 750 914	7 149 621	7 800 242	9 015 075
	350	22 179 760	24 380 449	26 208 116	31 383 875	31 295 847
	411/421	1 993 228	2 930 994	4 096 240	3 361 103	3 280 675
	412/422	3 511 000	894 000	-	-	-
<b>Industrial</b>	<b>S/Total</b>	<b>661 146 839</b>	<b>623 485 195</b>	<b>651 813 270</b>	<b>654 906 213</b>	<b>660 518 448</b>
	511/515	25 806 116	20 447 412	23 814 590	22 490 994	24 931 090
<b>Irrigation</b>	<b>S/Total</b>	<b>25 806 116</b>	<b>20 447 412</b>	<b>23 814 590</b>	<b>22 490 994</b>	<b>24 931 090</b>
St. Lighting	510	33 979 768	33 303 230	30 901 976	24 359 470	24 760 136
Temporary	610/615	207 721	214 987	220 445	220 882	250 550
Miscellaneous	-	2 546 574	1 906 534	2 974 888	2 696 359	6 624 873
	<b>S/Total</b>	<b>36 734 063</b>	<b>35 424 751</b>	<b>34 097 310</b>	<b>27 276 711</b>	<b>31 635 559</b>
CEB		2 641 021	2 768 508	2 841 667	2 952 524	2 964 119
<b>GRAND TOTAL</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>	<b>2 266 770 511</b>

#### kWh PER CUSTOMER PER CATEGORY

Category	2008	2009	2010	2011	2012
Domestic	1 874	1 913	1 966	1 965	1 993
Commercial	19 189	19 847	20 651	21 567	21 719
Industrial	99 705	96 604	103 726	107 679	110 233
Irrigation	55 497	42 777	48 305	44 625	47 488
Street Lighting	93 867	84 099	73 227	53 187	49 620
Others	5 395 316	4 890 029	6 037 000	5 869 765	9 839 542
<b>All Categories Mixed</b>	<b>5 306</b>	<b>5 237</b>	<b>5 413</b>	<b>5 446</b>	<b>5 475</b>

#### VARIATION OF SALES PER CATEGORY OF CUSTOMERS FOR THE YEARS 2010–2012

Customer of Consumer	kWh Sold			% Increase over previous year	
	2010	2011	2012	2010–2011	2011–2012
Domestic	695 312 108	709 996 334	736 996 967	2.11	3.80
Commercial	739 583 719	786 681 639	809 724 328	6.37	2.93
Industrial	651 813 270	654 906 213	660 518 448	0.47	0.86
Irrigation	23 814 590	22 490 994	24 931 090	(5.56)	10.85
Others	36 938 977	30 229 235	34 599 678	(18.16)	14.46
<b>Total</b>	<b>2 147 462 664</b>	<b>2 204 304 415</b>	<b>2 266 770 511</b>	<b>2.65</b>	<b>2.83</b>

#### PERCENTAGE SALES TO EACH CATEGORY

Category	2008	2009	2010	2011	2012
Domestic	31.43	32.56	32.38	32.21	32.51
Commercial	32.76	34.05	34.44	35.69	35.72
Industrial	32.59	30.52	30.35	29.71	29.14
Irrigation	1.27	1.00	1.11	1.02	1.10
Street Lighting	1.68	1.63	1.44	1.11	1.09
CEB + Others	0.27	0.27	0.27	0.27	0.27
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>



Reliable electricity supply is dependent on many factors, but primarily on people with the necessary expertise to provide leadership and to apply strategies, processes, systems and practices in the various functional areas of the business. Indeed, the combined human capital assets of employees constitute the lifeblood of the CEB.

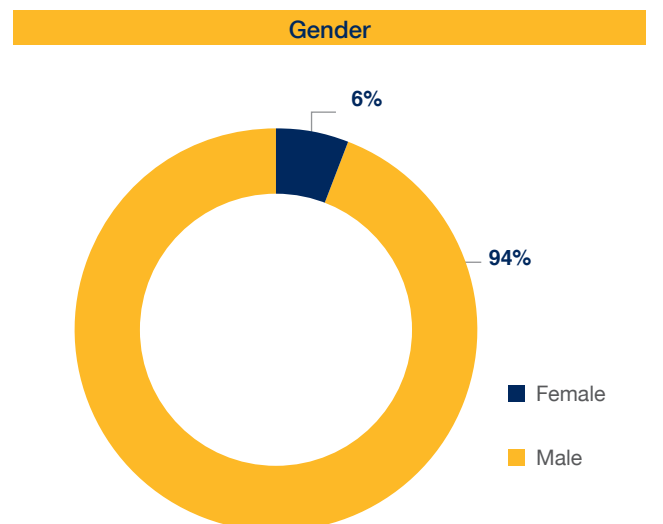
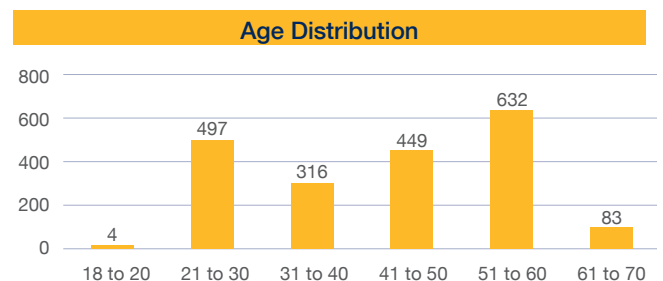
During the period under review, the utility has lived up to its mission of providing an essential service to the nation, amidst growing adversity and economic turbulence. Our people, operating at different levels, have, undoubtedly, been the architect of this performance through their initiative and dedication.

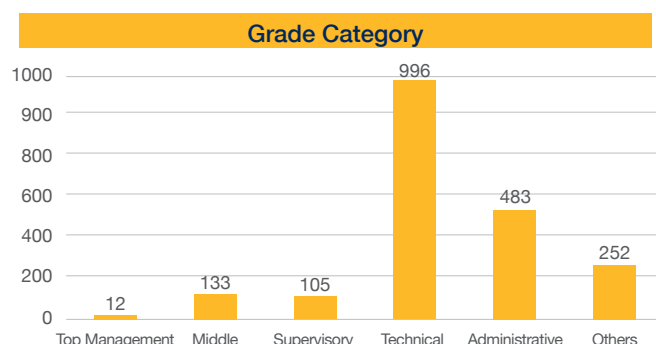
## MANPOWER

51 people left the CEB during the year 2012; this is mainly due to normal attrition, including retirements, deaths and resignations. During the same period, 246 new staff members were recruited. The labour force as at year-end stood at 1,981.

Some key human resource indicators are shown hereunder:

No. of Employees	
	Year 2012
Administrative & Technical Personnel	790
Other Categories	860
Trainees	26
Cadet Engineers/Technicians	305
<b>Total</b>	<b>1,981</b>





### 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 2012, some key and critical positions were filled at various levels of the organisation. In this respect, the recruitment and selection process was completed for 18 positions which, altogether, corresponded to the filling of some 134 vacancies.

### EMPLOYEE RELATIONS

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

#### JNC Meetings/Consultations

Regional and Joint Negotiation Committee meetings were held on a regular basis with the three recognised unions to address various employee relations issues. These meetings are considered as essential by Management as we firmly believe in building an effective and harmonious working relationship with the unions and employees at large.

Extensive negotiations were also held with the Union of Employees of the CEB and other Energy Sector (UECEBOES) on the recommendations contained in the Report on the Review of Organisation and Pay Structure and Conditions of Employment (Pay Report) submitted by Consultant B.C. Appanna in October 2009. Subsequently, an Arbitration Agreement was signed with the UECEBOES on 13 January 2012 regarding the issues on which no agreement could be reached, with a view to narrowing down the number of disputes. After lengthy and fruitful negotiations, a second Arbitration Agreement was signed between the two parties and the Arbitrator on 7 September

2012 whereby the number of disputes was reduced from 15 to 9. The Award of the Arbitrator would be delivered within 30 days after completion of hearing, following which the CEB and the UECEBOES would meet to draft the new collective agreement for period 01.07.09 to 30.06.13.

The Arbitration process, as well as the mediation process as advised by the Arbitrator, started in December 2012.

Following representations made by trade unions and employees on the contents of the Pay Report, the Board approved the Consultant's Report on Errors and Omissions in June 2012. An addendum to the existing Collective Agreement would be signed with the Unions shortly.

#### Employee Satisfaction Survey

Consultant StraConsult was hired in July 2012 to carry out an Employee Satisfaction Survey for CEB employees, both in Mauritius and Rodrigues. Around 600 employees were invited to participate in the survey, which was held concurrently at six locations around the island.

StraConsult presented its findings in December and the overall satisfaction index was rated at 60%. Therefore, it can be deduced that the employees are more or less satisfied with their working conditions at the CEB.

The key findings of the Report are summarised below:

- 89% of respondents have a good understanding of the mission and goals of the organization;
- 95% of respondents positively hold that their role is important in accomplishing this mission;
- 84% of respondents feel that their job at the CEB gives them the opportunity to learn;
- 84% of respondents are able to balance their work and personal life;
- 54% of respondents think that the Performance Evaluation is free from bias;
- Employees are positive that they are getting a better salary package than in similar parastatal bodies or state owned enterprises;
- A great majority (83%) would positively advise their friends to apply for a job at the CEB; and
- Job security, the experience acquired with the CEB, and the status of working at the CEB are at the top of the list of reasons why employees like working for the CEB.

### TRAINING AND DEVELOPMENT

The CEB has always laid great emphasis on Training and Development as a framework for helping employees to 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 implementation of a new Electronic Performance Management System (e-PMS) since January 2011 on a pilot basis was successfully completed in January 2012. This key HR project aims at the alignment of operational with strategic objectives, and produce greater employee engagement. At the end of the day, the e-PMS for all employees is a powerful tool to make the CEB a performance-driven organisation.

The e-PMS reviews performance on the basis of Key Performance Indicators 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 together to further upgrade the electronic version of the e-PMS. Some 60 officers, who had undergone in-depth training to act as e-PMS Champions, assisted in the implementation of the e-PMS at section level, including Rodrigues. The year 2012 was the first year of live implementation of the e-PMS and, from now onwards, it will determine the grant of yearly increment and the quantum of the productivity bonus to employees.

### Human Capital Development

To meet the challenges of rapid technological developments and changes in customer demands, the CEB continuously upgrades the skills and competencies of its people. In this respect, a total of 14,086 man-hours of training were provided during 2012, both locally and overseas.

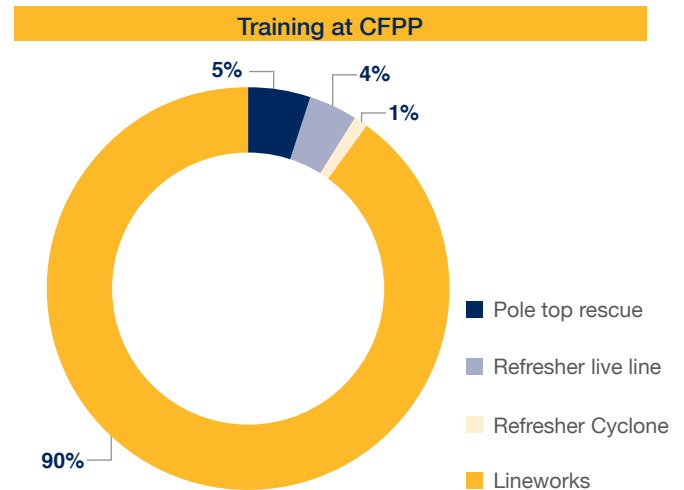
The overseas training (2,176 man-hours) consisted of different courses, mainly in the technical field, which was attended by employees from different departments.

The local training was mainly made up of courses conducted at CEB's Training School (CFPP) and on-the-job training. 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 170 students from both local and overseas institutions so as to offer them the opportunity to gain experience in relation to their respective specialisation.

### CEB Training School

The Centre de Formation et de Perfectionnement Professionnels (CFPP), which is the Training School of the CEB, provided training in the following fields:



### SAFETY AND HEALTH MANAGEMENT

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, 2012 also witnessed a wide range of activities and awareness campaigns to promote safety and health at the workplace. The implementation of the recommendations of the Safety and Health Consultant, following a comprehensive audit exercise, was initiated and several measures were taken to uplift the health and safety status at a number of CEB sites. A phased-approach was adopted in view of the significant financial implications.

### Promotion of Safety and Health

During the period under review, the following activities were organised to promote safety and health at work.

### World Day for Safety and Health at Work

The World Day for Safety and Health at Work was celebrated on 30 April 2012. The theme for the year was: "Promoting Safety and Health in a green economy".

In this context, the Safety Unit, in close collaboration with the Training School (CFPP), organised a one-day exhibition on "Electrical Danger & Safety" at the CEB Head Office, Curepipe.

A seminar was also held at the Head Office on various subjects such as the evolution of Safety and Health Regulations, the CEB Safety and Health Policy and the history of CEB Safety Rules. This seminar was organised with the collaboration of the Ministry of Labour, Industrial Relations and Employment. On this occasion, the revised Transmission and Distribution Safety Rules were launched by the General Manager.

### ***Safety Awareness Campaign***

In line with the requirements of OSHA 2005, concerning the provision of information, training and supervision of employees, 28 talks were held island-wide with the aim of sensitising and educating employees on the importance of a number of safety and health issues. The presentations were made by the Police Road Safety Unit, the NATRESA, and the government Fire Services. Over 1,000 employees attended the sessions.

### ***Revision of Generation Safety Rules***

Following the decision of the Main Safety and Health Committee, 29 sessions were held for the updating of the Generation Safety Rules. The final revised version of these rules is expected to be ready by early 2013.

### ***Safety Inspection and Enforcement***

During the year, more than 550 safety inspections were carried out in Mauritius 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 carried out to validate the aptitude of competent personnel regarding safety and safe systems of work.

Six meetings of the Main Safety and Health Committee were conducted at the Head Office, and 14 meetings of the Regional Safety and Health Committees were held island-wide and in Rodrigues.

### ***Health Surveillance***

Employees based at our power stations and those working on electricity networks were subjected to medical examinations by our Occupational Health Consultant. 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 7,000 man-hours of safety training were imparted during 2012.

Constant efforts were made to make the employees working in technical fields more conversant with the company Safety Rules and safe systems of work. Their competencies were confirmed through competency tests.

Some 200 new recruits from the Transmission & Distribution, Production, Supply Chain, and Customer Services departments were provided with Induction Training. These recruits were exposed to the basic safety requirements so as to enable them to integrate their new work environment smoothly.

### ***Accident Statistics***

Forty-two work-related accidents, requiring more than 3-days' absence from work, were recorded during 2012. It is worth noting that no fatal accident has been recorded for more than a decade. The corporate goal of "zero accident/incident/near-miss" still remains our priority target.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Accidents	83	73	86	55	79	73	41	38	37	42
Man-Days Lost	13,22	1,077	1,486	1,103	1,380	1,462	633	922	925	956
Frequency Rate	25.07	22.40	25.98	15.8	25.05	17.03	13	10.14	9.9	9.54
Severity Rate	0.41	0.33	0.45	0.35	0.44	0.34	0.26	0.25	0.24	0.22
Fatal Accidents	Nil	Nil	Nil	Nil	Nil	Nil	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.

Welfare and sports activities usually lead to the following benefits:

- Promotion of better physical and mental health for employees;
- Facilities like car loan schemes, medical benefits, education loans, passage benefits and recreational facilities for workers and their families help in raising their standards of living and ultimately their productivity levels;
- Promotion of sense of belonging to the organisation and active interest in work activities;
- Promotion of healthy industrial relations; and
- Reduction of social evils prevalent among employees, such as substance abuse.

During the year, various sports and recreational activities were organised for employees at large. Our staff also participated in several inter-firm tournaments organised by the Federation Mauricienne des Sports Corporatifs (FMSC). These activities have greatly helped in building up the existing team spirit within the organisation.

The CEB Inter-zones Football Championship 2012, as well as the Badminton and the Petangue Doublet and Triplet Championships, were organised. Some 500 employees participated in these activities.

A Ladies' Day was organized on 8 March 2012 at Domaine Lagrave to mark the Women International Day. This event saw the participation of 95% of our female colleagues.

A corporate gift was issued to every employee in December to mark the 60<sup>th</sup> anniversary of the CEB.

# Information Technology



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 of 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.

During 2012, the implementation of the different programmes mentioned in the strategic plan was pursued.





The CEB was widely involved in the preparation of the strategic plan to meet the future electricity demand of Mauritius and Rodrigues. A concerted approach was adopted by taking into account the national development in all sectors of the economy, the forecasted increase in the number of customers, and the national energy policies that have been evolving with time.

## DEMAND-SUPPLY BALANCE

Despite sustained actions in all spheres of the local economy to curb the growth of energy demand, continuous monitoring and assessment of the local electricity market showed that demand for electricity had continued to grow, but at a much slower rate than in the past decade.

Taking into account the prevailing and future social and economic developments of Mauritius, a peak demand of 430 MW was forecasted for 2012. On 19 December 2012, the CEB recorded a peak demand of 430.24 MW, thus confirming the prevision in the demand growth. On this trend, it is foreseen that, in 2013, the peak demand would reach 447 MW.

In anticipation to the future expected demand, and with the goal to further ensure reliable, quality and affordable electricity supply for the country, the CEB has continued to formulate and evaluate alternative energy supply strategies, 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 the global economic concerns.

In respect to the above, in 2012, the CEB has worked on the

following projects, within its integrated planning framework, which also included contingency scenarios.

## Preparation of the Integrated Electricity Plan (IEP) 2013-2022

As our country is not endowed with abundant supply of natural energy resources, it is incumbent upon the CEB, as per the CEB Act 1964, to plan carefully the national power system so as to ensure reliable and quality electricity supply that is also affordable and sustainable for the country. With the phasing out of the IEP 2003-2012, the development of the next Master Plan covering the period 2013-2022 was kick-started.

The IEP 2013-2022 is a 10-year strategic master plan outlining the power generation, transmission, and distribution plans of the CEB. The IEP aims at guiding both Mauritius and Rodrigues power systems' developments and, by extension, ensuring a sustainable and reliable electricity future for the Republic.

The cornerstones of the IEP 2013-2022 will be to optimize the use of the existing power system, to keep electricity prices as low as possible through least-cost capacity expansion, to encourage electricity consumers to participate in Demand-Side Management (DSM), and to provide for continued

Private Sector opportunities in the electricity sector. These objectives shall be met while giving due consideration to emerging challenges, such as protection of the environment and maintaining grid stability with the increasing share of renewable energy sources.

### Household Electricity Utilisation Survey 2012

In 2004, the CEB carried out a large-scale survey on the utilisation of electricity in households in Mauritius. The underlying objective of the exercise was to define CEB's Demand-Side Management (DSM) strategy.

Over and above the need for the development of an effective demand-side management strategy for the country, the outcomes of the 2004 survey were also used as supportive inputs in a number of studies conducted by international consultants. Furthermore, pertinent information from that survey had also helped to determine the market size for the sale of Compact Fluorescent Lamps (CFLs), whereby one million CFLs was successfully sold at a highly subsidised price in 2008-2009. The survey also provided the baseline data for the assessment of the impact of the CFL project.

In order to track market changes and gather updated information on the local electricity market, the CEB conducted a new Household Electricity Utilisation Survey (HEUS) in 2012, with the following objectives:

- Gather information on the pattern of electricity consumption in households;
- Supply useful inputs for tariff studies;
- Review CEB's DSM strategy in the light of recent evolution; and
- Collect essential inputs for effective demand forecast studies.

The survey was administered with the help of upper-class secondary students. A response rate of 20%, which represent approximately 2% of the CEB's residential customer base, was achieved. The survey report will be released in early 2013.

### Time-of-Use (TOU) Electricity Tariff Study

An Implementation Committee was set up to study and propose time-differential tariffs for a pilot Time-of-Use (TOU) project. The study would also shed light on the ensuing financial implications of the pilot TOU project on CEB's annual turnover.

The request to offer TOU tariff to all customer categories was made after recurrent debate on the subject matter.

It was advocated that TOU tariff, as a powerful tool, could assist in managing electricity demand and contribute to optimise the utilisation of power generation assets.

The study showed that customers were ready to opt for the TOU tariff only if the potential gain was worth the required change in behaviour and the implied social and material costs. The impact assessment, as part of the study, also revealed that offering the TOU tariff to a large number of customers may have abnormal consequences on the CEB annual sales revenues.

### GENERATION PLANNING

To ensure secure and reliable electricity supply for the country, with respect to the future expected demand, the CEB must continuously formulate and evaluate alternative energy supply strategies 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.

In this respect, in 2012, the following projects were addressed, within the integrated planning framework of the CEB, which also include contingency scenarios.

### Consultancy Services for Redevelopment of St. Louis Power Station

The redevelopment of St Louis Power Station forms part of the contingency plan of the CEB. The Power Station bears all the required amenities to augment its generation capacity, with the retirement of the old Pielstick engines.

Mott MacDonald consultancy firm was appointed to prepare a full redevelopment plan together with an EIA report to address environmental issues. The redevelopment plan report which was submitted to the CEB in May 2012 propose the retirement of six low efficiency Pielstick engines and the commissioning of 60 MW (2x30 MW) medium speed diesel engines. Application for the EIA license is in progress.

### Wind Farm at Curepipe Point (Plaines Sophie)

Following a competitive bidding process launched in 2011, Consortium Padgreen/Suzlon was selected for the setting up of a 30 MW wind-farm project at Plaines Sophie. The CEB started negotiations with the Consortium on an ESPA and same was finalised and signed in August 2012.

The Consortium has now 24 months to set up the wind-farm, which would consist of 14 units of 2.1 MW Suzlon wind turbine generators. The wind-farm will be connected to the

Henrietta substation and is expected to generate some 55 GWh of electricity annually. It is worth highlighting that it will be the first major wind farm project in Mauritius.

#### **Aerowatt Wind Farm at Plaines des Roches**

Another project, which was the subject of negotiations in 2012, 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).

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

In line with the national objective to encourage the penetration of renewable sources of energy, and with a view to reducing our dependency on fossil fuels, the CEB initiated a project for the setting-up of a grid-connected solar photovoltaic (PV) plants of capacity ranging between 1-2 MW inclusive. The total project capacity for this project was limited to 10 MW. The Request for Proposal was floated in March 2012.

At the closing date for the submission of bids, a total of sixty (60) bids were received, showing the interest in the project. The bid evaluation process was completed in November 2012. The next major step in this project is to secure Government funding.

#### **Expression of Interest to Conduct a Pre-feasibility Study for the use of Liquefied Natural Gas (LNG) in Electricity Generation**

In the quest to further promote the use of clean electricity generation technologies, the CEB launched an Expression of Interest (EOI) in August 2011 with the objective to look for eligible developers who could set up a 100 MW power plant based on LNG technology in Combined Cycle mode.

Eighteen proposals were received by the closing date for submission. The next step consisted in conducting a pre-feasibility study to determine whether Mauritius has the necessary facilities to venture into this technology. In this respect, a second EOI was floated in October 2012 to shortlist consultancy firms to perform the above study.

#### **Identification of Potential Sites for Mini/Micro Hydro Power Plants**

The above project caters for the conduct of a study to identify potential sites for the construction of new mini/micro Hydropower Plants. The objectives of this study are in line with Government's policy to optimise renewable energy sources in the context of the Mauriceille Durable (MID) scheme and the cost reduction strategy for the purchase of fuel oil.

A pre-selection of potential consultants was completed in December 2012 and the preferred bidder would be selected to carry out the survey in the first quarter of 2013.

#### **Medium Scale Distributed Generation (MSDG)**

After the launching of the Small Scale Distributed Generation (SSDG) project, much interest has been expressed by larger consumers and promoters to set up renewable energy systems of capacity greater than 50 kW. However, implementation of such projects is not presently possible due to the absence of a Grid Code and Feed-in-Tariffs for such larger systems. Since renewable energy systems larger than 50kW will essentially be connected to the medium network of the CEB, a new grid code should be developed.

In this respect, an EOI was floated in October 2012 to invite proposals from qualified and eligible consultancy firms for preparation of a Grid Code and appropriate Feed-in-Tariffs, as well as a Model Energy Supply and Purchase Agreement (ESPA) for renewable energy systems greater than 50 kW.

#### **SYSTEM PLANNING**

The following in-house key studies were conducted in 2012, in connection with planning of the Transmission and Distribution network:

- Re-development of the St Louis Power Station for the addition of 4 to 6 generating units;
- Network expansion plan for the supply of electricity to the forthcoming New Cargo Freeport Zone at Plaisance;
- System impact studies to recommend the interconnection of load exceeding 1 MVA with focus on security and reliability of supply for the present and future;
- System studies to assess requirements for the integration of both firm generation power plants and Renewable Energy Systems to ensure system stability and security;
- Interconnection study for the integration of 15 MW solar Farm at La Chaumière Substation; and
- Review of the interconnection study of the 18 MW Wind-farm at Plaine des Roches following the reduction in capacity to 9 MW.

#### **Development of the Medium Scale Distributed Generation Grid Code**

The technical requirements regulating integration for Renewable Energy systems of capacities greater than 50 kW to the grid are comparatively higher than that covered in the low voltage SSDG Grid Code. In this respect, the CEB, with its in-house expertise, has established two new grid codes that will allow the integration of Medium Scale Distributed Generation projects, comprising larger

capacity photovoltaic, wind turbine, mini-hydro, and biomass electricity generation systems.

The two new grid codes are:

- (1) Grid Code for capacities greater than 50 kW but less than 200 kW
- (2) Grid Code for capacities greater than 200 kW but less than 200 kW.

The launching of the MSDG Project is planned for early 2013.

#### Consultancy Services for the Development of a Grid Code

A Grid Code is designed to:

- Permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the transmission and distribution of electricity;
- Facilitate the supply of electricity; and
- Promote the security and efficiency of the power system as a whole.

In this respect, the CEB will recruit the services of a consultant to develop its transmission and distribution grid code. This grid code will regulate the technical activities of present and future components of the national grid.

#### SMALL SCALE DISTRIBUTED GENERATION (SSDG)

With a view to promoting clean energy, and in line with the vision to democratise the electricity grid, the Ministry of Energy and Public Utilities (MEPU), in collaboration with the CEB, launched the first phase of the SSDG Project in December 2010.

Through this initiative, Small Independent Power Producers (SIPPs) have been given the opportunity to produce their own electricity from three renewable energy sources, namely Photovoltaic (PV), Wind, and Micro-hydro. Furthermore, these SIPPs can export any surplus of electricity generated from their renewable energy sources to the CEB grid (referred to as Net Metering).

To enable the integration of the three renewable energy sources within the CEB grid, a Grid Code was also developed. The Grid Code defines the technical criteria and requirements for interconnection. Another crucial pre-condition to the success of this project has been the definition of attractive feed-in tariffs that are paid to SIPPs for the energy exported to the grid.

The project initial capacity was limited to 2 MW and each customer was allowed to install a maximum capacity of 50 kW. Given that a greater demand was recorded for the first phase, the project capacity was extended by 1 MW in December 2011. Other schemes were also set up during the year, as set out in the table hereunder.

SSDG Schemes	Capacity	Tariff
Mauritius (phase 1& phase2)	2.9 MW	Feed-in-Tariff
Rodrigues	100 kW	Feed-in-Tariff
Public, Educational, Charitable and Religious (PECR)	2MW	CEB's marginal cost
Regularisation of undeclared SSDG installation	-	No Tariff applicable

The status of the above four SSDG schemes, as at December 2012, are summarised below:

SSDG schemes	No of SSDGs commissioned	Capacity (kW)
Mauritius (phase 1& phase2)	77	713.91
Public, Educational, Charitable and Religious (PECR)	3	57.7
Regularising of undeclared SSDG installation	2	493.4

For the year 2012, the total energy exported by all the commissioned SSDGs to the CEB's grid, falling in the four schemes, was to the tune of 260,000 kWh.

#### 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 2012 were as follows:

#### Feasibility Study for Replacement of Fluorescent Tubes T8 by T5

Following the successful implementation of the Compact Fluorescent Lamp project in 2008–2009, a feasibility study was undertaken for the replacement of Conventional Fluorescent tubes (T8) by Linear Fluorescent tubes (T5). The T5 tube consumes around 40% less energy over its



life span as compared to the T8 tube. Although the cost of the T5 tube is higher as compared to the T8 type, this high initial cost is compensated by its long life span and energy efficiency properties.

For the purpose of the feasibility study, one CEB building was selected and around 150 T8 tubes were replaced by T5 tubes. If the findings are positive, it is envisaged to replace all T8 tubes by T5 on all CEB premises. The findings will be used to devise a national campaign for the penetration of T5 tubes in households.

### **Sensitisation Campaigns**

Several talks and exhibitions were organised by CEB resource persons in schools, colleges, and universities in order to sensitise the youth on the importance of saving energy as they can act as effective ambassadors for this cause.

Emphasis was laid on practical solutions for the judicious use of electricity at home and within schooling institutions.

### **Energy Saving Tips**

Messages with energy saving tips were introduced on the PABX of the Head Office during call waiting time so as to sensitise customers on the various means to save energy. This measure would be extended to other sections in the near future, including the CEB 130 Helpdesk.

In a similar vein, clips on energy saving are under production and these will be displayed in the waiting room of CEB's Customer Service Centres.

### **Energy Audit in CEB Buildings**

Energy Audit forms part of Government's project 'Removal of Barriers to Energy Efficiency in Buildings' and is in line with the MID vision.

An energy audit of a number of CEB buildings island-wide was carried out in 2012 with a view to developing a bank of data on the specific electrical energy consumption per meter square per year. By comparing these data with that of a standard building (to be calculated), we can improve the consumption of electrical energy by bringing in any modifications as may be required.

### **STREET LIGHTING**

The Memorandum of Agreement (MoA), which was signed between the CEB and Municipal/District Councils with a view to effectively managing street lighting systems island-wide, lapsed in November 2010.

A new MoA was circulated in 2012 for signature and, at the close the year, all local authorities had signed the MoA, except for three of them.

It is to be noted that the previous District Councils of Moka/Flacq, Grand Port/Savanne and Pamplemousses/Riv. du Rempart have now been split into six distinct District Councils following the promulgation of the new Local Government Act.

### **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 regard, several studies were conducted to ensure that new projects conform to the existing environmental regulations and adhere to good environmental practices.

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.

The main projects where the Environment Unit was involved in 2012 include:

- Redevelopment of the Saint Louis Power Station with a view to modernising the generation units and thereby reducing negative environmental impacts;
- Setting up of a wind-farm of 20-30 MW at Curepipe Point by PadGreen/Suzlon Consortium.

The CEB was also an active participant in several national projects on environment, such as:

- Disposal of PCB contaminated transformers: five transformers that were suspected to contain PCB's were sent abroad for safe disposal;
- Participation in the Climate Change activities.



## PRODUCTION

### Demand Pattern (Energy and Power)

The total energy generated for 2012 was 33.6 GWh, representing a rise of 1.5 % over year 2011 (33.1 GWh). The bulk of energy (89.40 %) was produced from fuel oil based power stations and the wind turbines (both Grenade and Trèfles Wind Parks) contributed to the remaining 10.6%.

Power Station	Energy Source	Output (kWh)	(%)
Port Mathurin	Fuel Oil and Diesel Oil	6,190,715	18.4
Pointe Monnier	Fuel Oil and Diesel Oil	23,854,313	71.0
Trèfles	Wind	364,396	1.1
Grenade	Wind	3,202,500	9.5
<b>Total</b>		<b>33,611,924</b>	<b>100</b>

The maximum power demand was 6.55 MW and was recorded on 31 December. This represents an increase of 3% over the year 2011 (6.39 MW).

### Operation and Maintenance

#### Pointe Monnier

The Phase 2 extension project of Pointe Monnier Power Station was completed with the addition of a WARTSILA engine of capacity 2.5 MW. The engine first start up was carried out on 25 September and it was synchronized to the grid for the first time on 27 September. The taking over certificate was signed between the CEB and BWSC on 23 November.

The three engines performed satisfactorily during the year with the MAN G1, MAN G2 and WARTSILA G4 clocking 57,742, 58,566 and 1,912 hours respectively. The energy generated was 23.9 GWh, representing 71% of the overall production.

#### Port Mathurin

The MAN Engines (G7, G8, & G9) cumulated 98,130, 94,041, and 85,444 running hours respectively. The total energy generated was 6.06 GWh, representing 18% of the overall production.

The MWM engines are utilised as back-up in case of emergencies. They clocked only 430 hours in 2012 as engines G1 and G2 did not operate owing to faulty HV circuit breakers. The energy generated by the four other MWM engines amounted to 0.13 GWh, representing 0.4 % of the total production.

#### Grenade

The four units installed at Grenade generated a total of 3.2 GWh in 2012, representing 9.5% of the overall production. Since their commissioning, Units 1, 2, 3 and 4 have cumulated a total running hours of 25 907, 22 905, 16 111 and 16 905 respectively.

Wind Turbine 3 was unavailable in July as there was a severe leakage on the hydraulic pipe on the pitch system. The spare parts for replacement were ordered from supplier VERGNET SA.

### Trèfles

The three units at Trèfles clocked a total of 19,058 running hours in 2012. The total energy produced was 0.3 GWh, representing 1.1 % of the overall production.

Scheduled maintenance was carried on all three units during the month of March and September 2012.

A professional trainer from VERGNET SA (France) delivered an on-site two-week refreshing course on the operation and maintenance of wind turbines (Type GEV 15/60) to our technicians.

### Main Projects

The main project for the year was the erection and commissioning of Pointe Monnier Phase 2 extension project by contractor BWSC. The other capital projects that were successfully implemented in 2012 include:

- Construction of concrete platforms at the foot of each wind turbine installed at Trèfles wind farm;
- Replacement of fencing around Trèfles wind farm; and
- Replacement of fencing around Pointe Monnier Power Station.

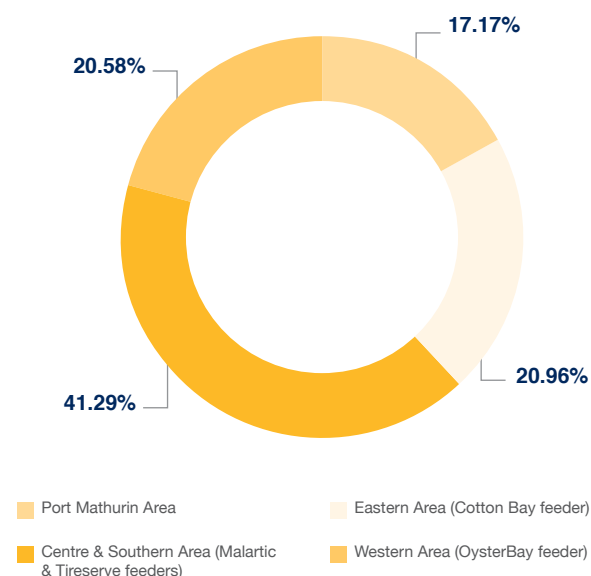
## DISTRIBUTION

### System Demand

The maximum power demand for the year under review was 6.55 MW and was recorded on 31 December. The average load factor of the system for the year was 35%.

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 2012



### System Performance

The overall performance of the distribution network was satisfactory in 2012. It is to be noted that there was a significant reduction in the number of general breakdowns, with only 3 breakdowns as compared to 11 in 2011.

### HV Network

The 22 kV distribution network was extended by 0.66 km to reach 149.84 km.

The programme for the gradual replacement of 22 kV pin-type insulators by 33 kV insulators was continued in 2012. The aim was to reduce the number of faults caused by burnt cross-arms and poles in areas exposed to a high degree of salinity in the atmosphere. In a similar vein, HT rotten poles, of more than 20 years old, were also replaced.

### LV Network

The low voltage network was extended by 0.6 km to reach 344.5 km.

### Installed Transformer Capacity

The total number of distribution transformers at the end of the year 2012 totalled 147, with an installed capacity of 13,825 KVA.

Feeders	Distribution Transformers					Total
	Ratings (KVA)					
	25	50	100	150	250	
Malartic	3	16	7	7	0	33
Oyster Bay	9	13	4	5	4	35
Cotton Bay	3	19	13	2	2	39
Port Mathurin		1	10	2	4	17
Ti Reserve	4	7	2	8	2	23
Total	19	56	36	24	12	147

### Losses

The overall system losses were brought down from 12.8% in 2011 to 11.5% in 2012, through a better control of reactive power flows.

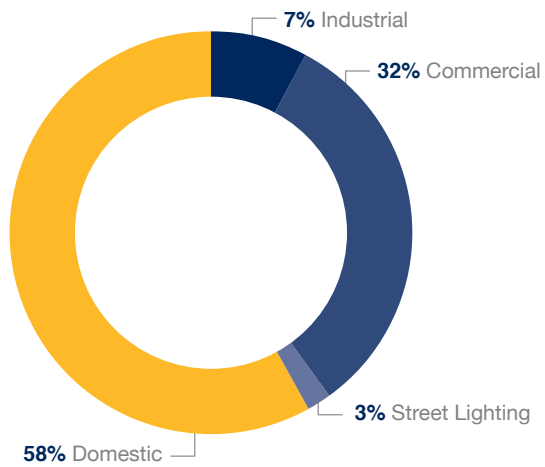
## CUSTOMER SERVICES

### Customers and Sales

The total number of customers, as at 31 December 2012, amounted to 12,818 compared to 12,464 in year 2011, representing an increase of approximately 3 %.

The sales of electricity totalled 27,590,575 kWh for the same period, equivalent to an increase of 3 % as compared to the year 2011.

### Sales of Electricity ( kWh)



### FINANCIAL PERFORMANCE

At the end of Financial Year 2012, the Rodrigues Branch made a deficit of Rs 104 million, compared to a deficit of Rs 72 million for 2011.

### 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:

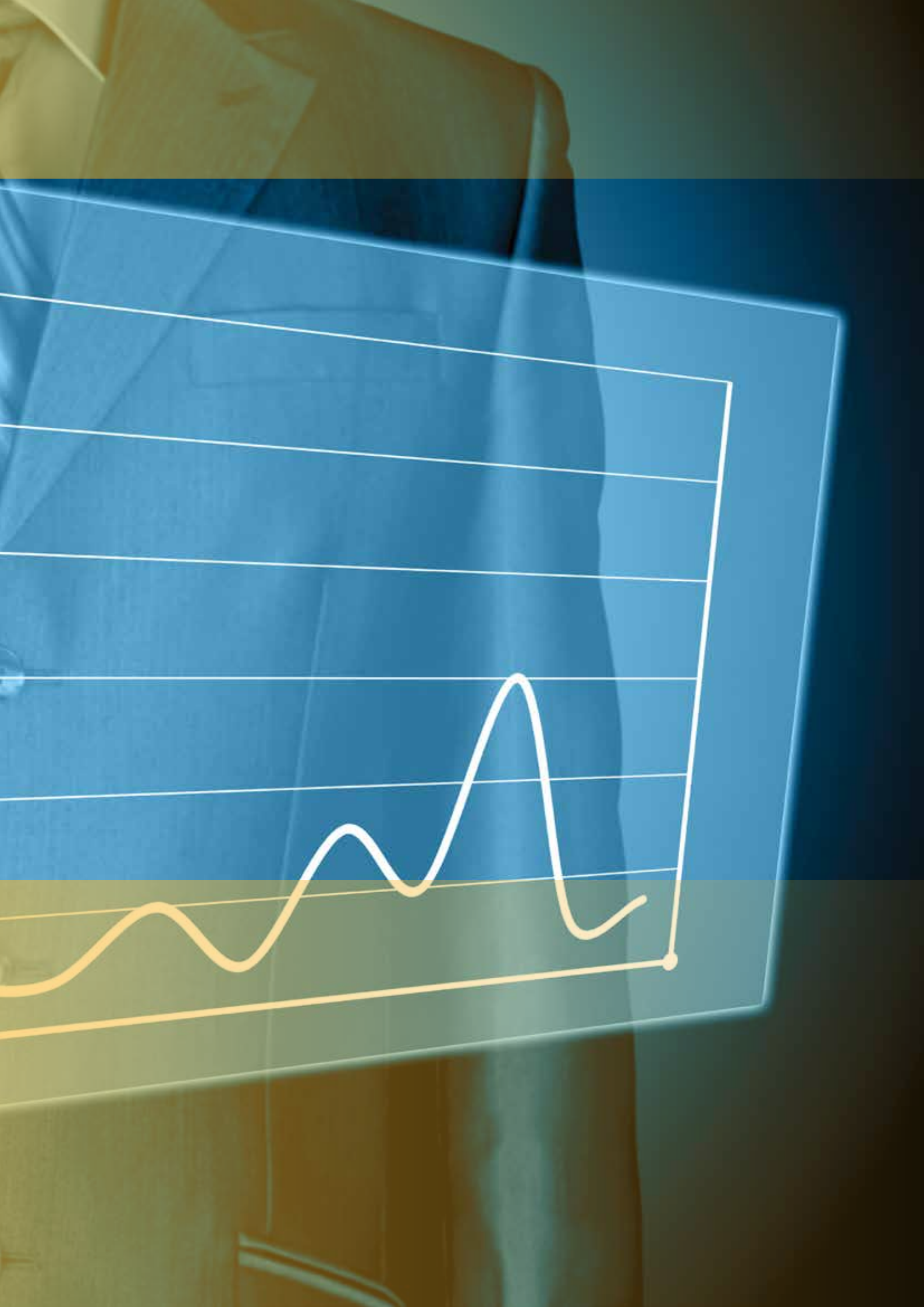
- Replacement of Old Diesel Air Compressor at Port Mathurin Power Station;
- Replacement of Radiator Coolers for MWM Units 3 & 4;
- Construction of new HFO Storage tank of 2000 m<sup>3</sup> at Pointe Monnier Power Station;
- Construction of a new 22 kV Indoor Substation at Port Mathurin;
- Installation of two auto-reclosers;
- Installation of two capacitor banks;
- Refurbishment of Malartic Feeder;
- Re-conductoring of Oyster Bay Feeder;
- Ring Port Mathurin Feeder with Cotton Bay at Baladirou; and
- Ring Cotton Bay Feeder with Malartic at Mourouk.





# MANAGEMENT DISCUSSION AND ANALYSIS





# Management Discussion and Analysis



The financial statements for the year ended 31 December 2012 have been prepared in accordance with the International Public Sector Accounting Standards and are presented on page 65 to 91.

For the financial year 2012, the CEB made a surplus of Rs 299 M compared to the restated surplus of Rs 1,069 M for the preceding year. Revenue from sales of electricity rose by 4.1%, primarily because of an increase in demand to the tune of 2.8%. Total expenditure increased by 10.8% as compared to financial year 2011, mainly on account of depreciation and amortisation expenses, rising costs of heavy fuel oil, and higher finance costs.

The liquidity position as at the end of the year deteriorated significantly, with an overdraft balance amounting to Rs 928 M compared to a positive bank balance of Rs 20 M as at 31 December 2011. This was mainly due to additional payments incurred for the day-to-day operations. With regard to debts, the total long term borrowings increased from Rs 6,972 M to Rs 7,519 M owing to additional loans taken for investments in generation facilities.

It is also worth highlighting that, while the CEB derives its total revenue almost exclusively from the sales of electricity based on electricity tariffs which are not cost reflective, its total expenditure is driven by cost drivers determined by market forces which fluctuate continuously. Accordingly, the utility's financial performance is prone to uncertainties and is sensitive to oscillations in its major cost drivers such as the prices of fossil fuels and movements in foreign exchange rates and interest rates. Profitability can, therefore, shoot up or fall to low levels in a relatively short time period.

## TOTAL REVENUE

The total revenue for the year 2012 amounted to Rs 14,184 M, out of which revenue from sales of electricity including meter rent amounted to Rs 13,299 M, i.e 94% of the total revenue. This represents an increase of around Rs 524 M, as compared to the year 2011. In terms of volume, total sales for the year 2012 stood at 2,294 GWh compared to 2,231 GWh for the preceding year, representing a volume increase of around 63 GWh. Details of the sources of revenue from sales of electricity are provided hereafter.

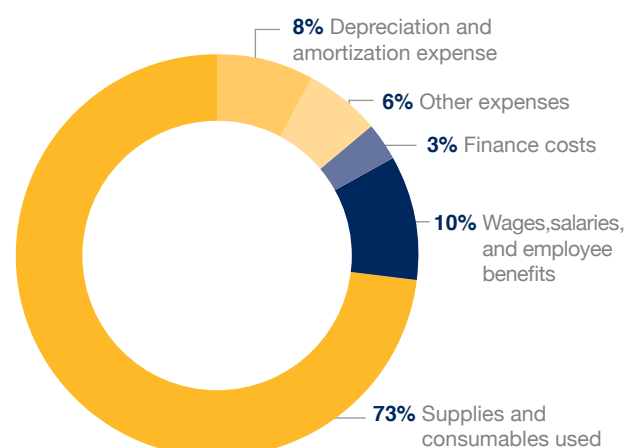
## INCOME FROM SALES OF ELECTRICITY-YEAR 2012

Customer Category	No. of Customers	Units Sold (kWh)	Revenue Rs	Average Price Per Unit Rs
Domestic	379,471	752,976,729	4,298,544,641	5.71
Commercial	38,338	818,714,913	6,092,862,760	7.44
General Industries (315/313/323)	6,046	381,082,083	1,488,070,495	3.90
E.P.Z (317/320/325/330)	140	237,762,590	712,552,785	3.00
Freeport Licensees (340/350)	12	40,310,922	161,572,066	4.01
Sugar Factories (421/422)	7	3,280,675	17,298,254	5.27
Irrigation (515)	551	24,964,751	70,968,646	2.84
Street Lighting (510)	502	25,424,466	199,291,121	7.84
Others (Temp. Supply)	150	254,965	3,192,241	12.52
Special and Non-Classified	-	9,588,992	67,120,491	7.00
<b>Total</b>	<b>425,217</b>	<b>2,294,361,086</b>	<b>13,111,473,499</b>	<b>5.71</b>

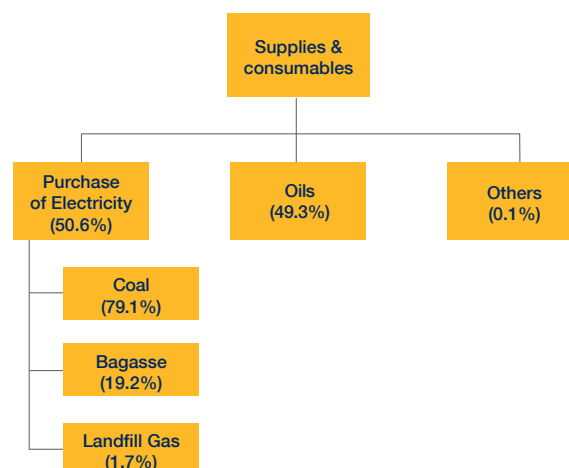
The average selling price per unit has remained almost stable, as compared to the figure of Rs 5.70 for the year 2011. The highest contribution in total income came from commercial customers (46.47%) at an average unit price of Rs 7.44 although it represented only 9.02% of the total number of customers.

## TOTAL EXPENDITURE

For the year ending 31 December 2012, the total expenditure of the CEB amounted to Rs 13,885 M, out of which some 73.43% represented expenditure incurred for supplies and consumables used. The breakdown of total expenditure is shown below:



Purchase of electricity, heavy oils, and light oil constituted the main elements of supplies and consumables used. Purchases of electricity from Independent Power Producers accounted for around 51% whereas oils utilised by the CEB for its own power plants represented 49% of the supplies and consumables used.

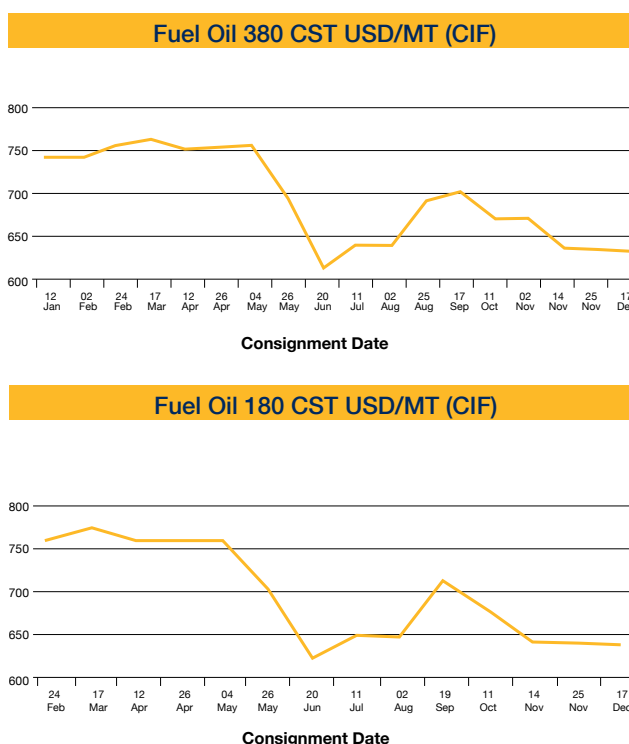


## CEB'S MAIN COST DRIVERS

CEB's main costs are driven by fuel oil and coal prices, exchange rates, interest rates and inflation; these are all external factors over which the CEB has little control.

## FUEL OIL PRICES

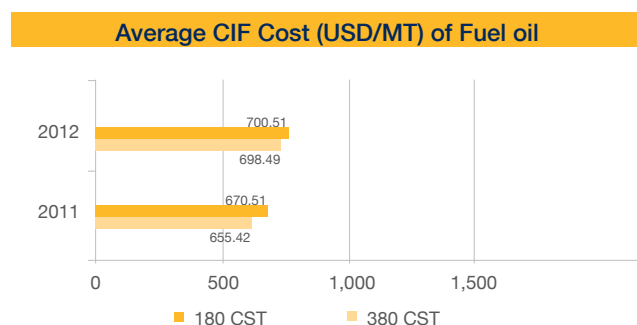
During the year 2012, there were significant fluctuations in the prices of both 180 CST and 380 CST fuel oils as shown below :





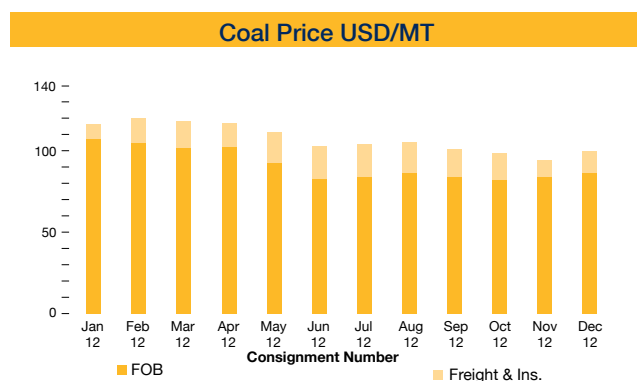
The highest CIF price per metric ton for fuel oil 380 CST paid by the CEB was around USD 769 (on 17.03.12) and the lowest was around USD 618 (on 20.06.12). The CIF price per metric ton for fuel oil 180 CST paid by the CEB reached a peak of around USD 781 (on 17.03.2012), whilst 3 months later it tumbled down to around USD 630 and subsequently, started to pick up again.

Compared to year 2011, the average CIF price per metric ton of fuel oil paid by the CEB in 2012 increased from USD 670 to USD 700 for 180 CST, and from USD 655 to USD 698 for 380 CST, representing some 4.5% and 6.6% increase respectively, as shown hereunder.

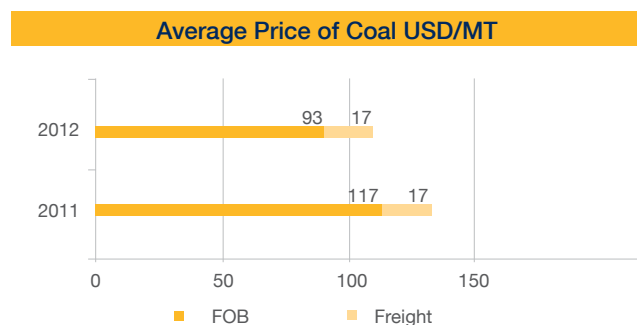


## COAL

The price of coal paid by the CEB is embedded in the purchase price of electricity from Independent Power Producers. The movement in the prices of coal paid by the CEB during the year 2012 is shown below.

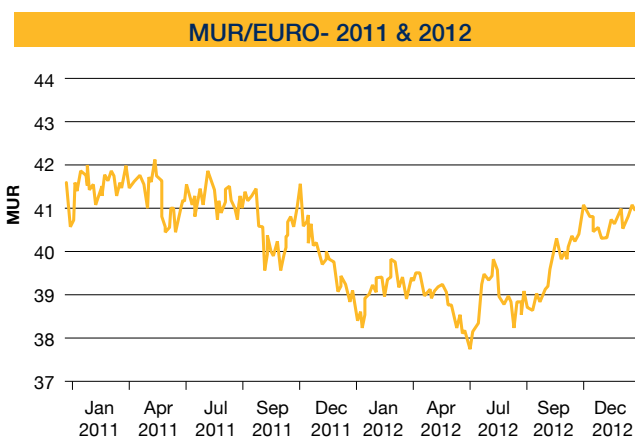


A comparison of the average price of coal per metric ton paid in 2012 with the year 2011 indicates an average decrease in the CIF price per metric ton of coal by 17.8%, as shown below.



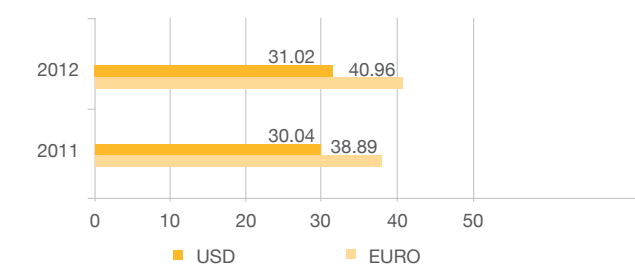
## FOREIGN EXCHANGE

The major foreign currencies in which the CEB conducts its transactions are the EURO and the USD. The movements in the rates of these currencies during the years 2011 and 2012 are shown below.



In general, an important factor to consider is the EURO and the USD exchange rates at the end of the accounting period compared to the preceding year-end so as to determine the unrealised gain/loss. The chart below shows a comparison of the EURO and USD at the two different closing date periods; the EURO has appreciated by some 5.3% while the USD has appreciated by 3.3%. As a result of the fluctuations in the foreign currencies, particularly the EURO and the USD, the CEB made a loss of Rs 92.8 million on foreign exchange transactions.

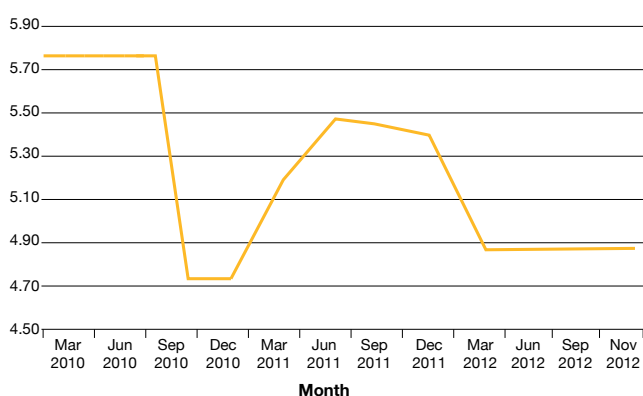
## EURO/MUR and USD/MUR at End of Accounting Period



## FINANCE COSTS

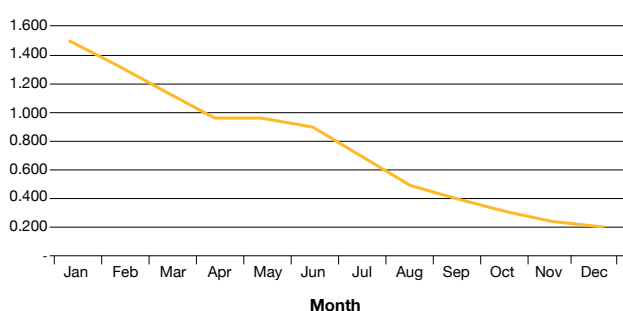
The finance costs of the CEB for the year ending 31 December 2012 amounted to Rs 379.39 M compared to Rs 294.79 M for the previous year. The main interest rates which impact on the finance costs are the Repo rate, the Euribor and the Libor. As shown below, the Repo Rate progressively decreased during the period 2011/2012 to stabilize at 4.90% as from March 2012.

**Repo rate - 2010/2012 (%)**

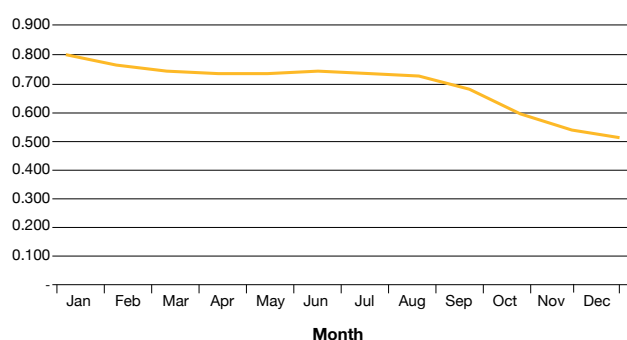


With regard to movements in foreign interest rates, both the average 6-month Euribor and the average 6-month Libor dropped significantly during 2012, as shown below.

**Average Euribor 6 months Rates Year 2012**



**Average Libor 6 months Rates Year 2012**



## INFLATION

The costs of operations were fairly stable as the local inflation rate for the calendar year 2012 stood at 3.9%, while in Europe prices increased by an average of 2.5%.

## FINANCIAL RISK MANAGEMENT

The risk management programme initiated by the CEB during the past years was strengthened with a view to mitigating risks, but also to take advantage of the any favourable macroeconomic indicators. These comprised improvement of risk management relating to interest rates, exchange rates, cash flow, and procurement of goods and services.

### Interest Rate Risk

A significant proportion of CEB's loan portfolio bears variable interest rate and any change in interest rate has a direct impact on the interest costs. In view of its significant level of overdraft and a sizable proportion of foreign loans which are subject to floating interest rates, the CEB is highly sensitive to movements in interest rates, both domestic and international.

During the year 2012, there has been a general decrease in the local and foreign interest rates and the CEB seized the opportunity to renegotiate some of its borrowings on better terms. The CEB portfolio was also reviewed with a view to maintaining a fair balance of credit facilities and loans with fixed and variable interest rates.

### Exchange Rate Risk

Exchange rate risk arises as a result of fluctuations in the exchange rate of one currency against other foreign currencies. The CEB is highly exposed to exchange rate risk due to the following factors:

- Imports of fuel oil are priced in USD;
- Foreign debts are mainly in EURO;
- Import of machinery, equipment and raw materials from abroad; and
- Purchase of electricity from IPPs, with the indexation formulae for determination of price paid comprising an exchange rate element.

To mitigate foreign exchange risks, purchases of foreign currencies were undertaken on a regular basis through bidding processes. This yielded positive results, particularly as the local market for foreign exchange proved to be quite favourable. An exercise was also initiated for regularly reviewing the currency composition of CEB's debt portfolio, taking into account the overall payment obligations in different foreign currencies.

### **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 proactive actions are taken to ensure that funds are always available to meet the organization's obligations. This was achieved through the efficient maintenance and management of various credit line facilities made available to the CEB.

### **Commodity Risk**

The CEB generates around 45% of the electricity consumed in Mauritius and Rodrigues using mainly imported heavy fuel oil (HFO 180 CST and HFO 380 CST) as raw materials. Fuel oil thus constitutes a major cost to the CEB. However, its price is dependent upon many exogenous factors such as geopolitical tensions, and demand and supply conditions. The financial position of the CEB is therefore exposed to fluctuations in the price of fuel oil, which has been very erratic during recent years.

### **PROCUREMENT RISK**

The CEB procurement policy and procedures were further streamlined to be in compliance with the new Public Procurement Act and other relevant regulations. The procurement framework laid emphasis on transparency, fairness and impartiality, competitiveness, security and confidentiality. To that effect, appropriate training was provided to the staff of the procurement section with regard to provisions of the Act, with a view to enhancing their ability to perform efficiently within the legal framework.

### **MEDIUM TERM OUTLOOK**

The uncertainty surrounding worldwide economic growth appears to be tenacious and there are signs that recovery will take much longer time than originally expected. A number of measures taken by major economies to trigger renewed dynamism and activate a return to high growth rates are yet to materialise. Indeed, while the outlook for advanced economies is showing signs of improvement, this could be short-lived because of the Greece Debt Crisis; on the other hand, growth in emerging market economies is softening.

The Mauritian economy has weathered the recent global slowdown relatively well in spite of its exposure to the euro area. While the country has shown some economic resilience and has been resisting to the downturn facing some countries worldwide, the risk that it gets affected is real and this would impact the electricity demand.

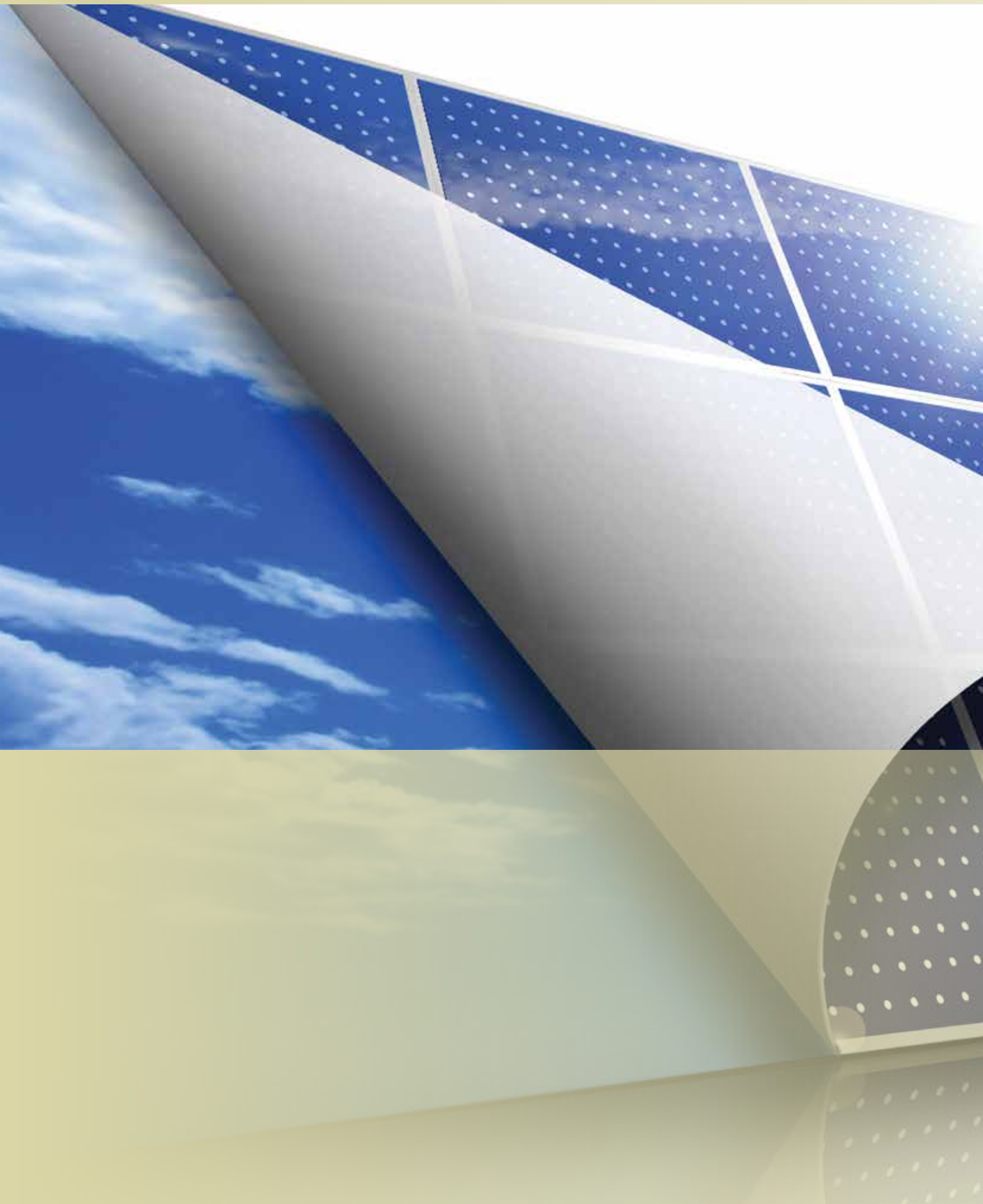
This uncertain situation is quite problematic for the CEB because it has to forecast future demand with a view to planning sufficient generating capacities, which require a time span of at least 2 years to become operational and meet demand. In the same vein, while CEB has benefitted from falling prices of fossil fuels in recent months, movements in their prices are unpredictable because they are subject to a number of uncontrollable factors as well as Geopolitical tensions.

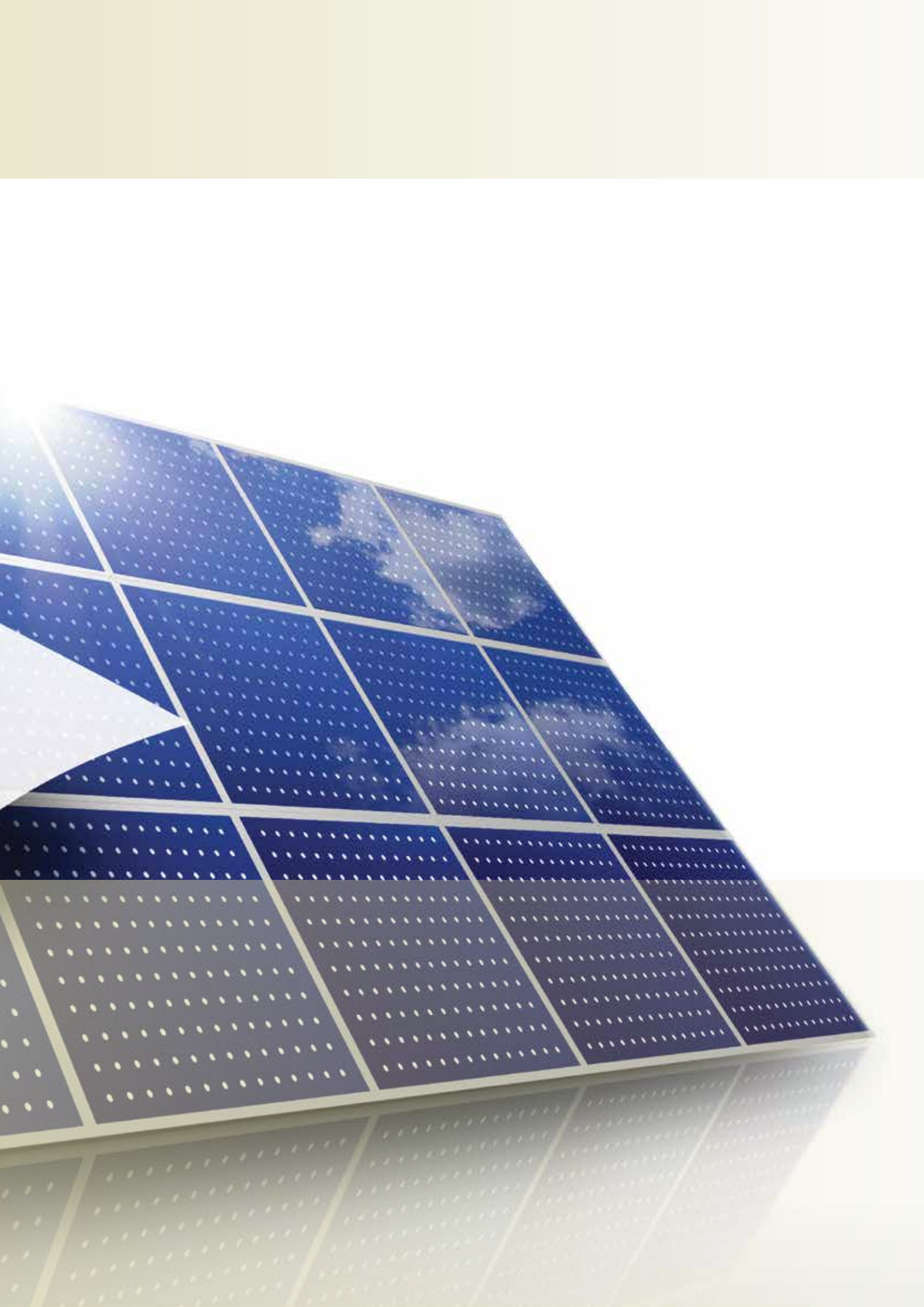
With a view to mitigating the risk associated with the volatility in fossil fuels prices, coupled with our objective for a green environment, the drive towards new renewable energy sources, which is already under way, has been accelerated. However, in view of the limits to energy savings and as renewable energy cannot be entirely relied upon for firm power, 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 2012

# 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 which comprise the statement of financial position as of 31 December 2012, and the statement of comprehensive income, statement of changes in equity and statement of cash flows 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 judgment, 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 give a true and fair view of the financial position of the Central Electricity Board as of 31 December 2012, 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 financial statements for the year ended 31 December 2012 were received at the office on 17 April 2013. Following examination of the financial statements, various amendments had to be made. The amended financial statements were submitted on 26 June 2014.

In my opinion, 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.



**K.C. TSE YUET CHEONG (Mrs.)**  
Director of Audit

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

25 September 2014



# Statement of Financial Position

as at 31 December 2012

		2012	2011 Restated
ASSETS	Notes	Rs	Rs
<b>Current Assets</b>			
Cash and cash equivalents	2	228,551,278	821,706,256
Receivables	3	2,737,121,455	2,729,964,513
Inventories	4	1,595,241,229	1,289,353,777
Prepayments	5	664,574	2,575,218
		<b>4,561,578,536</b>	<b>4,843,599,764</b>
<b>Non-current assets</b>			
Receivables	3	36,593,431	36,253,545
Other financial assets	6	1,000,000	1,000,000
Infrastructure, plant and equipment	7	21,166,045,036	20,431,569,735
Land and buildings	8	636,961,155	541,867,447
Intangible assets	9	39,298,367	46,742,706
		<b>21,879,897,989</b>	<b>21,057,433,433</b>
<b>Total Assets</b>		<b>26,441,476,525</b>	<b>25,901,033,197</b>
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Payables	10	2,080,453,689	2,543,348,155
Short-term borrowings	11	1,156,808,528	801,504,025
Current portion of long-term borrowings	12	485,545,821	617,445,509
Short-term provisions	13	263,220,781	33,560,233
		<b>3,986,028,818</b>	<b>3,995,857,922</b>
<b>Non-current liabilities</b>			
Payables	10	909,501,679	1,126,862,780
Long-term borrowings	12	7,034,256,424	6,355,341,936
Long-term provisions	13	127,728,235	233,253,731
Employee benefits	14	1,760,738,000	1,746,186,000
		<b>9,832,224,339</b>	<b>9,461,644,447</b>
<b>Total liabilities</b>		<b>13,818,253,157</b>	<b>13,457,502,369</b>
<b>Net assets</b>		<b>12,623,223,368</b>	<b>12,443,530,828</b>
<b>NET ASSETS/EQUITY</b>			
Capital contribution	15	670,856,196	670,856,196
Reserves		5,759,097,031	6,363,284,011
Accumulated surpluses		6,193,270,141	5,409,390,621
<b>Total net assets/equity</b>		<b>12,623,223,368</b>	<b>12,443,530,828</b>



**B. Narroo**

Chairperson



**S. Appanah**

Board Member

# Statement of Financial Performance

for the year ended 31 December 2012

		2012	2011 Restated
	Notes	Rs	Rs
<b>Revenue</b>			
Fee, fines, penalties and licenses	16	215,423,387	213,245,781
Revenue from exchange transactions	17	13,299,028,939	12,775,249,852
Grant received	18	20,000,000	-
Other revenue	19	649,793,156	607,076,240
<b>Total Revenue</b>		<b>14,184,245,482</b>	<b>13,595,571,873</b>
<b>Expenses</b>			
Wages, salaries, and employee benefits	20	1,387,612,319	1,264,300,794
Supplies and consumables used	21	10,195,360,139	9,534,324,496
Depreciation and amortization expense	22	1,165,915,349	705,752,501
Other expenses	23	757,012,800	727,436,388
Finance costs	24	379,390,010	294,795,185
<b>Total Expenses</b>		<b>13,885,290,616</b>	<b>12,526,609,364</b>
<b>Surplus for the period</b>			
		<b>298,954,867</b>	<b>1,068,962,509</b>

# Statement of Changes in Net Assets/Equity

for the year ended 31 December 2012

	Contributed Capital	Reserves	Accumulated Surpluses Restated	Total
	Rs	Rs	Rs	Rs
<b>Balance at December 31, 2010</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	-	2,122,329,686
Depreciation Adjustment	-	(350,599,162)	350,599,162	-
Other Adjustment	-	-	16,251,005	16,251,005
Surplus for the period	-	-	1,068,962,509	1,068,962,509
<b>Balance at December 31, 2011 Carried forward</b>	<b>670,856,196</b>	<b>6,363,284,011</b>	<b>5,409,390,621</b>	<b>12,443,530,828</b>
<b>Balance at December 31, 2011 Brought forward</b>	<b>670,856,196</b>	<b>6,363,284,011</b>	<b>5,409,390,621</b>	<b>12,443,530,828</b>
Depreciation & Other Adjustment	-	(604,186,980)	484,924,653	(119,262,327)
Surplus for the period	-	-	298,954,867	298,954,867
<b>Balance at December 31, 2012</b>	<b>670,856,196</b>	<b>5,759,097,031</b>	<b>6,193,270,141</b>	<b>12,623,223,368</b>

# Cash Flow Statement

for the year ended 31 December 2012

	2012		2011 Restated	
	Rs	Rs	Rs	Rs
<b>Cash flows from Operating Activities</b>				
<b>Profit for the year</b>		298,954,867		1,068,962,509
<b>Adjustment for:</b>				
Depreciation	1,165,915,349		705,752,501	
Exchange difference	194,856,289		(152,463,611)	
Finance costs	379,390,010		294,795,185	
Amortization of capital contribution & adjustment	(247,889,396)		(243,188,727)	
Investment Income	(14,911,480)		(17,191,281)	
Provision for pension costs	14,552,000	1,491,912,772	87,036,000	674,740,067
<b>Operating surplus before working capital changes</b>		<b>1,790,867,639</b>		<b>1,743,702,576</b>
<b>Changes in operating assets and liabilities</b>				
(Increase) in inventories	(305,887,452)		(132,843,321)	
(Increase) in receivables	(5,586,184)		(253,862,561)	
(Decrease) in accounts payables	(427,493,127)	(738,966,762)	825,517,973	438,812,091
<b>Cash from operating activities</b>		<b>1,051,900,877</b>		<b>2,182,514,668</b>
<b>Returns from investments and servicing of finance</b>				
Interest paid		(379,390,010)		(294,795,185)
<b>Net cash from operating activities</b>		<b>672,510,866</b>		<b>1,887,719,483</b>
<b>Cash flows from Investing Activities</b>				
Interest received	14,911,480		17,191,281	
Acquisition of tangible fixed assets	(1,988,040,018)		(2,637,722,370)	
		<b>(1,973,128,538)</b>		<b>(2,620,531,089)</b>
<b>Cash flows from Financing Activities</b>				
Loans received	1,876,953,547		2,417,307,158	
Loans repaid	(1,557,444,603)	319,508,945	(1,080,141,644)	1,337,165,514
		<b>(981,108,727)</b>		<b>604,353,908</b>
Foreign Exchange Adjustment		32,649,247		(57,076,604)
		<b>(948,459,480)</b>		<b>547,277,304</b>
<b>Net change in cash and cash equivalents</b>				
Cash and Cash equivalents as at 1 January	20,202,231		(527,075,073)	
<b>Cash and cash equivalents as at 31 December</b>	(928,257,249)		20,202,231	
		<b>(948,459,480)</b>		<b>547,277,304</b>



# Notes to the Financial Statements

for the year ended 31 December 2012

## 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.

## 2. 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 2012

## (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 leaves 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 2012

## (x) Infrastructure, 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:

	Years
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 2012

## **(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, wherever applicable, 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 2012

## **(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. 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 2012

2. CASH AND CASH EQUIVALENTS	2012	2011
	Rs	Rs
Bank deposits	225,947,782	357,587,171
Cash balances	2,603,497	464,119,085
<b>Cash &amp; Cash equivalents</b>	<b>228,551,278</b>	<b>821,706,256</b>
3. RECEIVABLES	2012	2011 Restated
	Rs	Rs
Trade Receivables	2,282,202,377	2,148,762,280
Impairment	(72,189,087)	(45,304,713)
	<b>2,210,013,290</b>	<b>2,103,457,567</b>
VAT	312,890,979	364,137,585
Staff loans for vehicles	57,327,506	55,522,717
Others	193,483,111	243,100,189
	<b>563,701,596</b>	<b>662,760,491</b>
	<b>2,773,714,886</b>	<b>2,766,218,058</b>
<b>Receivables within 12 months</b>	<b>2,737,121,455</b>	<b>2,729,964,513</b>
<b>Receivables after 12 months</b>	<b>36,593,431</b>	<b>36,253,545</b>

Trade debtors include electricity bills amounting to Rs 1,321 M for December 2012 consumption and delivered in January & February 2013. 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.

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

4. INVENTORIES	2012	2011
	Rs	Rs
<i>Inventories comprise the following items:</i>		
Fuel and lubricating oil	628,253,452	332,615,932
Spare parts for power stations	422,490,820	413,022,611
Transmission and distributions	446,509,089	454,734,153
Others	18,092,382	13,830,598
Sub total	1,515,345,743	1,214,203,294
Rodrigues	79,895,486	75,150,482
	<b>1,595,241,229</b>	<b>1,289,353,777</b>

Major spare parts exceeding Rs 500,000 in value have been identified and verified whether of capital nature. An amount of Rs 138.1 M worth of stock for 2012 has been capitalised and analysed into Generation Rs 80.7 M, Transmission & Distribution Rs 52.6 M and Rodrigues Rs 4.8 M

# Notes to the Financial Statements

for the year ended 31 December 2012

5. PREPAYMENTS	2012	2011
	Rs	Rs
Total prepayments	664,574	2,575,218
	<b>664,574</b>	<b>2,575,218</b>
6. OTHER FINANCIAL ASSET	2012	2011
	Rs	Rs
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 31.12.2012, there has been no transactions conducted by CEB Investment Company Ltd.

## 7. SCHEDULE OF INFRASTRUCTURE, PLANT AND EQUIPMENT

	Cost as at 31.12.2011	Additions / (Transfer) In the year 31.12.2012	Disposal In the year 2012	Total Cost as at 31.12.2012	Total Depreciation Charge for year 2012	Total Acc Depreciation On Disposal as at 31.12.2012	Accumulated Depreciation as at 31.12.2011	Accumulated Depreciation as at 31.12.2012	Carrying Amount as at 31.12.2011	Carrying Amount as at 31.12.2012
<b>GENERATION ASSETS</b>										
Thermal power station	14,572,638,206	3,377,564,137	-	17,950,202,343	529,695,512	-	6,477,364,408	7,007,059,920	8,095,273,804	10,943,142,423
Hydro power station	5,134,045,441	50,890,424	-	5,184,935,865	135,615,787	-	3,122,566,109	3,258,181,896	2,011,479,332	1,926,753,969
Wind Park	89,962,407	-	-	89,962,407	2,824,041	-	12,367,884	15,191,925	77,594,523	74,770,482
<b>Total Generating Assets</b>	<b>19,796,646,054</b>	<b>3,428,454,562</b>	<b>-</b>	<b>23,225,100,615</b>	<b>668,135,340</b>	<b>-</b>	<b>9,612,298,401</b>	<b>10,280,433,741</b>	<b>10,184,347,659</b>	<b>12,944,666,874</b>
<b>TRANSMISSION ASSETS</b>										
Transmission network	1,035,055,441	97,825,961	-	1,132,881,403	39,029,463	-	382,147,099	421,176,562	652,908,342	711,704,841
Major substations	2,290,301,040	162,668,870	-	2,452,969,910	85,730,411	-	1,261,983,377	1,347,713,788	1,028,317,663	1,105,256,122
System Control	204,050,635	15,871,810	-	219,922,445	11,203,920	-	68,413,304	79,617,224	135,637,331	140,305,221
<b>Sub Total</b>	<b>3,529,407,116</b>	<b>276,366,642</b>	<b>-</b>	<b>3,805,773,758</b>	<b>135,963,794</b>	<b>-</b>	<b>1,712,543,780</b>	<b>1,848,507,574</b>	<b>1,816,863,336</b>	<b>1,957,266,184</b>
<b>DISTRIBUTION ASSETS</b>										
Distribution network	8,941,381,184	447,699,831	-	9,389,081,015	282,958,725	-	3,909,415,653	4,192,374,378	5,031,965,531	5,196,706,637
<b>Total Transmission &amp; Dist Assets</b>	<b>12,470,788,300</b>	<b>724,066,473</b>	<b>-</b>	<b>13,194,854,772</b>	<b>418,922,519</b>	<b>-</b>	<b>5,621,959,433</b>	<b>6,040,881,952</b>	<b>6,848,828,867</b>	<b>7,153,972,821</b>
<b>Total Generating, Trans &amp; Dist Assets</b>	<b>32,267,434,353</b>	<b>4,152,521,034</b>	<b>-</b>	<b>36,419,955,388</b>	<b>1,087,057,859</b>	<b>-</b>	<b>15,234,257,834</b>	<b>16,321,315,693</b>	<b>17,033,176,525</b>	<b>20,098,639,695</b>
<b>Other Assets</b>										
Furniture & Office Equipment	74,332,743	5,150,282	-	79,483,025	3,352,081	-	51,515,759	54,867,840	22,816,984	24,615,185
Motor Vehicles	143,976,854	15,563,377	(1,214,319)	158,325,912	16,843,965	(559,224)	87,136,992	103,421,733	56,839,862	54,904,179
Computer Equipment	133,634,859	19,376,483	-	153,011,342	14,661,355	(76,606)	94,307,514	108,892,263	39,327,345	44,119,079
Tools & Instruments	184,969,354	20,354,411	-	205,323,765	12,448,248	(81,828)	155,101,671	167,468,091	29,867,683	37,855,674
Asset Under Construction	3,140,390,570	(2,372,539,855)	-	767,850,715	-	-	-	-	3,140,390,569	767,850,715
Major Sparts	109,150,766	28,909,743	-	138,060,509	-	-	-	-	109,150,766	138,060,509
<b>Total other assets</b>	<b>3,786,455,145</b>	<b>(2,283,185,559)</b>	<b>(1,214,319)</b>	<b>1,502,055,267</b>	<b>47,305,649</b>	<b>(717,658)</b>	<b>388,061,936</b>	<b>434,649,927</b>	<b>3,398,393,208</b>	<b>1,067,405,339</b>
<b>Total Infrastructure, Plant &amp; Equipment</b>	<b>36,053,889,498</b>	<b>1,869,335,476</b>	<b>(1,214,319)</b>	<b>37,922,010,655</b>	<b>1,134,363,508</b>	<b>(717,658)</b>	<b>15,622,319,770</b>	<b>16,755,965,620</b>	<b>20,431,569,735</b>	<b>21,166,045,036</b>



## 8. SCHEDULE OF LAND AND BUILDING

	Cost as at 31.12.2011	Additions / (Transfer) In the year 31.12.2012	Disposal In the year 2012	Total Cost as at 31.12.2012	Total Depreciation Charge for year 2012	Total Acc Depreciation On Disposal as at 31.12.2012	Accumulated Depreciation as at 31.12.2011	Accumulated Depreciation as at 31.12.2012	Carrying Amount as at 31.12.2011	Carrying Amount as at 31.12.2012
Land full ownership	373,237,685	(37,769,795)	-	335,467,890	-	-	-	-	373,237,685	335,467,890
Buildings	291,976,418	139,018,139	-	430,994,557	6,154,637	-	123,346,656	129,501,293	168,629,762	301,493,265
<b>Total Land &amp; Buildings</b>	<b>665,214,103</b>	<b>101,248,344</b>	<b>-</b>	<b>766,462,447</b>	<b>6,154,637</b>	<b>-</b>	<b>123,346,656</b>	<b>129,501,293</b>	<b>541,867,447</b>	<b>636,961,155</b>

## 9. SCHEDULE OF INTANGIBLE ASSET

	Cost as at 31.12.2011	Additions In the year 31.12.2012	Disposal In the year 2012	Total Cost Revaluation as at 31.12.2012	Total Depreciation Charge for year 2012	Total Acc Depreciation On Disposal as at 31.12.2012	Accumulated Depreciation as at 31.12.2011	Accumulated Depreciation as at 31.12.2012	Carrying Amount as at 31.12.2011	Carrying Amount as at 31.12.2012
Implementation of MIS	230,413,320	17,952,865	-	248,366,185	25,397,204	-	183,670,614	209,067,818	46,742,706	39,298,367
<b>Total Intangible Assets</b>	<b>230,413,320</b>	<b>17,952,865</b>	<b>-</b>	<b>248,366,185</b>	<b>25,397,204</b>	<b>-</b>	<b>183,670,614</b>	<b>209,067,818</b>	<b>46,742,706</b>	<b>39,298,367</b>

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 2.1 billion.

Had the assets been reported at historical costs, (Excluding the last revaluation) the Net Book Value would have been approximately Rs15.3 billion

# Notes to the Financial Statements

for the year ended 31 December 2012

10. PAYABLES	2012	2011
	Rs	Rs
Provision for loose bagasse	40,219,046	41,391,293
Interest on government loans	9,670,848	224,225,941
Wages and Salaries due	25,577,591	25,664,873
MBC TV Licence Fee	18,898,008	33,238,763
Retention Money on Contracts	14,187,437	10,827,972
Other creditors and accruals	1,971,900,760	2,207,999,313
Deposits from customers	454,947,300	424,419,004
Deferred Income - Capital Contribution received	454,554,379	702,443,776
	<b>2,989,955,368</b>	<b>3,670,210,935</b>
Payable within one year	<b>2,080,453,689</b>	<b>2,543,348,155</b>
Payable after one year	<b>909,501,679</b>	<b>1,126,862,780</b>
11. SHORT-TERM BORROWINGS	2012	2011
	Rs	Rs
Bank overdraft	126,808,528	51,504,025
Overnight facility	1,030,000,000	750,000,000
	<b>1,156,808,528</b>	<b>801,504,025</b>
<b>The average interest rates paid were as follows:</b>		
Bank overdraft and overnight facility	4.36%	3.36%

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 4.36%. The overdrafts are guaranteed by Government.

# Notes to the Financial Statements

for the year ended 31 December 2012

12. LONG-TERM BORROWINGS	2012	2011
	Rs	Rs
Current	-	-
Term loans	485,545,821	617,445,509
<b>Borrowings due within one year</b>	<b>485,545,821</b>	<b>617,445,509</b>
Non-current	-	-
Term loans	7,034,256,424	6,355,341,936
<b>Borrowings due after one year</b>	<b>7,034,256,424</b>	<b>6,355,341,936</b>
<b>TOTAL INDEBTEDNESS AS AT 31 DECEMBER</b>	<b>7,519,802,245</b>	<b>6,972,787,445</b>
	2012	2011
	Rs	Rs
<b>Term loans due after one year are repayable as follows:</b>		
Between two and five years	2,428,564,514	2,456,804,881
After five years	4,605,691,910	3,898,537,055
	<b>7,034,256,424</b>	<b>6,355,341,936</b>

During the year 2012, borrowing costs capitalised amounted to Rs 56.8 M

# Notes to the Financial Statements

for the year ended 31 December 2012

## 12. SCHEDULE OF BORROWINGS

DESCRIPTION	LOANS RECEIVED			LOANS REDEEMED			INSTALLMENTS			
	As At 1-Jan-12 Restated	In 2012	Currency Variation	As At 31-Dec-12	As At 1-Jan-12	In 2012	As At 31-Dec-12	Due But Not Paid	Repayable Within One Year	Repayable after Year 5
<b>Govt Loans:</b>										
<b>Local Loans</b>										
Development Loans	15,198,751	-	-	131,452,775	116,254,024	7,820,000	124,074,024	-	1,077,875	1,989,375
Kuwait Fund - 132 kV	182,194,950	-	-	218,633,940	36,438,990	87,453,576	123,892,566	-	14,575,596	58,302,384
Jin FEI - project	281,220,188	-	-	296,021,250	14,801,063	29,602,125	44,403,188	-	25,161,806	201,294,450
Fort Victoria Phase 2	329,000,000	94,000,000	-	470,000,000	47,000,000	423,000,000	470,000,000	-	-	-
Pte Monier (Rod)	24,600,000	98,400,000	-	123,000,000	-	12,300,000	12,300,000	-	5,535,000	22,140,000
	<b>832,213,889</b>	<b>1,046,707,965</b>	<b>-</b>	<b>1,239,107,965</b>	<b>214,494,077</b>	<b>560,175,701</b>	<b>774,669,778</b>	<b>464,438,186</b>	<b>46,350,277</b>	<b>132,039,575</b>
<b>Foreign Loans</b>										
GOVT-(KFW) ROD	4,188,514	-	-	78,466,213	74,277,699	4,188,514	78,466,213	-	-	-
GOVT-(KWF) FG3	29,679,939	-	-	423,453,888	393,773,949	29,679,939	423,453,888	-	-	-
GOVT-(NIB) -FG	98,700,000	-	-	291,592,500	192,892,500	98,700,000	291,592,500	-	-	-
BADEA	185,927,529	-	5,579,272	276,639,517	85,132,716	18,270,400	103,403,116	-	18,878,400	72,944,901
Fort Victoria Phase 2	1,713,976,000	423,819,000	118,305,000	2,256,100,000	-	-	-	-	-	470,020,833
Pte Monier (Rod)	70,117,200	277,706,500	21,354,300	369,180,000	-	-	-	-	-	61,530,000
	<b>2,102,589,182</b>	<b>2,848,666,046</b>	<b>145,238,572</b>	<b>3,695,432,118</b>	<b>746,076,864</b>	<b>150,838,853</b>	<b>896,915,717</b>	<b>2,798,516,401</b>	<b>18,878,400</b>	<b>2,166,674,068</b>
<b>Sub Total</b>	<b>2,934,803,071</b>	<b>3,895,374,011</b>	<b>145,238,572</b>	<b>4,934,540,083</b>	<b>960,570,941</b>	<b>711,014,554</b>	<b>1,671,585,495</b>	<b>3,262,954,587</b>	<b>65,228,677</b>	<b>2,298,713,643</b>
<b>Other Loans (Foreign)</b>										
EIB	38,744,873	-	1,712,424	82,978,790	42,521,493	6,457,479	48,978,972	-	6,799,964	27,199,854
KFW -FORT VIC	67,159,663	-	2,968,285	305,672,111	235,544,162	11,193,278	246,737,440	-	11,786,935	47,147,738
New St. Louis Loan-NIB	402,105,805	-	19,193,807	667,235,532	245,985,920	40,210,580	286,146,500	-	42,343,226	169,372,903
HSBC Fort - Victoria1	1,238,599,661	-	58,392,449	1,441,660,721	144,668,611	137,622,184	282,290,795	-	115,936,983	463,747,969
<b>Sub Total</b>	<b>1,746,610,002</b>	<b>2,415,280,189</b>	<b>82,266,964</b>	<b>2,497,547,153</b>	<b>668,670,186</b>	<b>195,483,521</b>	<b>864,153,707</b>	<b>1,633,393,446</b>	<b>176,867,117</b>	<b>749,057,867</b>
<b>Other Loans (Local)</b>										
CEB Pension Funds-Staff	781,182,734	57,620,018	-	959,302,752	120,500,000	24,000,000	144,500,000	814,802,752	-	814,802,752
CEB Pension Funds-MW	-	-	-	-	-	-	-	-	-	-
CEB Pension Funds-Manual	429,031,978	31,388,249	-	485,420,226	25,000,000	15,000,000	40,000,000	445,420,226	-	445,420,226
Consumers Development Loans	64,346,007	18,017,781	-	517,893,281	435,529,493	19,653,355	455,182,848	62,710,433	19,653,355	43,057,078
Barclays Bank plc	6,250,008	200,000,000	-	200,000,000	193,749,992	6,250,008	200,000,000	-	-	-
SBM	6,721,151	32,261,526	-	32,261,526	25,540,375	6,721,151	32,261,526	-	-	-
New St. Louis Loan-HSBC	80,000,000	160,000,000	-	160,000,000	80,000,000	16,000,000	96,000,000	64,000,000	16,000,000	48,000,000
8.1% 3 year Bond	500,000,000	500,000,000	-	500,000,000	-	500,000,000	500,000,000	-	-	-
6.29% sbm loan	-	500,000,000	-	500,000,000	-	-	-	500,000,000	100,000,000	400,000,000
HSBC St. Louis (refin Bar&BDM)	171,308,397	209,377,318	-	209,377,318	38,068,603	38,068,603	76,137,206	133,240,112	38,068,603	95,171,508
SBM refinancing FV2	-	376,000,000	-	376,000,000	-	-	-	376,000,000	47,000,000	188,000,000
HSBC Fort victoria	252,534,100	252,534,100	-	252,534,100	-	25,253,410	25,253,410	227,280,690	22,728,069	90,912,276
	<b>2,291,374,375</b>	<b>3,209,763,155</b>	<b>983,026,047</b>	<b>4,192,789,202</b>	<b>918,388,463</b>	<b>650,946,527</b>	<b>1,569,334,990</b>	<b>2,623,454,212</b>	<b>243,450,027</b>	<b>822,083,784</b>
<b>Sub Total</b>	<b>6,972,787,445</b>	<b>9,520,417,355</b>	<b>227,505,536</b>	<b>11,624,876,439</b>	<b>2,547,629,590</b>	<b>1,557,444,603</b>	<b>4,105,074,193</b>	<b>7,519,802,245</b>	<b>495,545,821</b>	<b>4,605,691,910</b>



# Notes to the Financial Statements

for the year ended 31 December 2012

The term loans are guaranteed by the Government. As at 31 December 2012, loans taken from the Government amounted to Rs 3,263 M and the Government Guarantees for loans taken by the CEB amounted to Rs 1,965 M.

The annual average interest rate paid on the loans was 4.65% (2011:4.17%)

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

## Analysis of borrowings by currency:

Currency	2012	2011
	Rs	Rs
Mauritian Rupee	3,087,892,398	3,123,588,262
US Dollars	173,236,401	185,927,529
EURO	4,258,673,446	3,534,891,715
Kuwait Dinars	-	29,679,939
Danish Kroner	-	98,700,000
<b>Total</b>	<b>7,519,802,245</b>	<b>6,972,787,445</b>

Loans of Rs 1.6 billion were arranged at fixed interest rates and Rs 5.9 billion were arranged at floating rates.

## 13. PROVISIONS

	2012	2011
	Rs	Rs
<b>Carrying Amounts</b>	<b>390,949,016</b>	<b>266,813,964</b>
Short-term provisions	263,220,781	33,560,233
Long-term provisions	127,728,235	233,253,731

# Notes to the Financial Statements

for the year ended 31 December 2012

## 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. In July 2007, a new Pension Fund has been set up for employees joining the CEB as from 2004.

	2012	2011
	Rs	Rs
<b>Amounts recognised in the Statement of Financial Position at end of year:</b>		
Present value of funded obligations	4,985,661,000	4,847,160,000
Fair value of plan assets	(2,557,319,000)	(2,226,880,000)
	<b>2,428,342,000</b>	<b>2,620,280,000</b>
Unrecognised actuarial gains/(losses)	(667,604,000)	(874,094,000)
<b>Position at end of year</b>	<b>1,760,738,000</b>	<b>1,746,186,000</b>
<b>Amounts recognised in the Statement of Financial Performance:</b>		
Current service cost	84,076,000	126,954,000
Contributions by employees	(52,411,000)	(45,981,000)
Interest on obligation	452,397,000	439,564,000
Expected return on plan assets	(221,074,000)	(200,693,000)
Actuarial losses/(gains) recognised in period	25,959,000	28,765,000
<b>Total included in staff costs/employee benefits expenses</b>	<b>288,947,000</b>	<b>348,609,000</b>
<b>Actual return on plan assets</b>	<b>125,354,000</b>	<b>153,153,000</b>
<b>Changes in Present Value of the Obligation</b>		
Present value of obligation at start of period	4,847,160,000	4,482,064,000
Interest cost	452,397,000	439,564,000
Current service cost	84,076,000	126,954,000
Employee contribution	52,411,000	-
Benefits paid	(174,132,000)	(177,064,000)
Actuarial (gain) loss on obligation	(276,251,000)	(24,358,000)
<b>Present value of obligation at end of period</b>	<b>4,985,661,000</b>	<b>4,847,160,000</b>
<b>Changes in Fair Value of the Plan Assets</b>		
Fair value of plan assets at start of period	2,226,880,000	1,943,237,000
Expected return on plan assets	221,074,000	200,693,000
Contribution to plan assets	379,217,000	307,554,000
Benefits paid out of plan assets	(174,132,000)	(177,064,000)
Actuarial gain (loss) on plan assets	(95,720,000)	(47,540,000)
<b>Fair value of plan assets at end of period</b>	<b>2,557,319,000</b>	<b>2,226,880,000</b>
Contributions by employer	326,806,000	261,573,000

# Notes to the Financial Statements

for the year ended 31 December 2012

	2012	2011
	Rs	Rs
Major Asset Categories as percentage of Plan Assets		
Secured loans	1.0%	1.5%
Loans to CEB	49.0%	54.2%
Other dues from CEB	12.0%	22.4%
Loans to members	1.0%	2.0%
Other investment	37.0%	19.9%
<b>Total</b>	<b>100%</b>	<b>100%</b>
Principal actuarial assumptions at end of year:		
Discount rate	8.50%	9.50%
Expected rate of return on plan assets	8.50%	9.50%
Future salary increases (Staff/Manual)	6.5%/6.0%	7.5%/7%
Future pension increases	5.50%	5.00%
Annual proportion of employees leaving service	5% p.a to 45 yrs, reducing to nil at 50.	
Actuarial table for employee mortality	A1967/70 2(Ult) PA(90) rated downby 2 yrs	
Movements in liability recognised in the Statement of Financial Position:		
At 1 January	1,746,186,000	1,659,150,000
Net expense recognised in Statement of Financial Performance	341,358,000	348,609,000
Contributions and direct benefits paid	(326,806,000)	(261,573,000)
<b>As at 31 December</b>	<b>1,760,738,000</b>	<b>1,746,186,000</b>
Amounts for the current and previous periods		
Present value of defined benefits obligations	(4,985,661,000)	(4,847,160,000)
Fair value of plan assets	2,557,319,000	2,226,880,000
<b>Surplus/(deficit)</b>	<b>(2,428,342,000)</b>	<b>(2,620,280,000)</b>
Experience adjustments on Plan Assets	(95,720,000)	(47,540,000)
Retirement benefit obliqations have been based on an actuarial report from Aon Hewitt dated 16 October 2013.		

## 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 2012

16. FEES, FINES, PENALTIES AND LICENSES	2012	2011
	Rs	Rs
Rechargeable services	37,405,741	48,381,635
Late Payment Surcharge	102,959,977	102,242,513
MBC TV Licence fee	3,600,000	3,600,000
Other sundry receipts	61,650,571	44,986,487
Penalties From IPP	9,807,100	14,035,146
	<b>215,423,387</b>	<b>213,245,781</b>

17. REVENUE FROM EXCHANGE TRANSACTIONS	2012	2011 Restated
	Rs	Rs
Sales of electricity	13,230,098,843	12,708,627,904
Rental of meters	68,930,096	66,621,948
	<b>13,299,028,939</b>	<b>12,775,249,852</b>

18. GRANT RECEIVED	2012	2011
	Rs	Rs
Grant for landfill project	20,000,000	-
	<b>20,000,000</b>	<b>-</b>

19. OTHER REVENUE	2012	2011
	Rs	Rs
Realised gains	102,031,687	194,232,621
Unrealised gains	-	152,463,611
Capital contribution	532,849,989	243,188,727
Interest on Bank deposits and other bank balances	14,911,480	17,191,281
	<b>649,793,156</b>	<b>607,076,240</b>

20. WAGES, SALARIES, AND EMPLOYEE BENEFITS	2012	2011
Aggregate remuneration comprised:	Rs	Rs
Wages & Salaries	971,204,746	899,078,315
Other Costs	416,407,573	365,222,479
<b>Total</b>	<b>1,387,612,319</b>	<b>1,264,300,794</b>

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

	2012	2011
	Number	Number
Manual Workers	1196	1025
Staff	903	885
<b>Total</b>	<b>2099</b>	<b>1910</b>

# Notes to the Financial Statements

for the year ended 31 December 2012

21. SUPPLIES & CONSUMABLES USED	2012	2011
	Rs	Rs
Heavy Oil	4,687,954,833	4,116,195,680
Light Oil	76,264,298	61,353,402
Lubrication Oil	117,782,039	107,075,438
Kerosene	148,318,111	144,414,691
Materials	5,932,140	4,234,243
Bagasse Transfer Price	61,790,170	64,198,252
Purchase Of Electricity - Coal	4,080,820,303	4,036,932,249
Purchase Of Electricity - Bagasse	930,749,099	986,014,961
Purchase of Electricity - Land filled Gas	85,749,145	13,905,580
	<b>10,195,360,139</b>	<b>9,534,324,495</b>

22. DEPRECIATION AND AMORTIZATION EXPENSE	2012	2011
	Rs	Rs
Infrastructure, Plant and Equipment	1,134,363,508	680,656,560
Land and Building	6,154,637	3,922,183
Intangible Asset	25,397,204	21,173,758
	<b>1,165,915,349</b>	<b>705,752,501</b>

23. OTHER EXPENSES	2012	2011 Restated
	Rs	Rs
Distribution costs	103,018,828	123,196,463
Pension Obligation	14,552,000	87,036,000
Others	444,585,682	517,203,926
Loss on exchange (unrealised)	194,856,289	-
	<b>757,012,800</b>	<b>727,436,388</b>

24. FINANCE COSTS	2012	2011
	Rs	Rs
Interest On Loan	336,701,587	267,374,591
Interest On Overdraft	42,688,423	27,420,594
	<b>379,390,010</b>	<b>294,795,185</b>

## 25. 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 5.3 billion from State Trading Corporation.

Loans due to Government is disclosed in the schedule of loans in note 11. Interest payable on these loans for 2012 amounted to Rs 92.7 million.

Loans due to CEB Staff Pension Fund and CEB Manual Workers Pension Fund totalled Rs 814.8 M and Rs 445.4 M respectively.



# Notes to the Financial Statements

for the year ended 31 December 2012

## Remuneration of key management personnel

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

	2012	2011
	Rs	Rs
Total Remuneration	23,421,508	19,477,938

## 26. COMMITMENTS

In the course of its generation and supply activities, the Board has entered into long-term contracts and “take or pay” contracts with independent power producers, in which it undertakes to purchase electricity for periods of up to 20 years.

The minimum energy and capacity payment in 2013 is estimated at Rs 4,718 M

## 27. PROVISIONS

	Back Pay	Passage Benefits	Vacation leave	Total
	Rs	Rs	Rs	Rs
Carrying Amount as at 1 January (Restated)	77,689,864	83,283,863	105,840,236	266,813,963
Additional Provision	118,519,166	31,139,790	37,202,157	186,861,113
Amount utilised during the year	2,124,360	27,919,076	32,682,624	62,726,060
Carrying amount as at 31 December	194,084,670	86,504,577	110,359,769	390,949,016
Within 1 year	194,084,670	27,919,076	41,217,035	263,220,781

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 to employees at year end.

# Notes to the Financial Statements

for the year ended 31 December 2012

## 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:

		2012				2011(Restated)			
		Loans & Receivables	Available for Sale	Other Financial Liabilities	Carrying amount	Loans & Receivables	Available for Sale	Other Financial Liabilities	Carrying amount
Financial Assets	Note	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000	Rs'000
Cash & cash equivalent	2	228,551	-	-	<b>228,551</b>	821,706	-	-	821,706
Receivables	3	2,773,715	-	-	<b>2,773,715</b>	2,766,218	-	-	2,766,218
Other financial asset	6	-	1,000	-	<b>1,000</b>	-	1,000	-	1,000
<b>Financial Liabilities</b>									
Payables	10	-	-	2,989,955	<b>2,989,955</b>	-	-	3,670,211	3,670,211
Short term borrowings	11	-	-	1,156,809	<b>1,156,809</b>	-	-	801,504	801,504
Borrowings	12	-	-	7,519,802	<b>7,519,802</b>	-	-	6,972,787	6,972,787
		<b>3,002,266</b>	<b>1,000</b>	<b>11,666,566</b>		<b>3,587,924</b>	<b>1,000</b>	<b>11,444,502</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 2012

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

- 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
- 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	
	2012	2011	2012	2011
	Rs'000	Rs'000	Rs'000	Rs'000
Euro	4,258,673	3,534,892	618	290,720
Kuwait Dinars	-	29,680	-	-
USD	173,236	186,309	12,778	196,158
Danish Kroner	-	98,700	-	-
<b>Total</b>	<b>4,431,910</b>	<b>3,849,581</b>	<b>13,396</b>	<b>486,878</b>

# Notes to the Financial Statements

for the year ended 31 December 2012

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%
Financial Assets	Rs'000	Rs'000	Rs'000
• Euro	618	31	(31)
• USD	12,778	639	(639)
Financial Liabilities			
• Euro	4,258,673	212,934	(212,934)
• USD	173,236	8,662	(8,662)
<b>Total Increase / (Decrease)</b>		<b>222,266</b>	<b>(222,266)</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 2012			Borrowings 2011		
	Rs '000	%	Interest Rates (% p.a)	Rs'000	%	Interest Rates (% p.a)
MUR	3,087,892	41.1	0-10	3,123,588	44.8	0-10
USD – Fixed Interest Rate	173,236	2.3	3.00	185,928	2.7	3
EURO – Fixed Interest Rate	92,934	1.2	2–3	110,093	1.6	2–3
EURO – Floating Interest Rate	4,165,739	55.4	Euribor+0.2-1.5	3,424,799	49.1	Euribor +0.2-1.5
Kuwait Dinars • Fixed Interest Rate	-	0.0	4.00	29,680	0.4	4.00
Danish Kroner • Variable Interest Rate	-	0.0	Libor +1	98,700	1.4	Libor +1
	<b>7,519,802</b>			<b>6,972,787</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 2012

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 2012.

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	3,087,892	30,879	(30,879)	-
• Euro (Floating Interest Rate)	4,165,739	-	-	20,829
<b>Total Increase/(Decrease)</b>	<b>30,879</b>	<b>(30,879)</b>	<b>20,829</b>	<b>(20,829)</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.

- One month after closure of accounts, reminders are sent to those debtors.
- 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 2012 or 31 December 2011.

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 2012, the maximum credit exposure was Rs 2,210 M (2011 - Rs 2,103.5 M), as analyzed below:

Trade Receivables as at 31 December		2012	2011 Restated
Note		Rs M	Rs M
Debtors for invoicing made in Jan & Feb 2012	(a)	1320.9	1,238.0
Within 30 days		543.4	194.1
31-60 days		99.5	120.5
61-90 days		68.9	63.7
More than 90 days	(b)	177.3	487.2
<b>Total</b>		<b>2,210.0</b>	<b>2,103.5</b>

Note:

- Sales for December 2012 are invoiced and delivered to customers in 2013.
- The amounts include cases of underbilling which have not yet been paid.



# Notes to the Financial Statements

for the year ended 31 December 2012

## *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.

29. CAPITAL COMMITMENTS	2012	2011
	Rs'000	Rs'000
Capital Expenditure committed in relation to the acquisition of property, plant and equipment	2,914,975	4,739,115

At 31 December 2012, the CEB had capital commitments of Rs 2,915 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 commitment.

## 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 (Mauritius)

for the year ended 31 December 2012

TARIFF	UNIT SOLD KWH	REVENUE RS	AVERAGE SELLING PRICE PER UNIT RS
<b>Domestic</b>			
110	195,418,110	1,039,659,523	5.320
110A	5,529,510	18,102,331	3.274
120	398,918,764	2,247,225,438	5.633
140	137,130,583	910,754,668	6.642
<b>Sub-Total</b>	<b>736,996,967</b>	<b>4,215,741,961</b>	<b>5.720</b>
<b>Commercial</b>			
215	169,213,270	1,739,096,753	10.278
217	358,574,622	2,501,377,765	6.976
225	267,829,845	1,712,840,074	6.395
245	436,123	2,673,181	6.129
250	13,670,468	55,401,755	4.053
<b>Sub-Total</b>	<b>809,724,328</b>	<b>6,011,389,528</b>	<b>7.424</b>
<b>Industrial</b>			
315	28,659,044	160,266,646	5.592
313	253,193,300	975,453,708	3.853
317	75,821,359	258,301,755	3.407
320	1,224,998	4,119,370	3.363
323	97,311,917	343,033,324	3.525
325	146,835,785	408,606,151	2.783
330	13,880,448	41,525,509	2.992
340	9,015,075	36,989,470	4.103
350	31,295,847	124,582,596	3.981
421	3,280,675	17,298,254	5.273
422	-	-	-
<b>Sub-Total</b>	<b>660,518,448</b>	<b>2,370,176,784</b>	<b>3.588</b>
<b>Industrial (Irrigation)</b>			
515	24,931,090	70,852,573	2.842
<b>Street Lighting</b>			
510	24,760,136	194,118,105	7.840
<b>Temp. Supply</b>			
610	250,550	3,136,962	12.520
<b>Special and non-classified</b>	<b>9,588,992</b>	<b>67,120,491</b>	<b>7.000</b>
<b>Total</b>	<b>2,266,770,511</b>	<b>12,932,536,405</b>	<b>5.705</b>

# Schedule B

## Analysis of Revenue Expenditure

for the year ended 31 December 2012

	2012	2011 Restated
<b>GENERATION COST &amp; PURCHASE OF ELECTRICITY</b>		
Generation Expenses Hydro	54,745,249	50,092,070
Direct Overheads ( Hydro)	119,056,833	108,937,364
Generation Expenses Thermal	5,030,319,281	4,429,039,210
Direct Overheads ( Thermal)	321,564,487	294,232,484
Purchase of Electricity - Coal	4,080,820,303	4,036,932,249
Purchase of Electricity - Bagasse	992,539,269	1,050,213,213
Purchase of Electricity - landfill gas	85,749,145	13,905,580
<b>TOTAL GENERATION COSTS</b>	<b>10,684,794,567</b>	<b>9,969,446,589</b>
<b>DISTRIBUTION COST</b>		
Distribution Expenses	103,018,828	123,196,463
Contractors Fees	103,306,514	75,685,764
Salaries and Related Expenses	462,282,533	445,246,268
Legal & Professional Expenses	-	-
<b>TOTAL DISTRIBUTION COST</b>	<b>668,607,875</b>	<b>644,128,495</b>
<b>ADMINISTRATIVE EXPENSES</b>		
Administrative expenses	738,196,756	717,428,661
Pension Obligations	14,552,000	87,036,000
Directors Fees	1,663,560	1,207,944
Bank Charges	2,672,747	3,473,783
Legal & Professional Expenses	15,752,266	14,236,865
Bad Debts & Impairment of Trade Debtors	26,884,373	30,830,253
Provision for Back Pay	118,519,166	-
Provision for passage benefits	31,139,790	36,048,469
Provision for vacation leave	37,202,157	22,224,618
<b>Total Administrative Expenses</b>	<b>986,582,815</b>	<b>912,486,593</b>
<b>Financial</b>		
Net Interest on Loans	336,701,587	267,374,591
Net Interest on Overdraft	42,688,423	27,420,594
Interest on Bank deposits	-	-
	<b>379,390,010</b>	<b>294,795,185</b>
<b>Depreciation of Assets</b>		
Generation Assets	668,135,340	445,911,003
Distribution Assets	418,922,519	191,849,583
Building and Other Assets	78,857,489	67,991,915
	<b>1,165,915,349</b>	<b>705,752,501</b>
<b>Total Revenue Expenditure and Provisions</b>	<b>13,885,290,616</b>	<b>12,526,609,364</b>

# Schedule C

## Depreciation of Assets

for the year ended 31 December 2012

	AMOUNT (RS)	AMOUNT(RS)
<b>Generation Assets</b>		
Thermal Power Station	529,695,512	
Hydro Power Station	135,615,787	
Wind Park	2,824,041	
<b>Sub-Total</b>		<b>668,135,340</b>
<b>Transmission Assets</b>		
Transmission Network	39,029,463	
Major Substation	85,730,411	
System Control	11,203,920	
<b>Sub-Total</b>		<b>135,963,794</b>
<b>Distribution Assets</b>		
Distribution Networks	282,958,725	
<b>Sub-Total</b>		<b>282,958,725</b>
<b>Land, Buildings and Other Assets</b>		
Buildings	6,154,637	
Furniture and Office Equipment	3,352,081	
Motor Vehicles	16,843,965	
Computer Equipment	40,058,559	
Tools & Instruments	12,448,248	
<b>Sub-Total</b>		<b>78,857,489</b>
<b>Total</b>		<b>1,165,915,349</b>

## Schedule D

### Selected Statistical Data

for the year ended 31 December 2012

		2012		Restated 2011	
		% of		% of	
		Revenue	Rs	Revenue	Rs
During the year ended 31 December					
<b>REVENUE AROSE FROM:</b>					
1.	Sales of electricity	97.31%	13,230,098,843	93.48%	12,708,627,904
2.	Meter rent	0.51%	68,930,097	0.49%	66,621,948
3.	Miscellaneous income	2.44%	332,366,554	4.25%	577,133,294
4.	Amortisation of grants	2.58%	552,849,989	1.79%	243,188,727
5.	<b>Making a total turnover of</b>	<b>100%</b>	<b>14,184,245,483</b>	<b>100%</b>	<b>13,595,571,873</b>
6.	Expenditure on generation, transmission and distribution and administration aggregated	87.59%	12,247,160,654	87.33%	11,872,757,908
7.	Balance before depreciation and interest	12.41%	1,937,084,829	12.67%	1,722,813,965
8.	Depreciation of fixed assets	8.34%	1,165,915,349	5.19%	705,752,501
9.	Balance after depreciation	4.07%	771,169,480	7.48%	1,017,061,464
10.	Interest on loans & Gain/Loss on Exchange	3.38%	472,214,613	-0.38%	(51,901,046)
11.	<b>Net Surplus for the year</b>	<b>0.69%</b>	<b>298,954,867</b>	<b>7.86%</b>	<b>1,068,962,510</b>
<b>Other Data</b>					
12.	Sales GWH		2,294.36		2,231.20
13.	Maximum effective capacity at year end MW		666.15		620.6
14.	Peak demand MW		430.24		412.49
15.	Average selling price RS/KWH		5.71		5.64
16.	Net loan indebtedness/total capitalization		0.37		0.36
17.	Coverage of Interest TIMES		2.01		5.10
18.	Return (PBIT) on average net fixed assets in operation %		0.03		6.40
19.	Debt service coverage TIMES		0.34		0.89
20.	Operating ratio %		95.52%		95.03%



# Schedule E

## Financial Statistics over Ten Years

Financial year ended 31 December		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
			Restated		Restated				Restated	Restated	Restated
1.	Units exported during the year (Mauritius)	Gwh	1,796.70	1,901.20	1,970.00	2,051.00	2,160.00	2,237.53	2,337.99	2,391.60	2,495.00
2.	Units sold during the year (Mauritius)	Gwh	1,607.00	1,703.90	1,775.50	1,879.00	1,975.00	2,069.23	2,173.91	2,228.23	2,266.77
3.	Losses (Mauritius)	Gwh	189.70	197.30	194.50	172.00	185.00	168.30	164.08	163.37	218.23
4.	Number of consumers at 31 December	Thousand	338.60	357.50	368.30	376.60	385.30	394.12	400.45	415.53	425.22
5.	<b>INCOME/REVENUE</b>										
	Sales of electricity	Rs Millions	4,953.60	5,352.10	5,771.70	6,769.94	7,513.86	10,063.47	11,544.93	12,708.63	13,230.10
	Rental of meters	Rs Millions	25.40	27.10	24.60	28.33	29.60	60.73	62.70	64.46	68.93
	Miscellaneous	Rs Millions	218.20	209.30	242.60	271.53	302.63	429.57	430.60	421.75	783.18
	<b>Total</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>10,553.77</b>	<b>11,157.42</b>	<b>12,031.14</b>	<b>14,082.21</b>
6.	<b>EXPENDITURE</b>										
	Generation costs	Rs Millions	1,471.10	1,744.00	2,305.30	2,777.49	2,695.38	3,329.86	3,170.70	3,912.06	5,525.69
	Purchase of electricity	Rs Millions	1,388.50	1,513.80	2,054.20	2,636.44	3,397.29	4,771.61	4,528.39	4,779.68	5,159.11
	Distribution costs	Rs Millions	338.60	239.50	535.70	595.20	581.88	662.96	542.22	667.13	668.61
	Depreciation of Generation, Transmission and distribution assets	Rs Millions	527.10	804.20	844.00	849.71	773.64	926.94	937.42	914.18	1,165.92
	<b>Total</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>	<b>12,519.32</b>
7.	<b>GROSS OPERATING SURPLUS</b>	Rs Millions	1,471.90	1,287.00	299.70	210.95	397.90	862.40	1,978.69	1,758.07	1,562.90
8. (a)	Administration, Establishment & Other Costs										
	incl. Additional depreciation in respect of revaluation	Rs Millions	395.70	532.40	364.19	325.08	384.54	483.43	849.99	844.71	912.49
(b)	(Gain)/Loss on Exchange	Rs Millions	(28.30)	383.80	(28.20)	582.30	(283.01)	313.64	(266.08)	(251.89)	92.82
(c)	Interest on Loan & Overdraft	Rs Millions	362.60	288.20	285.90	410.43	453.18	446.15	360.24	292.40	294.80
9.	<b>Retained profit(Loss)</b>		<b>613.30</b>	<b>82.70</b>	<b>(322.19)</b>	<b>(1,106.85)</b>	<b>(156.80)</b>	<b>(380.82)</b>	<b>1,034.54</b>	<b>872.86</b>	<b>298.95</b>
10.	<b>NET ASSETS</b>										
	Fixed assets less depreciation	Rs Millions	12,509.90	12,777.80	13,295.90	12,986.99	15,576.03	15,159.67	15,541.96	16,610.73	21,842.30
	Current assets less Current Liabilities	Rs Millions	(381.75)	(173.78)	(1,016.21)	(1,617.59)	(1,824.29)	(2,303.87)	(730.91)	(1.37)	714.79
	<b>Total</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>	<b>22,417.85</b>
11.	Net Capital Expenditure for year	Rs Millions	562.81	761.14	1,357.63	540.84	373.94	510.32	1,319.72	1,999.19	1,988.04
12.	<b>Financed by</b>										
	Outside sources	Rs Millions	248.30	624.10	1,094.79	221.30	128.50	128.50	710.91	1,294.57	2,417.31
	Internal Sources	Rs Millions	314.50	172.30	262.80	319.54	245.44	381.82	608.81	704.82	220.42
13.	Gross Operating Surplus to Net Assets	%	12.14	10.21	2.44	1.86	2.89	6.71	13.36	10.58	8.88
14.	Gross Operating Surplus to Turnover	%	28.32	23.03	5.17	3.10	5.27	8.52	18.45	15.14	11.75
15.	Net Profit or (loss) to Turnover	%	11.80	1.48	5.56	16.28	(2.08)	(3.76)	9.64	7.52	8.37
16.	Generation & Purchase Cost(excl dep) to Turnover	%	55.02	58.29	44.68	79.64	80.77	80.02	71.77	74.87	78.04
17.	Transmission and Distribution Cost to Turnover	%	6.52	4.28	9.24	8.76	7.71	6.55	5.05	5.75	5.04
18.	Depreciation of Generation Transmission & Distribution Asset to Turnover	%	10.14	14.39	14.56	12.50	10.26	9.16	8.74	7.87	8.77
19.	Admin, Establishment & other costs to turnover	%	7.61	9.53	6.28	4.78	5.10	4.78	7.92	7.28	7.14
20.	Interest on Loans/Overdraft to Turnover	%	6.98	5.16	4.39	4.83	4.65	3.28	2.71	2.52	2.31
21.	Net Return on Average Net Fixed Assets in operation	%	8.81	8.38	2.59	8.42	(1.10)	(2.48)	6.74	5.43	5.68
22.	Units lost to Units exported	%	10.56	10.38	9.87	8.39	8.56	9.48	7.52	7.02	6.83





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