



**A model of sub regional energy cooperation**



**BENIN ELECTRIC COMMUNITY**

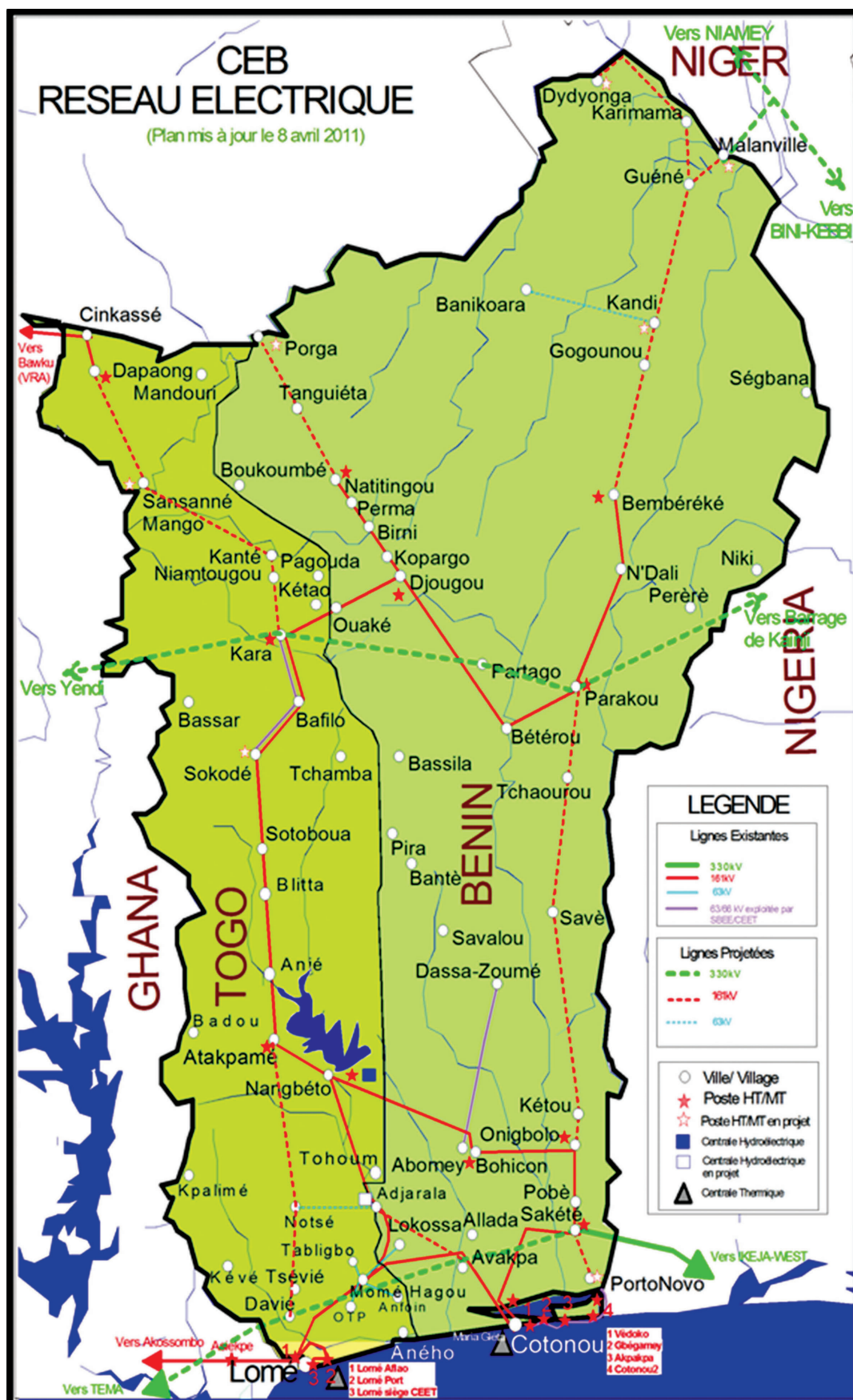
**2012  
ANNUAL REPORT**

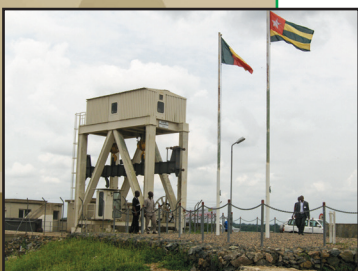




CEB Head office in Lomé

## **BENIN ELECTRIC COMMUNITY - 2012 ANNUAL REPORT**





# 1. General Information



## ELECTRIC COMMUNITY OF BENIN

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# CEB

*A model of sub-regional  
energy cooperation*



*With CEB,  
energy that stimulates  
the socio-economic  
development of Togo and Benin*

## 1.1. Organs

### HIGHER INTERSTATE COUNCIL

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Barthelemy D. KASSA, Minister of Energy, Mining Research, Oil Exploration, Water and Development of Renewable Energies



Jonas Aliou GBIAN,  
Minister of Economy and Finance



Marcel de SOUZA,  
Minister of Development, Economic Analysis and Prospective



Nassirou BAKO-ARIFARI,  
Minister of Foreign Affairs, African Integration, Francophonie and Benin Citizens Living Abroad

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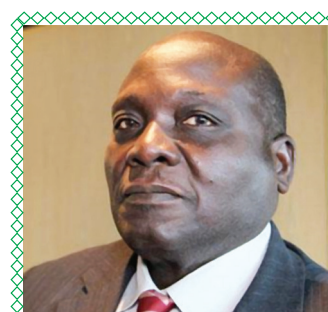
El Hadj Tairou BAGBIEGUE,  
Minister of Mines and Energy



Adji Otèth AYASSOR,  
Minister of Economy and Finance



Mawussi Djossou SEMODJI,  
Delegated Minister towards the Head of State, in charge of Planning, Development and Land Use Management



Elliot OHIN,  
Minister of State, in charge of Foreign Affairs and Cooperation

## HIGHER AUTHORITY

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Raoufou M. BADAROU, Director of the Cabinet of the Minister of Energy, Mining Research, Oil Exploration, Water and of the Development of Renewable Energies



Salem P. AOUTCHEME, Deputy Director of the Cabinet of the Minister of Development, Economic Analysis and Prospective



Charles PRODJINOTHO, Surveys Officer at the General Secretariat of the Ministry of Industry, Trade, Small and Medium-Sized Companies



Mohamed B.S. GADO, Permanent Secretary of the Office of the Economic and Financial Programs Monitoring



Karim GBANI, Director of Cabinet of the Minister of Labour and Public Service

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Issaka K. LEGUEBANDE, Director of the Cabinet of the Delegated Minister towards the Head of State, in charge of planning, Development and Land Use Management



Kokou Biava ATTITSO, Director of Industry – Ministry of Industry, Free Trade Zone and Technological Innovation



Ekoué AMOUSSOU-KOUEETE, Managing Director of Labour and Social Legislation – Ministry of Labour, Employment and Social Security



Awima A.S. OUTCHANTCHA, Comptroller – Technical Adviser of the Minister of Economy and Finance

# Speech of the Chairmen



Barthélémy D. KASSA, Minister of Energy, Mining Research, Oil Exploration, Water and Development of Renewable Energies  
(Benin)

2012 was a year crucially complete with strain upon supplies in power to the Community.

That is due to the allocation of use of power from Ghana and to the shut-down of the gas turbines further to the failure of West Africa gas pipeline in August 2012.

So, to give full satisfaction to its customers, CEB was compelled to refer much to more expensive thermal sources. As a result, there was an acute price pressure, difficult to manage.

The reasons of that situation, which is due to some growing levels of operating deficit since 2011, are of structural and cyclical character.

Besides, both States efforts, within the raising of resources by technical and financial partners, led to the beginning in one step of some major projects of extension and restoration of the transportation network.

Thus, at the development level, the



El Hadj Tairou BAGBIEGUE,  
Minister of Mines and Energy  
(Togo)

preparation of the projects selected as for 2012 budget has grown properly. Indeed, further to various service contracts, most of the major development projects are about to start. The project of modernization and extension of the dispatching whose objective is to update CEB dispatching as regards technology, extends the ground it covers to its whole network and to take West African Power Pool electricity market demands into account, is planned for in the stage of designs validation and work performance studies. The projects concerning the construction of the 161 kV Parakou-Onigbolo and Sakete-Porto-Novo lines, the construction of a 161/34.5/22 kV Transformer Pan at Kara Station, the extension of Maria-Gleta station, the restoration of Lome-Cotonou-Onigbolo lines as well as more other projects move satisfactorily. As far as the project of Adjarala hydroelectric rehabilitation is concerned, the search for funding is in progress.

At the financial level, the turnover has grown from 100.955 billions in 2011

to 106.605 billions in 2012 that is an increase of 5.3% due to a growing demand which moved from GWh 2050 in 2011 to GWh 2169 in 2012 that is an increase of 5.4%. Despite that slight improvement, CEB profitability has seriously decreased because of the important reference to very expensive supplying sources.

That growing trend of power demand reflect the social and economic dynamism of our Community and results from the impact of the high improvement of access to structural infrastructures among which there is electricity within a Program of Rural Electrification implemented in our both countries.

We encourage the General Management of CEB and give it the guaranty

of our full support to its efforts of re-newing process and follow-up of the company.

At last, we express our appreciation to the Higher Interstate Council, to high political authorities of our both countries as well as to the CEB technical and financial partners for their ongoing support on board with the development of the Community energetic sector.

We are sure that, thanks to the multiplied efforts of all the sector actors, we can meet the challenge so as to help CEB discharge its lofty mission to supply power in quantity, quality and at low cost to the populations of Togo and Benin and to promote the social and economic development of our both countries.



Bar screen dam of Nangbeto



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# Initialisms and Acronyms

AFD	French Development Agency
EIB	European Investment Bank
EBID	Ecowas Bank for Investment and Development
IDB	Islamic Development Bank
WB	World Bank
WADB	West African Development Bank
BOO	Build Own Operate
CEB	Electric Community of Benin
ECOWAS	Economic Community of West African States
CFPP	Professional & Educational Training Centre
IAD	Internal Audit Department
PD	Procurements Division
AHRD	Administrative and Human Resources Department
MAD	Management Auditing Department
NPSD	Nagbeto Power Station Directorate
MD	Managing Director
DMD	Deputy Managing Director
DP	Production Department
TD	Transportation Department
WAPP	West-African Power Pool
GG	Gas Generator
GRIDCo	Ghana Grid Company Ltd
GWh	GigaWatt/hour
IPP	Independent Power Producer
kWh	kiloWatt/hour
MV	Medium Voltage
NIGELEC	Electric Company of Niger
MWh	MegaWatt/hour
PHCN	Power Holding Company of Nigeria
PSP	Power Supply Project
SPTC	Cotonou Thermal Production Unit
SPTL	Lome Thermal Production Unit
TAG	Gas Turbine
TCN	Transport Company of Nigeria
VT	Voltage Transformer
UPDEA	Union of Electric Power Producers, Carriers and Distributors in Africa
VRA	Volta River Authority



## 2. Framework of activities

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# CEB

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## Electric Community of Benin

*With CEB,  
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## 2.1 PRESENTATION OF THE CEB

The Electric Community of Benin (CEB) is an international public organization. It has been established by the International agreement and the Benin-Togo Code of Electricity of July 27, 1968 reviewed on December 23, 2003.

Following that reviewed Agreements; the Electric Community of Benin has the exclusive rights to carry out on the territories of both States, the activities of transportation, importation and the unique purchaser to cater for the needs of both States.

In accordance with the article L33 of the reviewed agreement, the CEB has the following missions:

- Achieve and exploit according to the rules applied by the industrial and commercial companies, facilities of power production for the need of the two States;
- Achieve and exploit according to the rules applied by the industrial and commercial companies, the facilities of power transportation on the territories of both States as exclusive carrier. Moreover, it has the privilege of unique purchaser for the need of both States;
- Conclude, in case of necessity, with the neighboring countries of both States, agreements for the import of power, each of both States being committed not to conclude any separate agreement of power import:

- Conclude, in case of necessity, with the neighboring countries of both States, agreements for the export of excess power;

- Conclude, in case of necessity, with the neighboring countries of both States, power transit agreements;


- Assure, thanks to its Center of Professional Training and Re-training, the selection, training, and re-training for the benefit of enterprises of both States without exclusion;

- Plan the production and transportation of energy in conjunction with the ministries in charge of energy for the need of both States;

- Use for the benefit of both States, the missions of repair and maintenance center, outlets of material purchase, facilities, consulting and engineering office, knowing that these missions are not compulsory for the Electric Community of Benin (CEB).

## 2.2 ECONOMIC ENVIRONMENT

In 2012, the economic and financial environment was globally doubtful, essentially because of the troubles caused by the persistency of crown debts in Euro Area. Despite the important actions, especially to assure capital markets and to strengthen the monitoring of banking, undertaken within the Area, that situation, in addition to some other endogenous structural factors, involved a slowing-down of the economic activity in the First World as well as in emerging



and developing economies. Taking those factors into account, the International Monetary Fund (IMF) has adjusted, four times, his estimates downward by recording 3.3% as the rate of economic growth in 2012 against 3.8% in 2011.

### 2.2.1 World Economy Trend in 2012

The health status board of World Economy drawn up by IMF outlined some mixed trends. There is some resilience from United States with a growth rate of 2.2% against 1.8% in 2011. Euro area would be in recession since the activity showed a decrease of 0.4% in 2012, further to an increase of 0.4% the previous year.

Japan economy which is picking up would get a growth rate of 2.2% against a contraction of 0.8% in 2011. Emerging and developing countries recorded a slowing-down of the economic growth with a rate of 5.3% against 6.2% in 2011. In sub-saharian Africa the growth would remain constant around its level of 2011, at 5.0%.

There was a less important growth of world trade in 2012, because of the fall in internal demand of countries affected by the crisis. According to recent estimates, the volume of world trade in goods and services would increase by 3.2% in 2012 further to the growths of 5.8 in 2011 and 12.6 in 2010.

Inflation recession continues, in a context of economic activity slowing-down as well as production capacities under-utilization. In developed countries, the inflation rate would settle at 2.0% in 2012 following the rate of 2.7 in 2011. In emergent and developing countries that rate would decrease from 7.2% in 2011 to 6.3% in 2012.

### 2.2.2 Economic trend in Africa in 2012

In sub-saharian Africa, the growth would be strengthened at the rate of 5.0% in 2012. The main countries which boost the growth are South Africa, Nigeria, Ethiopia, Rwanda, Angola and Ghana whose growth rate would be less meaningful in 2012 in comparison with 2011 (14%). However, perspectives remain positive with a growth rate of 8.3% in 2012.

### 2.2.3 Economic trend in WAEMU member-countries in 2012

In 2012, the economy of WAEMU member-countries demonstrates resilience to internal as well as external shocks because of measures implemented in the member-countries and efforts inflated at the community level to support the economic activity so as to control inflationary pressures. The growth rate is estimated

at 5.8% against 0.6% in 2011. Faster growth results from the strengthening in the agricultural production, in the proper resumption of economic activities in Côte d'Ivoire and in the dynamism of mine production.

The medium annual inflation rate is estimated at 2.3% in 2012 against 3.9% in the previous year, as a proof of positive impacts of contingency measures implemented by Governments as well as regional Institutions so as to improve the supplying of

markets and to extend food products to vulnerable populations at reasonably low prices.

## 2.2.4 Economic environment in Benin and Togo

Benin and Togo experience slight different economic situations. Indeed, in 2012, Benin economy has got a straight line rate of 3.5% as in 2011, whereas Togo has recorded a growth of 5% against 4.8% in 2011.



Parakou station under construction



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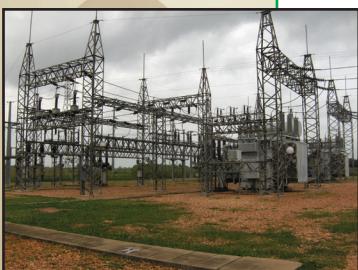
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# CEB

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### 3. Activities in 2012

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In 2012, the biggest challenge has been the one of power supply, but with the speciality that power supply took place in a sub-regional context marked by the allocation of power supply by VRA in Ghana. In addition to constraints related to power import from Ghana there was gas shortage due to the break-off of the West Africa gas pipeline in August 2012. That unusual circumstances led to complexed options of production especially the solicitation at every turn of power plants with higher production cost resulting to the higher disturbance of the Institution cash flow.

### **3.1 ACTIVITIES OF LEGISLATIVES BODIES**

#### **3.1.1 Higher Interstate Council**

As regards its activities and in accordance with the provisions of Benin-Togo electricity code, the Higher Interstate Council held, during 2012 financial year, two meetings namely:

1. The 75th regular Meeting held in Lome on Tuesday 13th November 2012 in the conference hall of the institution head office with the following agenda:

- Consideration and adoption of the summary of the 74th meeting deliberations and minutes;
- Consideration and certification of CEB accounts:

\* Presentation of the Higher Authority management statement for 2011 financial year;

- Presentation of Auditors' Reports;
- Power offer and demand matching and financial impacts on CEB;
- Note on purchase and sale contracts with power nonintegrated producing companies;
- Note on projects implementation;

2. The 76th Meeting, held as special session in the conference hall of the Regional Transportation Directorate of Benin in Cotonou, on Tuesday 11th December 2012 with the following agenda :

- Synthesis of the 75th meeting deliberations and note on the implementation of guidelines;
- Impact of the CEB tariff increase on distribution companies: CEET and SBEE;
- Note on Auditors' fees;
- Note on selection criteria of Auditors and external Auditor;

#### **3.1.2 Higher Authority**

In 2012, Higher Authority activities went through five meetings out of which three special ones. They are as follows:

1. Lome, Friday 10th February 2012: 137th Meeting, special session with the following agenda:

- Consideration and adoption of the summary of the 136th meeting deli-

berations and minutes;

- Consideration of the report of CEB legal advisers on the legal implications of power cross-supplying process between CEET and CEB as regards the provisions of Benin-Togo Code of Electricity;

- Consideration of CGT and JELBEN proposed contracts;

- Consideration of the proposed contract of operation and maintenance of Maria Gleta MW 80 Power Plant by CEB;

2. Cotonou, July 16, 2012 : 138th Meeting, special session with the following agenda:

- Consideration and adoption of the summary of the 137th meeting deliberations and minutes;

- Consideration and closing of CEB accounts by the Higher Authority;

- Submission of the Managing Director's operational report and financial statements as at December 31, 2010;

- Submission of auditors' report.

- Information on the network situation and on the power supply to the Community;

- Report on the findings of donors round-table meeting about Adjarala, held in Paris in mai 2012.

Lome, August 16, 2012 : 139th Meeting, special session with the following agenda :

- Consideration and adoption of the Managing Director's Performance

Annual Report;

- Offer and demand matching of the Community and financial impacts on CEB;

- Other business:

- JELBEN file;

- Presence of an hungarian mission in Benin;

- Dogbo bis dam in Benin.

Cotonou, September 14, 2012: 140th Meeting, regular session with the following agenda:

- Consideration and adoption of the summary of the 138th meeting deliberations and minutes;

- Highlight on the mid-term implementation of the budget of 2012 fiscal year;

- Note on the power supply to the Community;

- Highlight on the progress of projects.

Lome, December 21, 2012 : 141th Meeting, regular session

- With the following agenda :

- Consideration and adoption of the summary of the 139th and 140th meetings deliberations and minutes;

- Reports of the HISC 76th session and of both HISC Chairmen due diligence meeting.

- Consideration and adoption of the budget proposal of 2013 financial year;

- Note on the power supply to the Community.

## 3.2 ACTIVITIES OF THE MANAGEMENT TEAM

### 3.2.1 Human Resources Management

The number of CEB staff as at December 31, 2012 is five hundred and ten (510) employees assigned per socio-professional groups, per position and per unit as follows :

#### 3.2.1.1 Number per Social professional Group and per sex

N°	Group/ Sex	Number	%
1	<b>Senior Staff</b>	72	14%
	- Men	63	12%
	- Women	09	02%
2	<b>Supervisors</b>	194	38%
	- Men	166	33%
	- Women	28	05%
3	<b>Execut Agents</b>	244	48%
	- Men	226	44%
	- Women	18	04%
<b>TOTAL</b>		<b>510</b>	<b>100%</b>

#### 3.2.1.2 Number per position

N°	Position	Number	Remarks
1	Managing Directors	02	DG, DGA
2	Assistant Directors	08	DCG, DARH, DFC, DED, DT, DP, DAP, DAI
3	Advisers	02	
4	Area Directors	04	DRTB, DRTT, DCN, CFPP
5	Department Managers	28	
6	Divisional Heads	27	
7	Sections Heads	47	

### 3.2.1.3 Number per unit

N°	Units	Num-ber	%	Location
1	CEB Head Office	154	30	Lome/Togo
2	Togo Regional Transport Directorate (TRTD)	136	27	Lome/Togo
3	Benin Regional Transport Directorate (BRTD)	150	29	Cotonou/Benin
4	Nangbeto Plant Directorate (NPD)	55	11	Nangbeto/Togo
5	Vocational Training & Re-training Centre (VTRC)	15	03	Abomey-Calavi/Benin
<b>TOTAL</b>		<b>500</b>	<b>100</b>	

### 3.2.1.4 Staff Movements

In 2012, CEB recorded one (1) death, one (1) dismissal and one (1) early retirement.

### 3.2.1.5 Capacity Building

In order to reach a level of performance and efficiency in power production and transportation and to get skilled enough labour to meet its goals, CEB has offered trainings to its workers in 2012.

### 3.2.1.6 Recruitments

Recruitments are made to meet the shortage of workers in the various CEB business lines. They involve fixed-term contracts on the one hand and open-ended ones on the other hand. So, forty-six agents were appointed for all categories (confer board hereunder).

#### Open-ended Contracts (OEC)

Twenty-eight (28) staff among whom two (2) supervisors and twenty-six (26) executing agents, all formerly contract agents, were recruited (confer board hereunder).

### Fixed-term Contracts (FTC)


Regarding FTC, CEB has appointed eighteen (18) agents in order to support the existing staff efforts. That number is composed of one (1) senior staff, two (2) supervisors and fifteen (15) executing agents as hereunder presented. However, among the eighteen contract agents employed by CEB, six (6) were appointed in 2012 and the other twelve (12) were old contracts renewed on account of 2012.

N°	Social professional group	Number	Statuts	Remarks
1	Senior staff	00	OEC	No OEC recruitment
2	Supervisors	02	OEC	FTC
3	Executing Agents	26	OEC	FTC
4	Senior staff	01	OEC	
5	Executing agents	02	OEC	
6	Executing agents	15	OEC	
<b>TOTAL</b>		<b>46</b>		

### 3.2.1.7 Seminars and trainings

In 2012, the training plan showed much interest to trainings on <<Quality>> whose implementation results from the global objectives of the enterprise. Group trainings were emphasized too. Moreover, training plan was essentially implemented from CEB own funds. However, the personnel of CEB, all categories concerned, took part to seminars and workshops planned in the process of capacity building. All in all, there were fifty-six (56) training activities out of sixty (60) prescribed. Those activities involved one hundred and ninety-six (196) agents all categories concerned among whom there were sixty-seven (67) seniors, eighty-eight (88) supervisors and forty-one (41) executing agents. Four (4) other training activities were not preformed because of the unavailability of initially selected trainers. The performance rate is 82.05 % ie three hundred twenty eight millions one hundred ninety one thousand three hundred and sixty (328 191 360) out of a delegated budget of four hundred millions (400,000,000). The summary report of trained staff is as follows :

	Number	Staff Trained in 2012	%
SENIORS	72	67	93,06
SUPERVISORS	194	88	45,36
EXECUT AGENTS	244	41	16,80
<b>TOTAL</b>	<b>510</b>	<b>196</b>	<b>38,43</b>



In 2012, about 38% of the whole personnel were trained. The rate of the seniors (93%) is very high because groups trainings on Quality planned for the whole personnel started by the latter.

### 3.2.2 Power Generation Management

The total power produced by the CEB in 2012, from all sources is GWh 262.962 against GWh 245.934 in 2011. The unsold power (internal source) is GWh 2.787 that is 1.06% of the produced power. Activities details as per various producing sources are pointed out hereunder. Besides, power purchases from Contour Global are compiled to GWh 189.094 against GWh 58, 557 in 2011, that is an increase of 223% comparing to 2011.

#### 3.2.2.1 Generation from Hydraulic Source

Power generation at Nangbeto Hydroelectric Plant in 2012 is GWh 165.138 against GWh 201.552 in 2011, and is below the average recorded since 1988 which is GWh 173.192 against GWh 150 planned by the Project. 2012 is at the 18th position comparing to other years production and at the 17th as for good hydrological contributions.

The volume of the year supply reaches Mm3 2,714.23 against a volume supply of Mm3 3,660.394 in 2011. The 2011 hydrological year was charac-

terized by late floods that covered a period of about four months.

Floods covered the period going from July 7th to October 13th and the peak which is m3/s 528 is recorded on September 20th at midnight. The basic dimension of the impoundment -144msm- is not reached this year. The gross power corresponding to the basic dimension of GWh 138.39 is 34.176.

#### 3.2.2.2 Generation from Thermal Sources

##### Thermal Production Branch of Lome (SPTL)

Lome turbine is out of work since June 21, 2011, after 14,492.2 hours of operation, because of the gas generator (GG) time expiration and delay in the spare parts delivery.

##### Thermal Production Branch of Cotonou (SPTC)

The total power produced at the thermal production plant of Maria-Gleta in 2012 is GWh 97.841 against GWh 15.598 in 2011. The running hours after servicing the GG is h 5,206. The Running Hours (number of running hours) of the GG since its installation is h 21,213. The maximum power recorded is MW 23.44.

### 3.2.2.3 Consumption and Costs of Fuel

Further to the downtime of the TAG of Lome in 2012, CEET via CGT used MMB-TU 538,036.10 of WAPCO gas intended for CEB to produce GWh 76,541.

As for Maria Gléta TAG, it run from Jet A1 et gas. Gas consumption is MMBTU 1,236,932.351 valued at \$USD 8,994,145.805 that is FCFA 4,497,072,902.634. A total quantity of 99,263.6 A1 Jet evaluated at FCFA 4,472,123 is consumed. The mixed (gas and JET A1) facilitated a production of GWh 97.841 (see board hereunder)

Site	Fuel	Quantity	Value (FCFA)	Produced Power (kWh)	Fuel Cost FCFA/kWh
Maria Gléta SPTC	Jet 254 (Liters)	510,41	-	-	-
	DTE 25 OIL (Liters)	254 298,29	-	-	-
	Fuel Jet A1 (Liters)	99 263,6	48.472.123	97 840 940	162,67
	Gaz (MMBTU)	1 236 932,351	4.497.072.902,634		45,97

### 3.2.3 Power Transportation Management

#### 3.2.3.1 Power Purchase

It concerns the imported power and the power produced from sources not belonging to CEB and which is GWh 2,012.539 in 2012 against GWh 1 905, 645 in 2011. What implies a growth of 5.61%. The total amount of power purchased in 2012 is FCFA 96,754 billions against FCFA 83,857 billions in 2011, that is an increase of about 15.38% partially due to an important demand from more expensive sources.

#### 3.2.3.2 Transfer of Energy

The total energy and power recorded on CEB network in 2012 is as follows :

##### 3.2.3.2.1 Energy Supply

The energy demand met by CEB interconnecting network (including losses without CEET and SBEE own production) was GWh 2,263.758 in 2012 against GWh 2,151.579 in 2011 that is an increase of 5.21%. That demand has been covered by internal sources (CEB production, CGT production) in the following proportions :

### Internal Production:

GWh 452.056 that is 19.97%

- Hydroelectric Plant of Nangbeto:  
GWh 165.138 that is 7.29%
- SPCT Thermal Production:  
GWh 97.824 that is 4.32%
- CGT Production:  
GWh 189.094 that is 8.35%

### Imports:

GWh 1,811.702 that is 80.03%

- VRA Import:  
GWh 566.107 that is 25.01%
- ECG Import:  
GWh 2.241 that is 0.10%
- CIE Import (Abobo):  
GWh 50.795 that is 2.24%
- TCN Import:  
GWh 1,188.341 that is 52.49%

### In BENIN:

SBEE : kWh 1,065,476,408.37, that is 49.13% (+5.97% comparing to 2011)

SCB/LAFARGE : kWh 59,754,283, that is 02.76% (-0.33% comparing 2011)

Total BENIN : kWh 1,125,230,691, that is 51.93%(+5.62% comparing to 2011)

### In TOGO:

CEET : kWh 886,41,14.80, that is 40.88%(+6.51% comparing to 2011)

WACEM : kWh 103,605,964, that is 04.78%(-6.56% comparing to 2011)

SNPT : kWh 51,662,733, that is 02.13%(+30.42% comparing to 2011)

Total TOGO : kWh 1,041,681,838, that is 7.07%(+6.00% comparing to 2011)

TOGO + BENIN: kWh 2,166,912,529.37 (+5.80% comparing to 2011)

- NIGELEC Import:

GWh 4.218 that is 0.19%

The quantity of power charged by CEET for CEB in 2012 is kWh 186,333,049. According to a tripartite agreement between CEB, CEET and SBEE, CGT plant production for December which is kWh 44,389,700 will be beared at the rate of kWh 19,847,500 by CEB, kWh 12 761 934 by SBEE and kWh 11 780 246 by CEET.

### 3.2.3.2.2 Power Sale

The net power supplied by CEB to its customers (including SONABEL BURKINA) in 2012 is GWh 2,168.536 against GWh 2049,528 in 2011 and GWh 1,790.711 in 2010 that is an increase of 5,81%. The demand met by CEB for its customers of the community in 2012 is assigned in the following proportion :

### 3.2.3.2.3 Loss of Power in the Network

The non sold power by CEB in 2012 (due to transportation loss and subsidiary consumptions) is GWh 100.543 against GWh 96,751 in 2011. This non sold power represents 4.43% of the power generated and bought by CEB against 4.51% in 2011.

### 3.2.3.2.4 Recapping of Recorded Power and Charge Factor

The highest powers(quarter averages per hour) called on the interconnected networks in 2012 are as follows:

**CEB:** MW 357.92 on tuesday march 13 at 7.30 pm (against MW 339.22 in 2011)

**BENIN:** MW 194.50 on thursday November 22nd at 9.45 pm(against MW 185.31 in 2011)

**TOGO:** MW 169.84 on Wednesday 31st October at 3.03 pm(against MW 161.14 in 2011)

The total demand of power of the interconnected network is GWh 2,275.538, whereas the quarter average per hour highest power called is MW 357.92 . The average power corresponding to the total power demand being of  $2,275,538 / (24 \times 365) = \text{MW } 259.76$ , 2012 charge factor then equals  $259.76/357.92 = 72.57\%$  against 72.53% in 2011 and 66.94% in 2010.


### 3.2.3.2.5 Quality of the Service Provided

- Power supply in 2012 is broadly speaking satisfactory as regards its availability for the community. However, some efforts shall be made to guaranty a level of service fully satisfactory to customers. Indeed CEB network recorded in 2012, 10 interruptions from VRA/GRID Co against 10 in 2011. Those interruptions involved about MWh 878,471 of power non delivered. The global duration of those disturbances ie interruptions is 878 minutes, that is 14 hours and 38 minutes, against 10 hours 19 mn in 2011.

The number of interruptions from PHCN/TCN source is 37 against 36 in 2011. Those interruptions involved a non delivered power valued at MWh 20,571.52. The cumulated duration of those interruptions is 8 465 minutes that is 5 days 21 hours 5 minutes, against 5 days 15 hours 32 mn in 2011.

As for internal interruptions on the Community power network, there are 1,517 against 1,530 and they have a cumulated duration of 48,426 mn ie 33 days 16 hours 6 minutes against 37 days 22 hours 01 mn in 2011.

Those interruptions involved a non supplied power estimated at MWh 17,749.01 . The whole interruptions of a global duration of 40 days out of which 33.5 days on the internal



network of CEB involved MWh 39,199 of power non supplied.

The synchronization of VRA-CEB-TCN sources which is not yet achieved imposes a functioning of the CEB network through two sub-networks, what gets a negative impact on service quality.

Internally, many startings (1,530) at some points damaged some power cut organs, thus compromising the quality of demand satisfaction. So, participatory and urgent actions with suppliers are necessary to reduce those startings in order to improve the service offered to the final consumers.

#### 3.2.3.2.5.1 Startings

There was a decrease of 0.78% of the internal startings of the community network but the cumulated duration of those startings got an increase of 28.31% with a non supplied power quantity which involved a growth of 51.77% bringing it from MWh 11,694.45 to MWh 17,749.01 from 2011 to 2012. the cumulated duration of those startings is estimated to 48426 mn ie 33 days 16 hours 6 mn against 37 days 22 hours 1 mn in 2011.

#### 3.2.3.2.5.2 Incidents

Among the noticed incidents, we can mention:

- Some communication difficulties between stations and mainly from

the management centre to the stations and the impossibility to read the TCN importation in due time of dispatching constitute some weaknesses for the network operation.

- A substantially permanent unavailability of telecommunication system making impossible the transmission of data from the system B (Benin Area) and the use of the phony for the network purpose which is fully uncertain.

- The functioning of the CEB network through two sub-network because of the non synchronization of the VRA and TCN sources.


### 3.2.4. Maintenance of Equipments

The Preventive maintenance was performed at the rate of 95% based on the maintenance annual program planned for all stations ; however there was an explosion of outage and measuring appliances (circuit breaker and TC) at some stations but there was no human fatalities.

In 2012, the preventive and curative maintenance operations were carried out on the main structures of production as well as the main transportation network facilities (lines, sets and auxiliary equipments) of the CEB.

### 3.2.5 Projects Management

During 2012 financial year, the pre-



paration of the projects selected as for 2012 budget has significantly progressed.

Indeed, further to the negotiation stages of the various service supply contracts, most of the big development projects are about to start.

### 3.2.5.1 Project of Modernization and Extension of the dispatching

The objective of this component consists in updating CEB dispatching technology, extending its actions to all its network and taking into account the electricity market constraints with regard to the West African Power Pool.

This project is made up of two components:

- The component «Supervision of Work»;
- The component «Supply and installation of equipments for the modernization and extension of the dispatching

Supervision of Work consists in :

- (i) writing of technical prescriptions;
- (ii) preparation of the tender documents (DAO);
- (iii) assistance of the project owner (CEB) for the selection of the enterprise;
- (iv) supervision of the project implementation by the consultant selected for that purpose

The contract of the selected EDF Consultant for the first component is being implemented. Indeed, as for work supervision, EDF supported CEB in the approval of execution documents and also contributed to project management


Regarding the second component, the contract concluded with ALS-TOM/INEO was brought into force on May 15, 2012 for 18 months. The project is at the stage of designs approval and work disposal plan.

### 3.2.5.2 Project of construction of Parakou – Onigbolo and Sakete – Porto-Novo kV 161 lines

The objective of this project is to supply Porto-Novo from Sakete existing station by constructing Sakete-Porto-Novo, line of about 30 km long on the one hand and on the other hand to allow, through Onigbolo-Parakou line of about 250 km long, to create an emergency road to supply North Togo and North Benin.

The construction of those two lines accounts for the Project of Development of Access to Modern Energy jointly funded by World Bank, European Investment Bank and KfW.

Besides, on IDA funding accounting for the Project of Energy Services Supply, EDF has been appointed for the feasibility study of Detail Design and Tender Documents for the building of those lines.



Started on March 12, 2010, the contracting process took end by the conclusion of the last contract on November 5, 2012 with the grouping SAE Power Lines and GAMMON India. Those various contracts are about to be put into force.

As for the supervision of the kV 161 Onigbolo-Parakou and Sakete-Porto-Novo construction work, the contract was concluded on December 27, 2012.

### 3.2.5.3 The Adjarala hydro-electric rehabilitation

Looking at the framework of sensitization and mobilisation of sponsors for the financing of the construction of Adjarala's dam of which IDA will be financing, CEB has made the consultant AECOM, carry out an economic study of the project whose temporary report was presented during the sponsor's meeting held in Paris on May 29 and 30, 2012.

The goal of the above study is to bring out the numerous aims and the economic repercussions of the dam after its construction so as to gain the sponsor's interest in the financing of the project.

During the meeting the intentions of financing quoted to 165.8 billion has been obtained against the project amount of 186.352 billion CFA. Thus there is a gap of 20.6 billion to fill. In the same day those that promise to finance the project have been invited. Only the delegation

of GEZHOUBA GROUP CO of China and Megatron federal of South Africa attended the meeting of technical partners. China GEZHOUBA GROUP suggests to construct the project with the Proper Fund of China that will be mobilized for the account of Benin and Togo republics for the achievement of the project. As far as Megatron Federal is concerned it proposes to carry out the project according to the partnership Public / Private under the model BOOT.

Other promoters such as SINOHYDRO of China and HENWOOD FINANCE INC of Israel have been invited but they didn't come.

The report of economic study that the consultant AECOM finalized and transmitted to the sponsors concluded that the hydroelectric project arrangement of Adjarala's dam yields an internal economic rate of 16.2% roughly 101 918 billion.

Concerning the environmental and social management scheme in addition to the project, further studies have been started on the financing of the World Bank; also experts of environmental panel and technical panel namely hydrologists, geotechnics experts, dam experts were employed.

In a parallel direction, the terms of references for the recruitment of consultant engineer for the bringing up to date of the technical studies of project engineering are on the way of execution.

### 3.2.5.4 Restoration of Lome-Cotonou-Onigbolo line

The project aims at extending for 20 more years minimum, the life time of those lines, built more than 30 ago. CEB applied and got from WABD a funding of FCFA 300 millions to carry out the feasibility studies.

The studies entrusted to EDF are completed. The draft technical report was returned to CEB on May 5, 2005 and the final report on August 16, 2005 : the cost of the line rehabilitation is estimated at FCFA 6 billions.

The European Investment Bank (EIB) showed its interest for this project. It had an evaluation mission from March 2 to 5, 2009 and committed to finance the project by including kV 161 line pans related to Lome-Cotonou-Onigbolo line through out the serviced stations subject to the transmission of the report of the environmental assessment of the rehabilitation project at least 30 days before submitting the evaluation report of the project to governing bodies of the EIB. That demand was raised and the EIB has signed the funding contracts with the governments of Benin on December 16, 2009 and of Togo on December 18, 2009.

A review of the study and the bid documents by EDF (the consultant who carried out the study) was recommended by the EIB. A contract was signed with EDF further to a notice of non-objection to update the study and the bid documents.


Within that contract EDF conducted, from April 7 to May 28, 2010, an investigation mission of the line followed by a second mission for the investigation of the stations from June 7 to 11, 2010.

Further to its review, the bid document was published in November 2011. Bids awaited for February 7 were received on March 6, 2012 further to some tenderers request for postponement.

The evaluation took place from March 7 to 16, 2012. Bids evaluation report was submitted to the bank on March 19, 2012. INEO ENERGIE EXPORT company was selected in accordance with the bids evaluation findings further to the bank notice of non-objection. The contract was finalized and signed by both parties on July 17, 2012.

After examining the report of environmental assessment carried out, the bank took contact with CEB on August 7, 2012 regarding environmental liabilities on that line. The bank noticed that during the construction of that line, issues related to environmental and social compensation were not completely settled. So the bank recommended that those issues should be settled before carrying out the rehabilitation work.

That condition is sine qua non for the implementation of the project of the line rehabilitation. The financial effect of those corrective actions was valued by the consultant at FCFA



864,702,575. Thus, as wished by the bank, it is urgent that each State commits to settle the pending liabilities and to appreciate the concerns of the affected populations in order to get its support towards EIB for the implementation of both projects (rehabilitation of Lome-Cotonou-Onigbolo line and construction of Onigbolo-Parakou line).

CEB sent a letter to EIB and World Bank on September 10, 2012 to certify its commitment on behalf of both countries, to settle during 2013 the compensations liabilities of the lines. EIB gave a favorable notice on December 20, 2012 but requested that the States should sign an addendum (which corrects articles 1.4 and 6.3) to the initial credit agreement so as to allow the raising of the prior conditions to a settlement related to the environmental reports and the implementation of the action plan of the reestablishment of the affected populations. CEB is expecting the addenda to be signed by the States of Togo and Benin.


The selection process of the Consultant who shall supervise the work is also over. In effect, the Bank issued the noticed of the non-objection on the short-list and the application for service proposal was sent to selected offices. Those offices offers were received on February 18, 2011. Further to the contracting, the bank notice of non-objection was obtained so as to contract with INTEC office, the winning bidder. The contract was concluded on October 13, 2011 and enforced

### 3.2.5.5 330 KV Ghana-To-go-Benin line (dorsal coast)

The great interest of this line of high tension transportation is to promote power transactions between some coastal states in order to facilitate import, export, transit and seasonal storage all accounting for reestablished programs or mutual help. So, that line is of a major economic concern, not only for the abovementioned four coastal countries but also for all WAPP zone A countries whose power networks are interconnected. Those countries are Burkina Faso, Ivory Coast, Ghana, Togo, Benin, Nigeria and Niger.

That is one of the priority projects – recorded in WAPP Management Plan - which shall interconnect, from West to East power networks of Ghana, Togo, Benin and Nigeria. That line connects Takoradi thermal plant (660) to Volta station near Accra, to Mome-Hagou station in Togo, to Sakete station in Benin and to West Ikeja station in the suburb of Lagos, the economic capital town of Nigeria.

The construction work of that line in Benin side are funded by ADB. The Financing Agreement was signed with the Government of the Republic of Benin and the loan has been reassigned to CEB. As for the funding of the other part of the structures located on Togo land, the financing agreements have been signed on June 1st, 2010 between the Government of Togo and KfW.



In 2011, many of the activities, accounting for that project, were not completely achieved. Those activities continued in 2012 and new activities were also initiated. Those activities are:

- Contracting for work, a process during which contractors bids were received on November 5, 2012 and the evaluation reports were submitted on December 11, 2012 by CEB to various donors (KfW, WADB, ADB) who contribute to the finding for the notice of non-objection.
- The securement of funds for affected populations compensation. During that process, ADB approved on February 17, 2012 the documents submitted to it by CEB for that purpose.
- Selection of the office which will supervise the work. At that stage, the Consultants' proposals were received on September 14, 2012 and the evaluation report of the technical proposals was submitted by CEB to World Bank on November 7, 2012 for consideration and notice of non-objection. The World Bank issued its notice of non-objection on December 19, 2012.

All in all, the achievement ratio of the activities related to work supervision is estimated at 35% whereas the one concerning construction work of the line is 20% as at December 31, 2012.

### 3.2.5.6 kV 330 Dorsal North Project

The project consists in a KV 300 line from Birmin Kebbi in Nigeria to Niamey and Ouagadougou with a branch at the level of Dosso (Niger) for the interconnection with the CEB network at Bembereke. The feasibility study of this line is carried out by FICHTNER and the study report presented from March 5 to 8, 2007 in Ouagadougou.

At that meeting, CEB mentioned the change occurred in the configuration of the line contained in his new investment plan. Those changes concern :

- the 30 kV line ending in Malanville,
- the construction of a kV 330/161/33 station in Malanville,
- the extension of the kV 161 line up to Bembereke,
- the construction of a kV 161/20 station in Kandi.

It was decided at that meeting that the new approach could not be integrated in the study without any addendum to the basic agreement of FICHTNER.

The addendum was signed and the additional studies were completed. The reports were sent to CEB, NIGELEEC, SONABEL and PHCN. On May 31, 2010, managing directors validated the supplemental report in Niamey. Thus, the total cost of the study (initial + additional) is FCFA 300 millions equally shared between CEB,



NIGELEC, SONABEL and PHCN.

FICHTNER'S reports show an estimate cost of FCFA 26 billions for the structures to be set up in Benin.

A new instruction is given to FICHTNER as for bids for final design studies as well as environmental and social impact assessment.

From September 28 to 30, 2011 there was examination of bids followed by negotiations with the Consultant in Ouagadougou.

On November 15 and 16, 2011 was reviewed in Lome the final bid of the Consultant FICHTNER for the carrying out of the Final Design, the bids document, the environmental and social impact assessment as well as the meeting of both countries electricity companies Managing Directors.

Further to the discussions Managing Directors decided to transfer the management of the project to the General Secretariat of WAPP which is chartered to conduct such a project within a sub-regional context.

By letter N° 781/MEF/DC/SGM/CAA dated April 22, 2010, Benin Minister of Economy and Finance sent to WADB the list of priority projects of power production and transportation to be funded within the Funds of Energy Development of the Regional Initiative for Sustainable Energy developed by WAEMU member-States.


Among the priority projects registered on the list are mentioned the construction of a km 218 long kV 161 line connecting the areas of Bembereke, Kandi and Malanville and of three kV 161/33/20 transformer stations of MVA 12 each in Bembereke, Kandi and Malanville, initially in the WAPP KV 300 Dorsal North Project.

In reply to the official request for funding a WADB mission stayed in Benin and Togo from November 4 to 15, 2010 in order to evaluate the project on behalf of FDE donors. Conclusions and recommendations mentioned in the evaluation draft report are favorable.

The project was presented at the session of the FDE Donors Council held in December 2010 and the Loan Agreement between WADB and the Government of Benin was signed on January 22, 2011 and ratified by the Parliament.

Besides, the construction of that line is jointly funded through a loan of FCFA 20 billions from the Funds for Power Development implemented within the WAEMU Regional Initiative of Sustainable Energy, a FCFA 8.078 billions loan from WADB and CEB equity resources up to FCFA 1.622 billions.

The selection process of the Consultant for the draft project studies and the preparation of the technical prescriptions are in progress. Indeed, the call for expression of interest was




published on July 13, 2011 and the application for proposal was approved and published on November 15, 2011. The conference prior to the preparation of tenderers bids was organized on December 5, 2011. The bids submission date formerly planned for January 16, 2012 was postponed to January 30, 2012 at 10 am UT on request of some consultants. The signing of the agreement with the consultant is planned for March 2012.

### 3.2.5.7 The Project of Independent Producers Selection

The objective of this project is to seek for the service of a Consultant who will prepare some standard bids Documents for the selection of independent producers of energy and special conventions of transfer and purchase/sales of energy on the territory of the Electrical Community of Benin with energy production from different sources.

Within the PFSE, some Terms of Reference (ToR) were sent on September 1, 2008, to the bank for an unsuccessful notice of non-objection. Inter alia, on request of Togo and Benin governments a joint team (Ministries in charge of Energy, SBEE, CEET, Regulatory Authority of Togo and CEB) was installed to prepare the ToR which was submitted to bank on July 13, 2010 to replace those submitted on September 1, 2008.

Further to the bank observations on the ToR which were taken into account, the reviewed ToR were sent on September 5, 2010 to the Bank for the notice of non-objection. After many follow-up actions, the Bank made, on December 23, 2010, some other observations which were considered and taken into account. The evaluation report of the expressions of interest was sent to Bank on May 3, 2011 for notice. By e-mail dated May 18, 2011, the Bank made some observations on the said report and requested CEB to reconsider the content and submit it again to it with the request for proposal (RP). Further to the transmission of the reviewed report to the Bank on June 16, 2011, the bank notice was obtained on June 24, 2011. The Request for Proposal (RP) is sent to the bank for notice on the same day, June 24, 2011. The concurrence of the bank was obtained on June 24, 2011 on RP subject to the integration of some observations. The finalized RP was sent to the Consultants on the short-list. The bids were submitted on September 14, 2011. The report of technical bids evaluation sent to the bank on September 29, 2011 got its concurrence on September 30, 2011. The financial bids were opened on October Tuesday 18, 2011. The minutes of financial bids opening as well as the report of financial evaluation were sent to the bank on November 2, 2011. The minutes of negotiation and the contract draft were sent to the bank on November 21, 2011. The bank gave its notice



of non-objection on November 24, 2011. The final copy of contract is sent to the selected supplier of services in the week of December 12, 2011 for signing. Besides, the bank requested a re-evaluation on December 30, 2011 further to complain of Hector Farina Office. The commission of evaluation of tenders took the work again and submit its report for the bank notice of non-objection purpose on February 24, 2012. The bank made its observations on the evaluation report on the same day. In reply, CEB sent on April 3, 2012 an e-mail to the bank to explain the mood in which the re-evaluation was made. The bank reacted on April 13, 2012 by insisting on the strict respect of its former observations for the re-evaluation. With respect to the bank observations CEB notified to STEG International by facsimile dated June 28, 2012 the cancellation of the contract signing process and the re-evaluation of the bids.

### 3.2.5.8 Construction of a kV 161/34.5/22 Transforme Pan at Kara Station

This project concerns the construction of structures for the installation and the concessioning of the second kV 161/34.5/22 power transformer at Kara.

The notice was published early January 2011 in the local newspapers namely «La Nation» in Benin and «Togo Presse» in Togo.

At the end of the invitation to tender, FORCLUM ENERGIES SERVICES Company was selected to perform the work.


The Agreement N°134/CEB/DG/DED/DAP/SAT/2011 was signed on October 21, 2011 and enforced on March 12, 2012 for an amount of FCFA 836,971,847. The work which have already started was planned for 300 working days.

In 2012, CEB made the acceptance-test in factory of some equipments. It also made the acceptance-test in situ of some materials. Work in situ started with the 100% of the civil work.

### 3.2.5.9 Extension of Maria-Gleta Station

The project consists in cutting and connecting the second term of the kV 161 Lome-Cotonou same line to Maria-Gleta station and creating two spans of KVA 150 line, supplying as well as installing a kV 161/15-20 MVA 50 transformer, the construction of the span of kV 161 transformer and the span of kV 15 transformer and its connection to SBEE kV 15 station.

At term, that project will allow to secure and guaranty the supplying and the feeding of Atlantique-Littoral areas from Maria-Gleta on the one hand, to satisfy the growing demands in energy of the Commune of Calavi and its neighboring areas on the other hand, and at last to



increase the discharge value of the power produced by thermal plants installed on the site and functioning from gas or A1 jet.

Completely funded by CEB equity resources, the cost of realization is of FCFA 1,619,788,882.

At the end of the contracting process MRI Company was selected to perform the work. The contract between CEB and MRI Company was signed on November 21, 2011. The work are planned for 300 working days.

In 2012, CEB made the acceptance-test in factory of some equipments to certify the compliance of the tests with the technical prescriptions and the used standards. Work in situ started with the 95% of the civil work. The physical status report of the project is 35%.

### 3.2.5.10 Construction of the kV 161 Bembereke-Kandi-Malanville Line

Within the strengthening and the development of its network, CEB undertook in 2004, jointly with NI-GELEC, SONABEL and PHCN, the study for the construction of a kV 330 line to connect Birnikebi in Nigeria to Ouagadougou in Burkina Fasso through Niamey in Niger with a branching off in way of Zabori in Niger to interconnect Malanville in Benin, and a kV 161 line to connect Malanville with Bembereke through Kandi. The studies were entrusted to


FITCHNER which, in 2006, made judgements of the technical feasibility of that line and of its financial and economic cost-benefit.

In 2010, thanks to the Regional Initiative for Sustainable Power (RISP) developped by WAEMU member-countries, the Minister of Economy and Finance of Benin sent to WADB, by letter N° 781/MEF/DC/SGM/CAA dated April 22, 2010, the list of priority projects for power production and transportation of the Government of Benin for their funding within the Funds for Power Development (FPD).

Among the priority projects mentioned in the list was the construction of a km 218 long kV 161 line to connect the areas of Bembereke, Kandi and Malanville as well as three kV 161/33/20 de MVA 12 transformer stations each at Bembereke, Kandi and Malanville whose feasibility studies were carried out within the WAPP kV 330 North Dorsal.

In reply to the official application for funding, the project was selected by WADB and a WADB mission stayed in Benin and Togo from November 4 to 15, 2010 for the purpose of the evaluation of the project on behalf of FPD Donors.

The project was presented at the December 2010 session of FPD Donors Council and the Loan Agreement between WADB and the Government of Benin was signed on January 22, 2011 and ratified by the Parliament. The loan is deeded back to CEB by



the Autonomous Amortization Fund (AAF) and enforced on January 3, 2012.

Let's remind that the construction of that line is jointly funded by a FCFA 20 billions loan from the Funds for Power Development granted within the WAEMU Regional Initiative for Sustainable Power (RISP), a FCFA 8.078 billions loan through WADB business window applied for by CEB as well as CEB equity resources up to FCFA 1.622 billions.

Since the conclusion of the loan, CEB started the process of Consultants selection for the carrying out of the studies of the Final Design and the preparation of the Bids Documents as well as the environmental and social impact assessments.

Within that process, the expression of interest was published on July 13, 2011 and the Request for Proposal (RP) was sent to the WADB which gave its notice of non-objection on November 7, 2011.

The RP was sent to Consultants on November 2011. The submission date for proposals planned for January 16, 2012 was postponed to January 30, 2012 on request of some Consultants. The evaluation of technical and financial offers was performed and the report was submitted to WADB on March 21, 2012 for the notice of non-objection for the purpose of the award of the contract to the successful services bidder. The bank gave its notice of non-objection to the report

on April 3, 2012 and on April 23, 2012 a negotiation session was held with the interim successful bidder Consultant. The negotiated and endorsed Contract draft was sent to WADB on April 30, 2012 for the notice of non-objection purpose.

The bank sent its observations on the draft proposed contract to CEB on May 18, 2012. The draft proposed contract including its observations was sent back to the bank on May 22, 2012. On May 23, 2012 the bank gave its notice of non-objection to the conclusion of the contract with CabIRA/STUCKY grouping and the contract was concluded on July 17, 2012.

CEB got the receivable version of the advance Guaranty on November 5, 2012 and sent the advance bills to the AAF on December 12, 2012. The beginning of the work was delayed because of the repeated disposal by CEB of the guaranty for the mobilization advance proposed by CabIRA/STUCKY because of its form which is not in compliance with the model of guaranty in the Request for Proposal.

### 3.2.5.11 Construction of the kV 161 Atakpame-Lome line

The project consists in the construction of a kV 161 line long of about km 140 between Atakpame and Lome, the extension of related stations and the construction of a kV 161/33 transformer station connected on the kV 161 Atakpame-Lome



to Notse line

The project sponsoring accounts for the approach which aims at the creation of an additional way to supply Atakpame and northern areas of Togo and Benin from the productions of some plants located in Lome, thanks to the achievement of Lome C station (Davie) within the kV 330 Sakete-Lome C – Tema interconnection.

This project is funded within the Funds for Power Development (FPD) of the Regional Initiative for Sustainable Power developed by the WAE-MU member-countries further to the request N°0079/PR/MPDAT/CAB dated January 17, 2011 from the Minister delegated by the President of the Republic, in charge of Planning, Development and Land-Use Management who valued the project cost of realization at FCFA 15 billions.

Further to that request, the project was revalued by WADB at FCFA 20.36 billions

On the basis of the request, the funding agreement N°2011084/FDE TG 2011 31 00 of the amount of 20 billions from which 15 billions will be deeded back to CEB was concluded between WADB and the Republic of TOGO on September 1st, 2011.

The deeding back process is in progress. The project which is valued at FCFA 20.36 billions is parted as follows:

- WADB: FCFA 15 billions,
- CEB equity resources: FCFA 0.8 billions and
- Other Donors: FCFA 4.56 billions.

To fill the FCFA 4.56 billions gap of the project funding and to allow its effective implementation, CEB sent a request of additional funding to WADB on October 25, 2011 applying from the latter an additional financial support in loan. CEB is expecting the feed-back from WADB.

Coupled with that process of raising of funds, CEB started the selection process of the Consultant who shall carry out the feasibility studies, Final Design and Bids Documents.

Within that process, the notice for the expression of interest was published on July 13, 2011 and the Proposal Request (PR) was sent to WADB which gave its notice of non-objection on November 7, 2011. The PR was sent to the Consultants on November 15, 2011. The submission date of the offers formerly planned for January 16, 2012 was postponed to January 30, 2012 on the request of some Consultants. The evaluation of technical and financial offers was carried out and the report was submitted to WADB on March 21, 2012 for the notice of non-objection before contracting. The bank gave its notice of non-objection on April 3, 2012 and a negotiation session was held with interim successful bidder Consultants. The negotiated and

endorsed draft proposed contract was sent to WADB for its notice of non-objection on April 30, 2012. The bank sent some observations on the draft proposed contract to CEB on May 18, 2012. The draft proposed contract included its observations was sent back to the bank on May 22, 2012. On May 23, 2012 the bank gave its notice of non-objection for

the conclusion of the contract with CabIRA/STUCKY grouping and the contract was concluded on July 17, 2012. There was a delay in the beginning of the work by the grouping. That delay is due to the non-conclusion of the Deeding Back Agreement between the Government of Togo and CEB.



Electric field Parakou construction

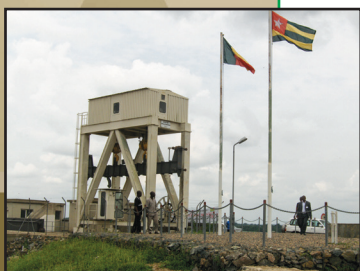


Electric field Nangbéto



Downstream dam Nangbéto

## **BENIN ELECTRIC COMMUNITY - 2012 ANNUAL REPORT**



## 4. Financial Statements



## ELECTRIC COMMUNITY OF BENIN

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# CEB

*A model of sub-regional  
energy cooperation*



*With CEB,  
energy that stimulates  
the socio-economic  
development of Togo and Benin*

# BALANCE-SHEET AS AT DECEMBER 31, 2012

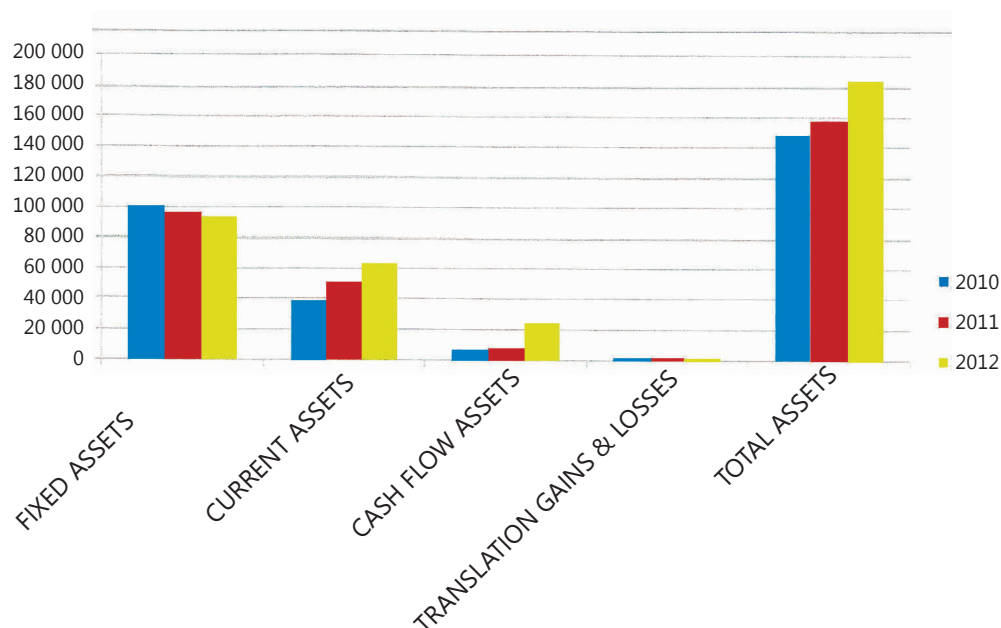
## ASSETS

(Amounts in CFAF)

ITEMS	NOTES	BALANCE AS AT 31/12/2012	BALANCE AS AT 31/12/2011
<b><u>FIXED ASSETS</u></b>			
<b>FIXED COSTS</b>			
Preliminary expenses and allocables charges	2	3 678 275 263	2 492 706 006
<b>INTANGIBLE ASSETS</b>			
Gross		917 515 896	763 441 880
Depreciation		-769 626 420	-751 099 231
Net	2	<b>147 889 476</b>	<b>12 342 649</b>
<b>TANGIBLE ASSETS</b>			
Gross		203 370 704 179	202 614 325 253
Depreciation		-115 487 718 103	-109 017 350 323
Net	2	<b>87 882 982 076</b>	<b>93 596 974 930</b>
Advances paymants	2	2 489 903 075	100 377 667
<b>LONG-TERM INVESTMENTS</b>			
Equity Investment		29 968 000	29 968 000
Other Investments	2	194 462 338	194 462 338
		224 430 338	224 430 338
<b>TOTAL FIXED ASSETS (I)</b>		<b>94 423 484 228</b>	<b>96 426 831 592</b>
<b><u>CURRENT ASSETS</u></b>			
EAO Current Assets		0	0
<b>STOCKS</b>			
Raw materials and other supplies		3 529 060 085	3 604 418 593
<b>RECEIVABLES AND REQUIREMENTS</b>			
Suppliers & advance payments		2 359 201 813	979 468 737
Customers		56 859 077 910	45 889 947 743
Others		1 232 008 242	1 060 915 349
<b>TOTAL CURRENT ASSETS (II)</b>	3	<b>63 979 348 050</b>	<b>51 534 750 422</b>
Investment security		0	0
Outstanding deposit		0	0
Cash in bank and hand		24 921 033 252	7 773 346 250
		0	
<b>TOTAL CASH FLOW ASSETS (III)</b>	4	<b>24 921 033 252</b>	<b>7 773 346 250</b>
<b>TRANSLATION GAINS &amp; LOSSES ASSETS (IV)</b>	5	<b>1 792 857 722</b>	<b>2 451 996 885</b>
<b>TOTAL ASSETS (I+II+III+IV)</b>		<b>185 116 723 252</b>	<b>158 186 925 149</b>

**TREND OF MAJOR BALANCE-SHEET/ASSETS ITEMS  
FROM 2010 TO 2012  
(in millions CFAF)**

	2010	2011	2012
FIXED ASSETS	100 800	96 427	94 424
CURRENT ASSETS	38 285	51 535	63 979
CASH FLOW ASSETS	7 054	7 773	24 921
TRANSLATION GAINS & LOSSES	1 497	2 452	1 793
TOTAL ASSETS	147 636	158 187	185 117



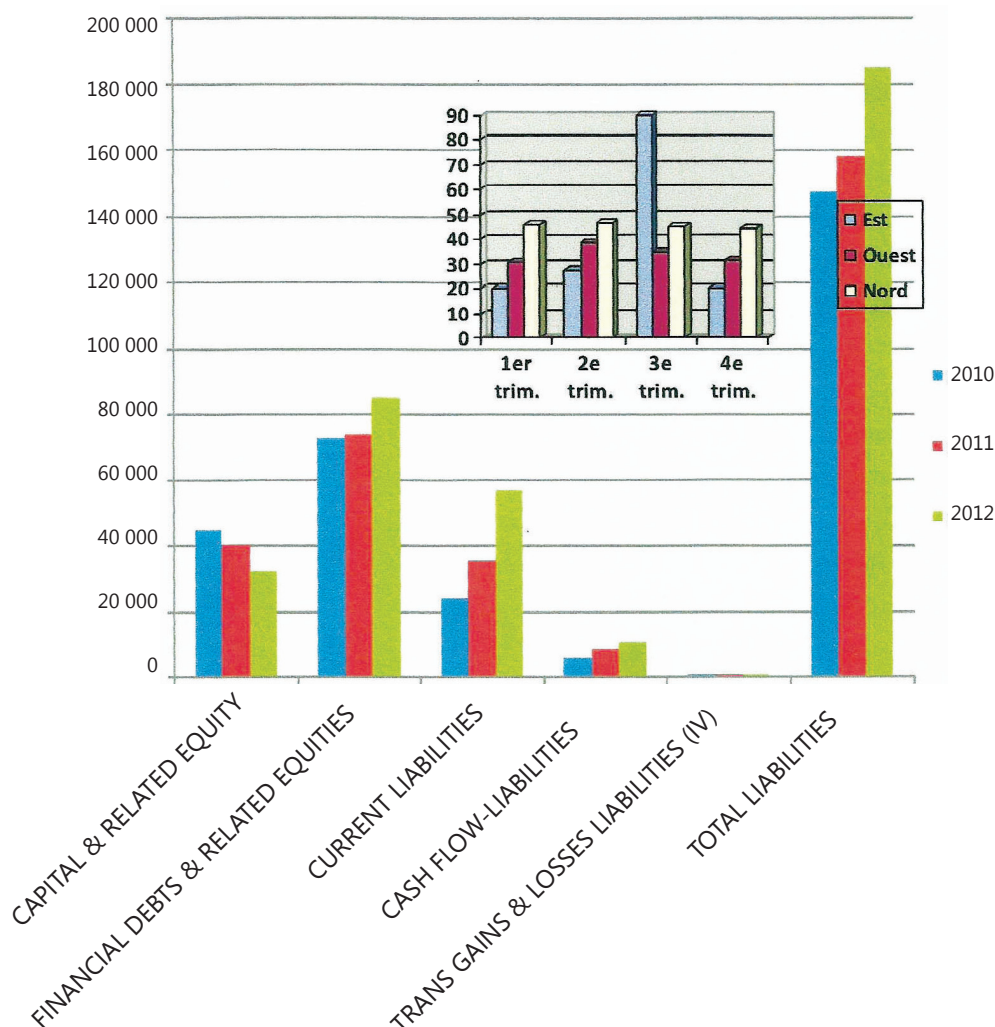
Partial view of a dam

**BALANCE-SHEET AS AT DECEMBER 31, 2012**  
**LIABILITIES**  
**(Amounts in CF\$)**

ITEMS	NOTES	BALANCE AS AT 31/12/2012	BALANCE AS AT 31/12/2011
<b><u>CAPITAL &amp; RELATED EQUITY</u></b>			
<b><u>CAPITAL</u></b>		26 350 000 000	26 350 000 000
<b><u>PRENUMS &amp; RESERVES</u></b>			
Reevaluation reserve		2 475 000	2 475 000
Carried forward		6 873 241 790	10 545 064 921
<b>Annual surplus</b>		-7 455 765 383	-3 671 823 131
<b><u>OTHER EQUITY CAPITAL</u></b>			
Capital grant		768 784 017	876 615 494
Provisions and related funds		6 044 772 691	6 431 253 784
Total other equity capital		<b>6 813 556 708</b>	<b>7 307 869 278</b>
<b>TOTAL CAPITAL AND RELATED EQUITIES (I)</b>	<b>6</b>	2 489 903 075	40 533 586 068
<b><u>FINANCIAL DEBTS AND RELATED EQUITIES</u></b>			
Borrowings		57 370 429 687	45 474 465 639
Various financial debts		2 120 666 045	2 113 679 775
Provisions for liabilities & charges		25 350 932 212	26 131 931 333
<b>TOTAL FINANCIAL DEBTS AND RELATED EQUITIES (II)</b>	<b>7</b>	<b>84 842 027 944</b>	<b>73 720 076 747</b>
<b>TOTAL CONSISTENT RESOURCES (I+II)</b>		<b>117 425 536 059</b>	<b>114 253 662 815</b>
<b><u>CURRENT LIABILITIES</u></b>			
Customers collected advances		1 349 819 900	0
Current debts and EAO related resources		277 677 516	771 520 535
Operating suppliers		52 504 958 842	31 179 319 945
Fiscal debts		26 975 001	20 505 183
Social debts		1 287 364 100	1 103 229 966
Other debts		1 411 727 212	1 860 919 750
Provisionned risks		173 104 959	480 353 056
<b>TOTAL CURRENTS LIABILITIES (III)</b>	<b>8</b>	<b>57 031 627 530</b>	<b>35 415 848 435</b>
<b><u>CASH FLOW LIABILITIES</u></b>			
Bank cash advance		1 500 000 000	1 500 000 000
Bank other drafts		8 916 676 711	8 981 239 903
<b>TOTAL CASH FLOW LIABILITIES (IV)</b>	<b>9</b>	<b>10 416 676 711</b>	<b>8 481 239 903</b>
<b>TRANSLATION GAINS &amp; LOSSES LIABILITIES (V)</b>	<b>10</b>	<b>242 882 952</b>	<b>36 173 996</b>
<b>TOTAL LIABILITIES (I+II+III+IV+V)</b>		<b>185 116 723 252</b>	<b>158 186 925 149</b>

**TREND OF MAJOR BALANCE-SHEET LIABILITIES ITEMS  
FROM 2010 TO 2012 (in millions of CFAF)**

	2010	2011	2012
CAPITAL & RELATED EQUITY	44 719	40 534	32 583
FINANCIAL DEBTS & RELATED EQUITIES	72 815	73 720	84 842
CURRENT LIABILITIES	24 245	35 416	57 032
CASH FLOW-LIABILITIES	5 539	8 481	10 417
TRANS GAINS & LOSSES LIABILITIES (IV)	318	36	243
<b>TOTAL LIABILITIES</b>	<b>147 636</b>	<b>158 187</b>	<b>185 117</b>

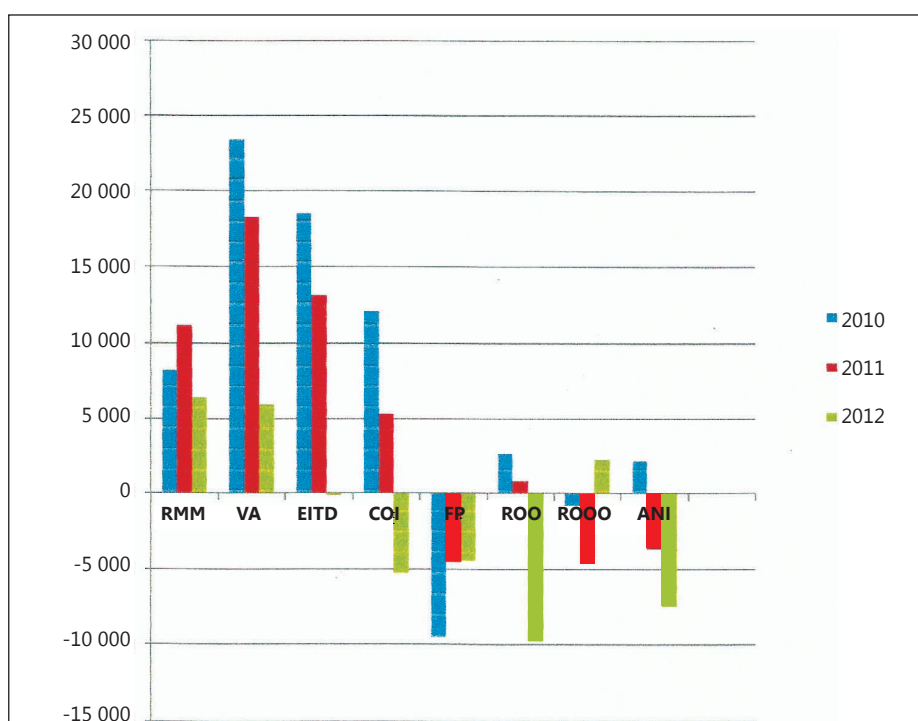


**INCOME STATEMENTS AS AT DECEMBRE 31, 2012**  
(Amounts in CFAF)

ITEMS	NOTES	BALANCE AS AT 31/12/2012	BALANCE AS AT 31/12/2011
<b><u>OPERATION ACTIVITIES</u></b>			
Power sales in Bénin and Togo	11	106 605 293 985	100 955 633 639
Power purchase	13	-96 753 671 689	-83 857 779 917
<b>GOODS GROSS PROFIT MARGIN</b>		<b>9 851 622 296</b>	<b>17 097 853 722</b>
Power sold in Benin and Togo	11	14 011 017 493	13 028 886 838
Self constructed		0	0
Purchase of raw materials	13	-7 650 256 545	-2 142 936 806
Inventory charges	13	-48 472 123	243 687 770
<b>RAW MATERIAL MARGIN</b>		<b>6 312 288 825</b>	<b>11 129 637 802</b>
Miscellaneous revenue	11	158 888 290	213 603 157
Operation grant		0	0
Sundry income	12	323 505 863	84 322 961
Other purchases	13	-2 033 399 758	-1 979 865 182
Inventory charges	13	89 232 878	-116 320 894
Transportation	13	-133 443 607	-101 468 542
External Services	13	-7 029 555 121	-6 206 272 009
Duties and taxes	13	-7 413 134	-7 668 668
Other non operating expenses	13	-1 654 915 783	-1 770 955 990
<b>VALUED ADDED</b>		<b>5 876 810 749</b>	<b>18 342 866 357</b>
Wages and fringe benefits	13	-5 897 201 359	-5 281 168 739
<b>EARNINGS BEF INTEREST TAXES &amp; DEPRECIATION</b>		<b>-20 390 610</b>	<b>-13 061 697 618</b>
Appropriation to depreciation & provisions	13	-8 327 265 130	-10 116 573 095
Shifting	14	3 056 788 356	2 375 464 152
Reversal of provisions		0	0
<b>CURRENT OPERATING INCOME</b>		<b>-5 290 867 384</b>	<b>5 320 588 675</b>
<b><u>FINANCIAL ACTIVITY</u></b>			
Financial Income	15	265 896 170	255 603 794
Gains on exchange	15	1 008 299 582	1 512 135 354
Reversal of provisions		71 613 053	0
Shifting		0	0
Financial costs	16	-3 649 683 342	-3 469 986 863
Exchange losses	16	-2 129 811 146	-2 593 127 355
Appropriation to depreciation & provisions	16	0	-204 096 661
<b>FINANCIAL PERFORMANCE</b>		<b>-4 433 685 683</b>	<b>-4 499 471 731</b>
<b>RESULT OFF-ONGOING OPERATIONS</b>		<b>-9 724 553 067</b>	<b>821 116 944</b>
<b><u>EXTRA ONGOING OPERATIONS</u></b>			
Releve from assets disposal	17	8 197 223	14 039 751
EAO Revenue		606 190 943	0
EAO Shifting	18	1 659 347 773	513 092 262
Shifting EAO		0	0
Book value of assets disposal		-4 948 255	-147 323 440
EAO Charges		0	
EAO Allotment		0	-4 872 746 648
<b>RESULT OFF-ONGOING OPERATIONS</b>		<b>2 268 787 684</b>	<b>-4 492 938 075</b>
<b>ACCOUNTING NET INCOME</b>		<b>-7 455 765 383</b>	<b>-3 671 821 131</b>

**TREND OF INTERMEDIARY BALANCES FROM 2010 TO 2012**  
(in millions of CFAF)

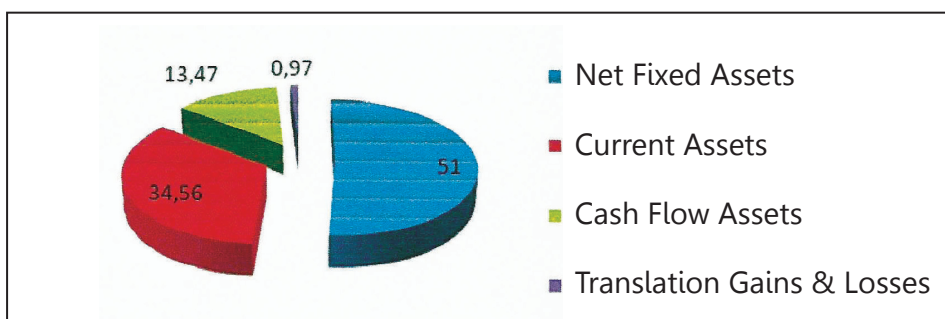
	2010	2011	2012
GGPM	21 637	17 098	9 852
RMM	8 155	11 130	6 312
VA	23 406	18 343	5 877
EITD	18 519	13 062	-20
COI	12 088	5 321	-5 291
ROO	-9 430	-4 499	-4 434
ROOO	2 659	821	-9 725
RHAO	-779	-4 493	2 269
<b>ANI</b>	<b>2 182</b>	<b>-3 672</b>	<b>-7 456</b>



**GGPM** : GOODS GROSS PROFIT MARGIN  
**RMM** : RAW MATERIALS MARGIN  
**VA** : VALUED ADDED  
**EITD** : EARNINGS BEFORE INTEREST TAXES & DEPRECIATION  
**COI** : CURRENT OPERATING INCOME  
**ROO** : RESULT OF ONGOING OPERATIONS  
**ROOO** : RESULT OFF-OINGOING OPERATIONS  
**ANI** : ACCOUNTING NET INCOME  
**FP** : FINANCIAL PERFORMANCE

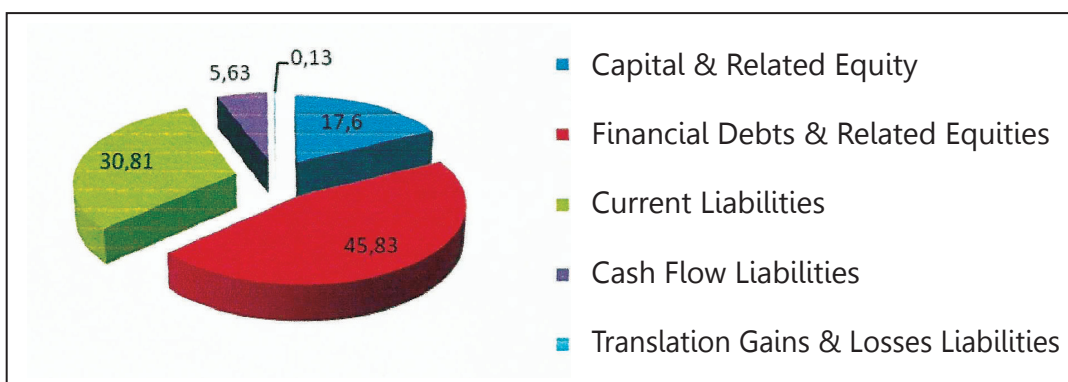
### Balance-sheet Assets

Items	Amounts	%
Net Fixed Assets	94 423 484 228	51
Current Assets	63 979 348 050	34,56
Cash Flow Assets	24 921 033 252	13,47
Translation Gains & Losses	1 792 857 722	0,97
<b>TOTAL</b>	<b>185 116 723 252</b>	<b>100</b>



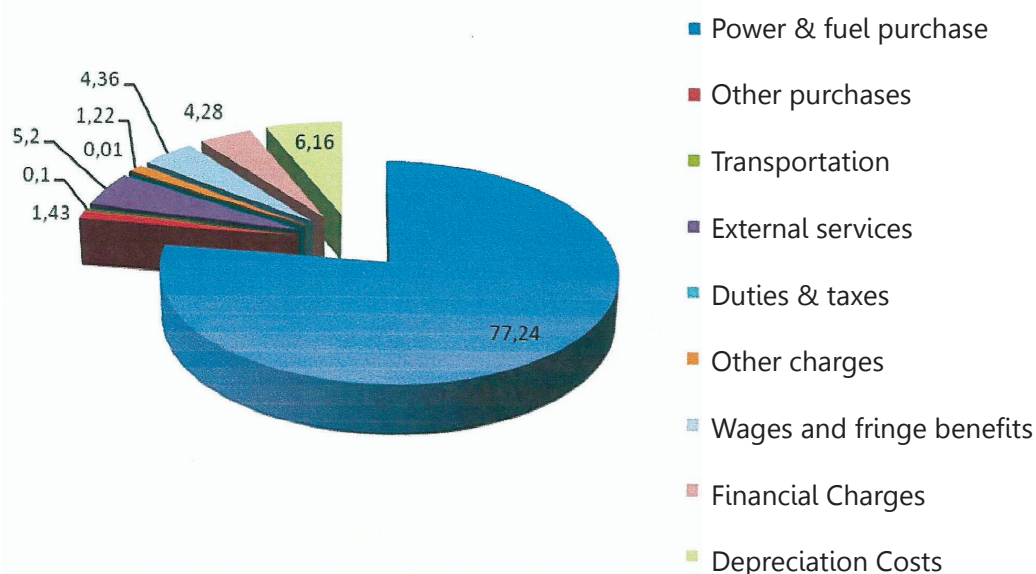
### Balance-sheet Liabilities

Items	Amounts	%
Capital & Related Equity	32 583 508 115	17,60
Financial Debts & Related Equities	84 842 027 944	45,83
Current Liabilities	57 031 627 530	30,81
Cash Flow Liabilities	10 416 676 711	5,63
Translation Gains & Losses Liabilities	242 882 952	0,13
<b>TOTAL</b>	<b>185 116 723 252</b>	<b>100</b>



### Operation and Financial Charges

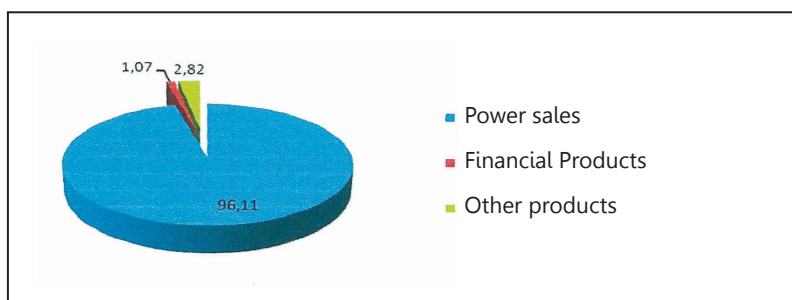
Items	Amounts	%
Power & fuel purchase	104 452 400 357	77,24
Other purchases	1 944 166 880	1,43
Transportation	133 443 607	0,10
External services	7 029 555 121	5,20
Duties & taxes	7 413 134	0,01
Other charges	1 654 915 783	1,22
Wages and fringe benefits	5 897 201 359	4,36
Financial Charges	5 779 494 488	4,28
Depreciation Costs	8 327 265 130	6,16
<b>TOTAL</b>	<b>135 225 855 859</b>	<b>100</b>



Electrical Transmission System

### Operation and Financial Products

Items	Amounts	%
Power sales	120 616 311 478	96,11
Financial Products	1 345 808 805	1,07
Other Products	3 539 182 509	2,82
<b>TOTAL</b>	<b>125 501 302 792</b>	<b>100</b>



CFPP classroom



## ELECTRIC COMMUNITY OF BENIN

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# CEB

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*With CEB,  
energy that stimulates  
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## 5. Annexe

# CEB

*A model of sub-regional  
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## Electric Community of Benin

*With CEB,  
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