



Electricity  
Authority  
of Cyprus



Y E A R S

Annual Report **2012**



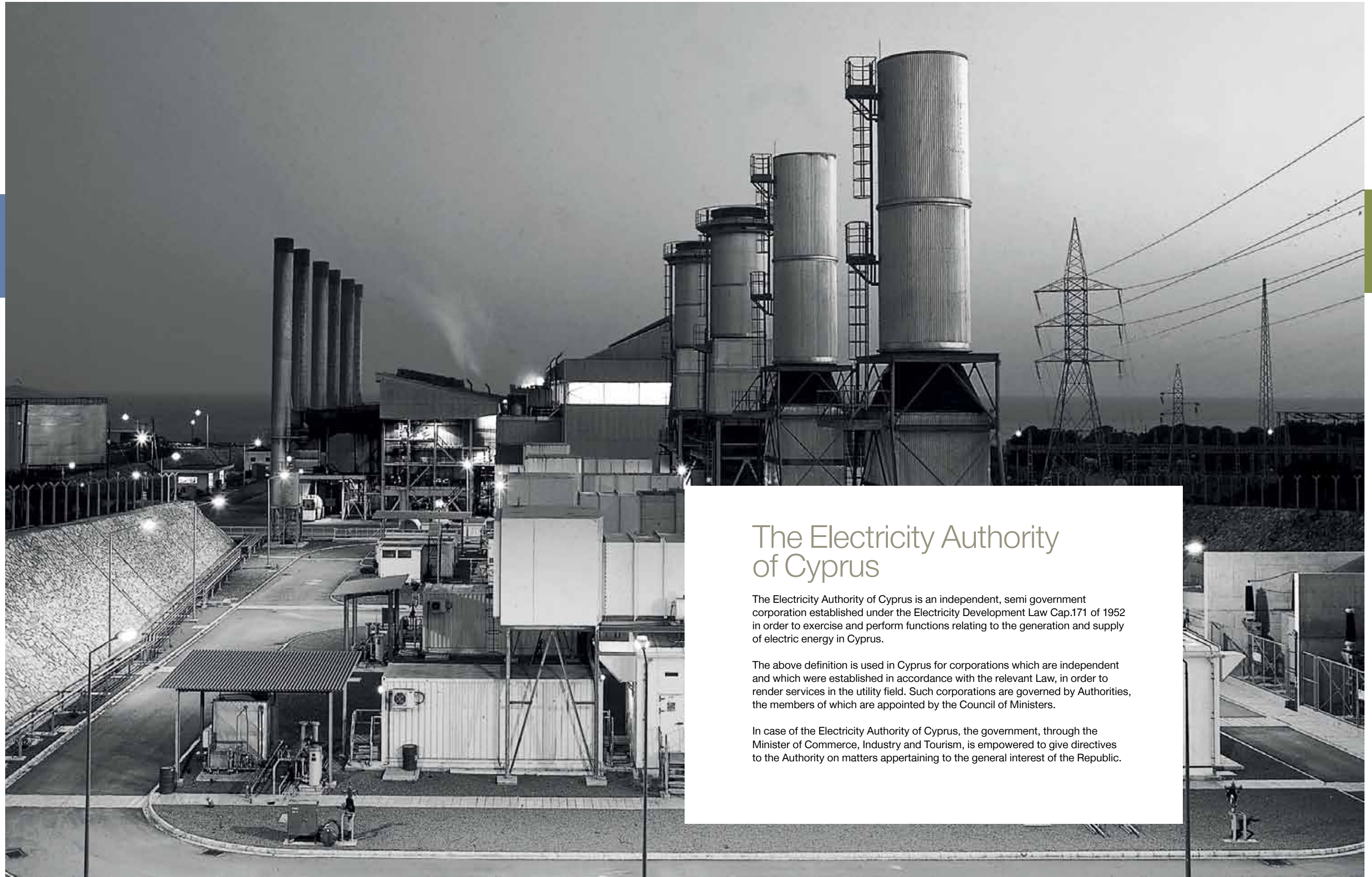




individual  
actions,  
individual  
talents,  
individual  
identities.

we all however,  
share the same  
desire to offer  
a life filled with light  
and an everyday  
reality filled  
with energy.





## The Electricity Authority of Cyprus

The Electricity Authority of Cyprus is an independent, semi government corporation established under the Electricity Development Law Cap.171 of 1952 in order to exercise and perform functions relating to the generation and supply of electric energy in Cyprus.

The above definition is used in Cyprus for corporations which are independent and which were established in accordance with the relevant Law, in order to render services in the utility field. Such corporations are governed by Authorities, the members of which are appointed by the Council of Ministers.

In case of the Electricity Authority of Cyprus, the government, through the Minister of Commerce, Industry and Tourism, is empowered to give directives to the Authority on matters appertaining to the general interest of the Republic.



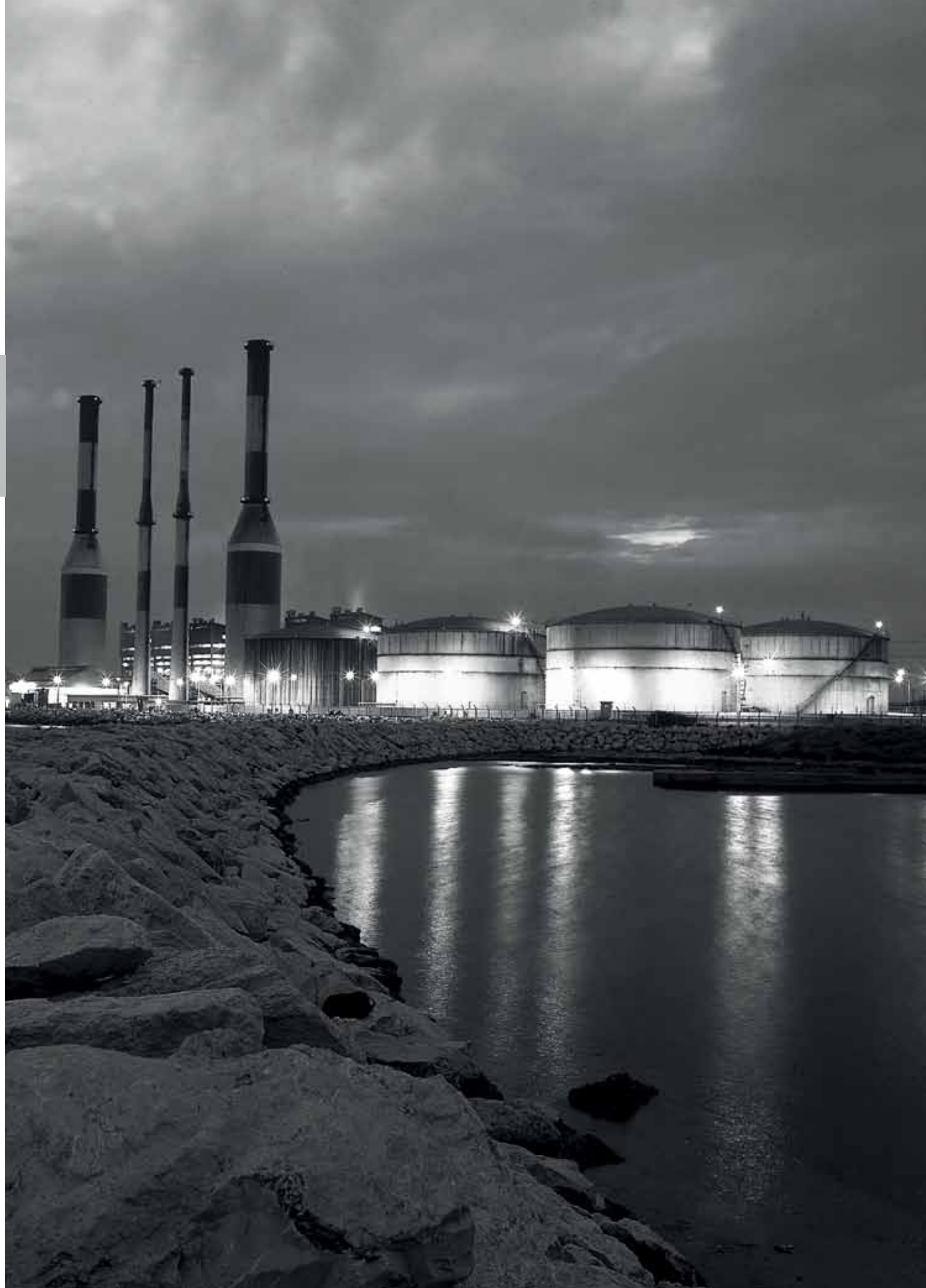


## Our Mission is ...

... to provide our customers with the highest quality of safe and reliable services in the energy sector and in other activities at competitive prices, respecting society, the environment and our people and contributing to the development of our country.

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## The Year in Brief

		2012	2011	% Increase (Decrease)
<b>GENERATION</b>				
Total units generated	million kWh	4 443,1	4 726,8	(6,0)
Maximum output capacity of power stations	MW	1 493,0	964,6	54,8
Maximum demand met	MW	997	922	8,1
Thermal efficiency of generation	%	33,6	33,9	(0,9)
<b>SALES OF ELECTRICITY</b>				
Sales	million kWh	4 355,6	4 594,9	(5,2)
Consumption in the turkish occupied area	million kWh	7,0	7,0	-
Average charge per kWh sold	€cents	22,188	18,668	18,9
Consumers at 31 December	thousand	548,5	543,9	0,8
<b>FINANCE</b>				
Total income	€ thousand	1.185.063	926.117	28,0
Operating costs	€ thousand	1.084.946	841.649	28,9
Operating profit	€ thousand	100.117	84.468	18,5
Finance costs	€ thousand	13.960	8.991	55,3
Tax	€ thousand	8.935	7.788	14,7
Provision as a result of Tax Council Decision	€ thousand	0	(1.896)	(100,0)
Net profit for the year	€ thousand	77.222	69.585	11,0
Capital expenditure	€ thousand	99.863	214.718	(53,5)
Average net assets employed	€ thousand	1.885.002	1.816.275	3,8
Return on average net assets employed	%	5,3	4,7	12,8
<b>EMPLOYEES</b>				
Permanent employees in service at 31 December		2 269	2 370	(4,3)
Sales per employee	million kWh	1,92	1,94	(1,0)
Consumers per employee		242	229	5,7

# Board of Directors and Management

## THE AUTHORITY

### CHAIRMAN

H. Thrassou Civil Engineer, MSc, ex Minister of Communications & Works

### VICE CHAIRMAN

G. Pistentis Businessman - Computers

### MEMBERS

F. Ioannou Economist of National Kapodistriako University, Athens, Bank Employee

P. Chadjicharalambous Mathematics University of Leipzig, Germany

Y. Ioannou Business Management – Economics - Greece

S. Shialaros Greek Literature teacher

A. Tzitzos Economist

A. Oratis Mechanical Engineer – Teacher

K. Kyriacou Managing Director Insurance Brokers & Risk Management



H. Thrassou  
Chairman



G. Pistentis  
Vice Chairman



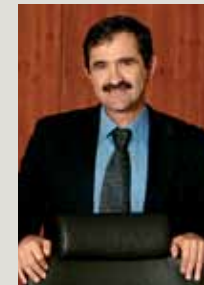
F. Ioannou  
Board Member



Y. Ioannou  
Board Member



P. Chadjicharalambous  
Board Member



S. Shialaros  
Board Member



A. Tzitzos  
Board Member



A. Oratis  
Board Member



K. Kyriacou  
Board Member



S. Stylianou  
General Manager

### LEGAL ADVISERS

Ioannides Demetriou, Lefkosia

### AUDITORS

Auditor General of the Republic  
PricewaterhouseCoopers, Lefkosia

### EXECUTIVE

#### GENERAL MANAGER

Dr. S. Stylianou  
BSc (Eng), PhD, MBA, MIMechE, CEng

#### EXECUTIVE MANAGER FINANCE

H. Hadjiyerou  
FCA, MBA

#### EXECUTIVE MANAGER CUSTOMER SERVICE

C. Paroutis  
BSc (Eng), MIET  
(since 1/7/2012)

Vacant  
(until 30/6/2012)

### EXECUTIVE MANAGER NETWORKS

V. Efthimiou  
BSc (Eng), MSc, PhD, MIET  
(since 1/7/2012)

Vacant  
(until 30/6/2012)

### EXECUTIVE MANAGER GENERATION

A Patsalis  
BSc (Eng), MIOSH

### EXECUTIVE MANAGER COMMON SERVICES

A Valanides  
BSc Computer Science  
Member of Cyprus Computer Society

### EXECUTIVE MANAGER CORPORATE DEVELOPMENT

Vacant  
(since 1/1/2012)



# Chairman's Message



It is time once again to cast our minds back twelve months and evaluate the work undertaken by the EAC last year.

Before referring to the EAC's achievements in 2012, however, I feel that I have a duty to thank my predecessor as Chairman of the Board, Haris Thrassou, for his service to the Authority for almost five years.

Although only a few months have passed since my appointment as Chairman of the Board of the EAC, I became aware from the very first moment of the quality, character and reliability of the Organisation's personnel.

A classic example of this may be seen in the small miracle that the EAC performed in summer 2011 when, just 30 days after the tragic event at Mari and the almost total destruction of Vasilikos Power Station, an uninterrupted supply of electricity was restored throughout Cyprus. For those of us who, at that time, were not part of the EAC, it was hard to comprehend the amount of work that needed to be carried out under such difficult conditions in a very short period of time and continued into 2012 so that today two of the five generation units have resumed commercial operations and we expect all the damage to be fully repaired by the summer.

I must express my special thanks to the entire EAC staff for the work they do. The Board of Directors, in total cooperation with the General Manager, the whole of the EAC Management and the Trade Unions, will fight to support our personnel so that they can give their best on a daily basis in the difficult times that lie ahead, something to which the public has grown accustomed during the Authority's 60-year contribution to Cypriot society.

The new reality in our country, created by the global financial crisis, has had a negative effect on the EAC. We are going to face difficulties which present, at the same time, a great challenge to the Organisation. In the new economic environment, we shall have to pay particular attention to our flexibility and our ability to take decisions quickly. The issue of the privatisation of semi-government organisations is one of concern not only to the State and the employees of these organisations but to every citizen of the country. I consider that it is important for the economy and in the broader interests of the country that organisations providing vital services such as the EAC remain in the public sector under state control.

With the arrival of natural gas, the EAC's primary objective is to offer the country a new fuel option for electricity generation, one that is more environmentally friendly and competitive than the mazut and diesel oil that are used today. Continuous negotiations and close collaboration with the Ministry of Commerce, Industry & Tourism are key to the success of the aim that we have set, which is to put an end to our dependence on oil and its by-products as soon as possible.

Indicatively, let me state that the purchase price of fuel for electricity generation rose by around 19,4% in 2012, given that the EAC paid €645 million (60% of its expenses for the year) compared to €540,4 million in 2011 (63,5% of the EAC's expenses in 2011).

The quickest possible arrival of natural gas in Cyprus will boost the country's industrial sector and the broader economy and it will be a significant move towards normalising the situation on the island.

In 2012, it was obvious that the main focus of work on the generation system would be the repairs to, and the speediest possible return to operation of, Vasilikos Power Station.

The work that was carried out in 2011 after the explosion and during 2012 to repair the station was a well-coordinated effort by the entire EAC family which, in a very short space of time and following all the required procedures, achieved something that had appeared impossible to many.

Although there was a fall in both electricity generation and sales after the tragic events at Mari in summer 2011, development works on the Transmission System and upgrades to the relevant substations continued in 2012.

Despite the financial crisis and our constant efforts to significantly reduce costs, the long-term objective of the EAC remains the upgrading of the Transmission and Distribution Networks. In these difficult times, the EAC's first priority has always been to provide the best service to its customers and its main concern is to bring about the fastest possible construction and operation of large and important substations to relieve tourist, urban, industrial and other areas.

The decision to set up a Contact Centre was of strategic importance for the EAC and it is now a significant tool in its transformation into a customer-oriented organisation with particular emphasis on providing the best possible customer service.

The EAC Contact Centre has now been providing services for more than two years, enabling customers to obtain information about any matter of interest to them at any moment by speaking directly to an EAC customer service officer.

The EAC wished to continue its corporate social responsibility programme in 2012 but the financial crisis and the subsequent new economic realities have obliged us to focus on just two causes that have been established for some years. Events such as the all-day charity fair held by the Cyprus Anti-Cancer Society at the EAC's Head Offices, and the Authority's support for the enclaved pupils and students in the occupied areas fill us with strength and hope to continue and our aim is always to support such causes.

To conclude this brief look at some of the main issues that the EAC dealt with in 2012, I consider it my duty to express my thanks to the Minister of Commerce, Industry & Tourism, George Lakkotrypis, and to wish him every success in the difficult task that he has undertaken with his appointment, and to thank his predecessor, Neoklis Sylikiotis, for his help and cooperation with the Board of Directors in 2012. I also extend special thanks to the Cyprus Energy Regulatory Authority and the Transmission System Operator for their full and close cooperation throughout this whole period. I also thank the representatives of the media who have always stood by the EAC and promoted its activities.

Thanks go to the Members of the Board of Directors and to the Management of the Organisation, in particular to General Manager Stelios Stylianou, for their cooperation and agreement on the handling of all the issues facing the EAC during the year under review. I wish to express special thanks to all the Trade Unions and, through them, to all members of staff for their excellent cooperation.

We all realise that the coming days will be difficult but, at the same time, I wish to underline my optimism that the EAC will once more reveal its ability to contribute and show the character of its people as it continues its mission to provide a constant, uninterrupted supply of electricity to consumers in every corner of the island at the lowest possible prices.

**Charalambos Tsouris**  
Chairman

# General Manager's Message



For the EAC, 2012 was a year in which we had to deal with significant and unprecedented difficulties. Fully aware of the problems, the Authority took up the fight on all levels and succeeded in carrying out its main mission, that of providing an uninterrupted supply of electricity to the country and, at the same time, implementing its development plan. Every one of us in the EAC played his/her part in this endeavour and I would like to take this opportunity to express once again my thanks to all members of the Authority's personnel for their efforts to maintain the Organisation in its position as the most dependable supplier of electricity in the country.

The future is not going to be easy and the Organisation has no choice but to rely on the industriousness, willingness, eagerness to work and know-how of its personnel. These are the characteristics that have enabled the EAC to touch every citizen in every corner of the island for the past 60 years. We shall continue to rely on them and, calling on our personnel's united support, we shall try even harder to bring the Authority back to a state of progress and prosperity.

Topping the list of the EAC's projects in 2012 was the reconstruction of Vasilikos Power Station. The Gas Turbine Combined Cycle (GTCC) Unit No. 5 came into commercial operation on 21 November and GTCC Unit No. 4 on 21 December 2012. Steam-Electric Unit No. 3 is due to come into operation at the end of May 2013. Units No. 1 and No. 2 (130 MW each) are expected to be ready in June 2013.

In 2012 we continued to implement the Authority's plans which included making full use of, and maintaining, the power stations at Dhekelia and Moni.

Moreover, in summer 2012, some 95 additional temporary generators with a total capacity of 120 MW were installed at Moni Power Station and connected to the grid on 15 September 2012. All the other temporary internal combustion units that had been leased by the Authority were disconnected on 31 August 2012. At the same time, two conventional 30 MW generation units (Units No. 1 and No. 2) at Moni Power Station were deactivated on 25 October 2012. On 29 October 2012, the status of all the station's remaining thermal units was changed to cold backup. All the necessary work has been completed so that Moni Power Station is in a cold backup state, ready to be reconnected and started up in 24 hours.

In 2012, the installed capacity of the Transmission Substations increased by 269 MVA. Specifically, during the course of the year, significant work was carried out to complete and operate vitally important transmission substations such as the 132/22-11kV Pseudas and Stroumbi substations and phase 2 of the 132/22-11kV Xeropotamos substation, while 85% of the 132/22-11kV Athienou substation was completed.

At the same time, upgrading/dismantling work was carried out at the following substations:

- Vasilikos South (132/22-11kV) after disconnection from the temporary generators at Vasilikos on 9 November 2012.
- Moni (132/11kV) with the dismantling of the temporary generators (September 2012) that had been installed in June 2012.
- Dhekelia (132/22-11kV) where the temporary generators were disconnected.
- Polis (132/66/11kV), upgrade of the substation in November 2012.
- International Airport, upgraded from two 31,5 MVA transformers to two 40 MVA transformers. Additionally, GIS open-type equipment was installed and commissioned.
- Anatoliko (132/66/11kV).

During the course of the year, all work was completed on the Pafos Area Office and the entire personnel moved in at the beginning of January 2013. The EAC's policy has always been to offer its personnel a safe and comfortable work environment so as to ensure that all members give their best on a daily basis for the progress and welfare of the Organisation.

In January 2012, the New Applications Service began operating from the Contact Centre, initially serving the Ammochostos - Larnaka districts and subsequently Lemesos and Lefkosia. Early in 2013 it will be extended to cater for customers in the Pafos area. In 2012, the service received approximately 13 000 calls.

In 2012, the EAC maintained its harmonious cooperation with Institute of Energy of the Ministry of Energy, Trade, Industry & Tourism, as it did with the Cyprus Energy Regulatory Authority (CERA) and the Transmission System Operator (TSO) as part of a joint handling of all RES-related issues.

At this point I would like to express my special thanks to the former Chairman of the EAC Board, Haris Thrassou, for the excellent cooperation we enjoyed from June 2010 when I took up my duties as General Manager, and to wish him health and happiness, I also wish to welcome the new Chairman of the Board, Charalambos Tsouris, and to give him my commitment that the whole service will be with him in the effort that we shall all be making in the difficult days that lie ahead.

Together with the EAC trade unions, whose leaders I thank particularly for their constructive cooperation, we promise that our sole objective is the progress of our Organisation, the uninterrupted supply of electricity to the country and the welfare of our personnel.

To close this brief message, I would like to express my warm thanks to all my associates and, in particular, the Executive Managers of the Business and Corporate Units for their superb cooperation.

I am optimistic that our Organisation, through constant improvements to the services it provides to the public but mainly thanks to the experience that it has gained during its more than 60 years of service to Cyprus, the know-how it possesses and an increase in productivity by each and everyone of us, it will continue to be the leader in the new energy environment.

**Dr. Stelios Stylianou**  
General Manager

# Business and corporate units



## Generation Business Unit

### GENERATION OF ELECTRIC POWER

During the year 2012, the Electricity Authority of Cyprus continued the implementation of its operational which provided for the full utilisation and maintenance of the existing Dhekelia and Moni Power Stations. Moreover the Electricity Authority of Cyprus proceeded with the restoration of the Vasilikos Power Station, and the mission of the Project Team is the speedy, safe and cost effective return of the station to full operation the soonest possible.

The Combined Cycle Gas Turbine (CCGT) unit No. 5 was commissioned to commercial operation on 21 November 2012 and has been working satisfactorily ever since. Gas turbine Unit No. 42 of the CCGT unit No. 4 commenced operation on 15 November 2012 and was in combined cycle operation (1+1, 110MW) on the 21 December 2012.

Additionally, during the summer of 2012 a further 120MW temporary generator units were installed by APR Energy LLC and were deployed at Moni Power Station. These units ceased operation on 15 September 2012. Furthermore, all other temporary generator units that were rented by the Authority ceased operation on August 31, 2012.

Finally, two conventional generator units of the Moni Power Station, of 30 MW nominal capacity each, were decommissioned since 25 October, 2012.

### VASILIKOS POWER STATION

Vasilikos Power Station, with an installed capacity of 868 MW (3 x 130 MW Steam Units, 2 x 220 MW CCGT Units and 38 MW Gas Turbine Unit), as well as another 70 MW from temporary internal combustion engines (19 Units with a total capacity of 25 MW from TERNA and another 60 Units with a total capacity of 45 MW from DAMCO) installed after the explosion, and were decommissioned by the end of August 2012, generated in 2012, 654 032 MWh, which corresponds to 14,7% of the total electricity generated from the Authority's Power Stations. During the same period the Station exported, 642 011 MWh, which corresponds to 15,0% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the CCGT Unit No.4, for units generated, reached 44,4%, and for the CCGT Unit No.5 reached 43,8%. These figures are not considered representative due to the short runtime and the extensive performance tests conducted during the year for both aforementioned units.



# Generation Business Unit

## RESTORATION OF THE VASILIKOS POWER STATION

### Introduction

The Vasilikos Power Station restoration project is proceeding as planned, with satisfactory progress to date.

CCGT Unit 5 has been fully commissioned in November 2012, while CCGT Unit 4 has been in operation in combined cycle (1+1, 110 MW) in December 2012. For Steam Unit 3 there has been an unexpected delay in setting it in operation. Specifically, Unit No. 3 after the sudden stop suffered during the explosion, for unspecified reasons, caustic soda was accumulated on the roots of the turbine blades of medium pressure. Therefore the company suggested the removal and cleaning of the mobile and stationary blades before the commissioning of the unit in order to avoid oxidation of the blades and possible further problems at a later stage.

### Restoration Schedule

The revised restoration schedule outline is as follows:

- Unit No. 3 availability (130MW) expected by the end of May 2013.
- Units No. 1 and 2 (130 MW each) expected by June of 2013.

It is stressed that the restoration schedule is heavily dependent on a number of critical tasks, which EAC is closely monitoring within the assigned time frame to maintain the programme.

## DHEKELIA POWER STATION

Dhekelia Power Station, with an installed capacity of 460 MW (6 x 60 MW Steam Units and 100 MW for Internal Combustion Engines (ICE1 & ICE2) Plants), as well as another 60 MW from temporary internal combustion engines, installed after the explosion, and decommissioned by the end of August, generated in 2012, 3 158 884 MWh which corresponds to 71,1% of the total electricity generated from the Authority's Power Stations. During the same period, Dhekelia Power Station exported, 3 032 515 MWh which corresponds to 70,8% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the Steam Units, for units generated, reached 30,9% whereas the corresponding thermal coefficient of efficiency for the Internal Combustion Plants reached 41,8%.



### Maintenance

Due to the loss of generation from Vasilikos Power Station caused by the explosion at Mari, all units of Dhekelia Power Station were almost constantly in service and were off service only for short periods of time for cleaning of the boilers. After the end of summer period and the partial restoration of Vasilikos Power Station, the annual maintenance of units 3 and 4 has been performed. The annual maintenance of these units covered all the mechanical and electrical systems as well as automation and control systems. Furthermore, all relevant transformers, circuit breakers, motors and other electrical and electronic equipment were included in the maintenance.

Before the summer season the scheduled major maintenance of 14 000 hours for the units of ICE 1 and 12 000 hours for the units of ICE 2. New navigation lights on all the chimneys of the station in order to meet international standards have been installed.

# Generation Business Unit

## MONI POWER STATION

The installed capacity of Moni Power Station was reduced to 270 MW (4 x 30 MW Steam Units and 4 x 37,5 MW Gas Turbine Units). It is noted that since the 25/10/2012 units 1 and 2 were withdrawn from the installed capacity of the station and the installed capacity of the thermal units has been reduced to 120 MW (4 x 30 MW). Since 29/10/2012 all thermal units are in cold reserve status with a need of a 24 hours notice for returning in operation. 120MW of temporary mobile generating units have been installed by the company APR Energy LLC, bringing the total power of the temporary mobile units for the summer season at 155MW (120MW APR + 35MW Energy Int.). The temporary units have since been dismantled and removed.

Moni Power Station generated in 2012, 630 189 MWh which corresponds to 14,2% of the total electricity generated from the Authority's Power Stations. During the same period, the Power Station exported, 607 337 MWh which corresponds to 14,2% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the Steam Units, for units generated, reached 25,9% whereas the corresponding thermal coefficient of efficiency for the gas turbines reached 20,8%.

## Maintenance

During 2012 the annual general maintenance and repair of boilers No.3, 4 & 5 took place. The maintenance of boilers included among others the control and cleaning of all parts, corrigible in the combustion chambers, preventive replacement suspects (segments) of superheater tubes with other upgraded hardware for durability, corrigible airways and flues to prevent leaks, maintain the occluder. Also maintenance of the air heaters, fans depression systems, boilers and valves and high pressure test welds was performed. Also an external contractor inspected with nondestructive methods the welds tailpipe superheated steam. Maintenance and operation of automation and control in electrical equipment and other auxiliary equipment has taken place. In steam boilers No.2 and 6, hydraulic control of the safety valves were performed in the presence of officials from the Ministry of Labour.

During 2012 the annual general maintenance and repair of turbine No. 5 has been performed. The examination included the maintenance of bearings, testing and maintenance of the cooling systems, condensate and feed water systems, hydraulic oil and lube oil, network abstraction, pumps, valves and electrical parts as well as maintenance and operation in automation and control.



The annual general maintenance of the above unit included all relevant transformers, circuit breakers, motors, starters and other electrical equipment.

The general plant maintenance of the Reverse Osmosis unit (Inverters, Booster Pump and the main water pump) has taken place and a new filter for cleaning the seawater has been installed.

The annual inspection of mooring and the renewal of the certificate of conformity of the anchorage have taken place along with the cleaning insulators 66kV, 132kV systems and maintenance of high voltage circuit breakers.

On 25/10/2012, two conventional power plants of 30 MW each, were decommissioned and as from 29/10/2012 the station is in cold standby, ready to reignite and start operation after 24 hours notice, is being carried out.

# Generation Business Unit

## ENVIRONMENTAL ISSUES

For the protection of the environment and the continuous monitoring of the air quality, six mobile air quality units, two for each Power Station, were in continuous operation at selected sites in the vicinity of the Power Stations during 2012. These fully equipped units are capable of monitoring the ground level concentrations of dust, nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon dioxide (CO) and ozone (O<sub>3</sub>). The units are also capable of measuring other meteorological data such as the wind speed and direction, the air temperature and the relative humidity.

## STUDIES

- Officers of the Generation Business Unit were involved in the procedures required for the Accession of Cyprus in the European Union and the effects these will have on EAC operation and more specifically in matters involving the environment and the generation of electricity.
- The Generation Business Unit prepared the verification report with calculations of the carbon dioxide CO<sub>2</sub> emissions for the period January - December 2011 based on the greenhouse gas Emissions Trading Directive. This report was subsequently verified by an external consultant and submitted to the Ministry of Agriculture, Natural Resources and Environment.

## SYSTEM OPERATION

### Electricity supplied

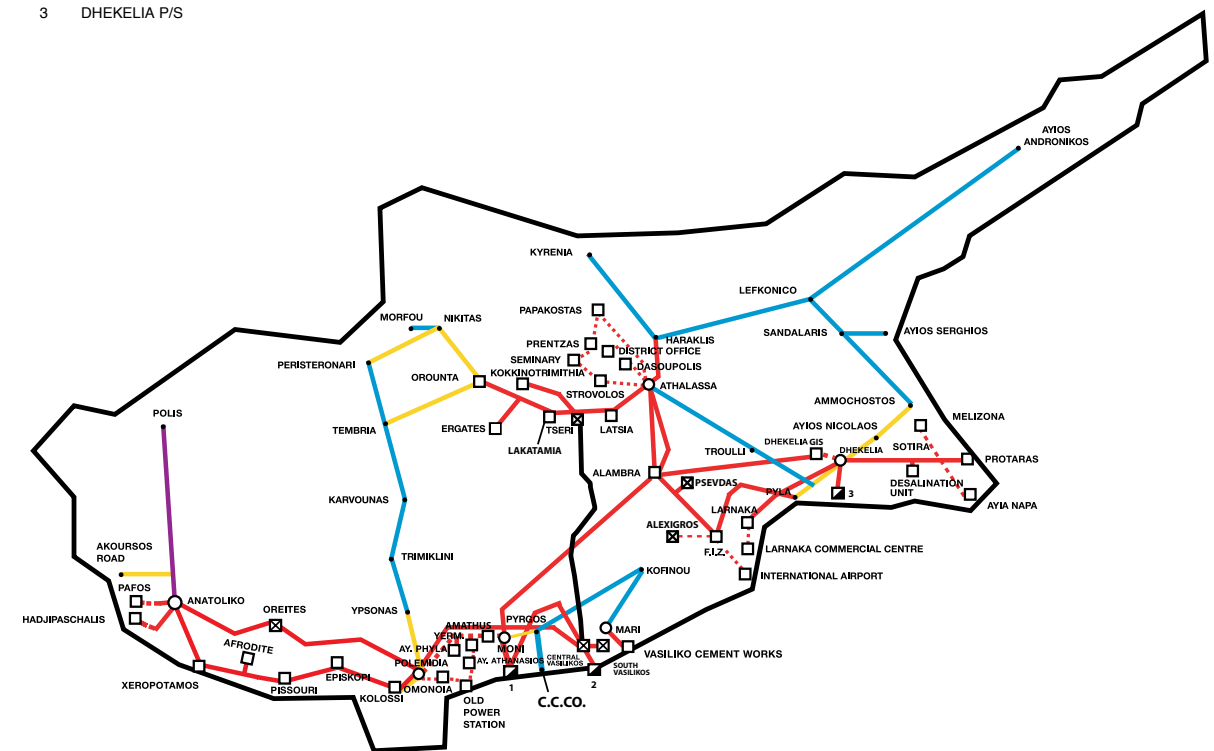
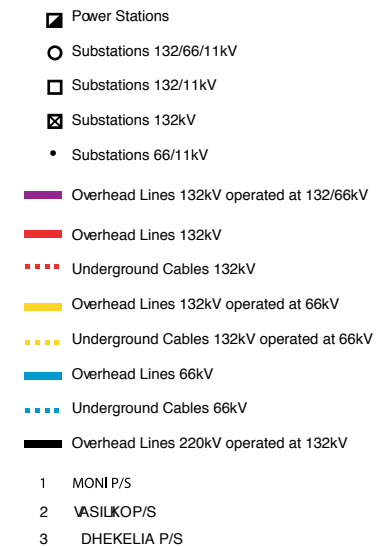
In 2012 the total number of units generated by the EAC's three Power Stations was 4 403 106 MWh, compared with 4 726 884 MWh in 2011, representing a decrease of about 6,85% over the previous year.

Figure 2 (page 26) shows the total number of units generated annually from 2005 to 2012. The predicted generation for the period 2013 – 2020 is also shown.

### Generation, Transmission and Distribution Losses

Electricity consumption at the power stations amounted to about 3,63% of the total generation, compared with 4,62% the previous year.

Figure 3 (page 26) shows electricity generation and sales distribution of sales to the various consumer categories.





# Generation Business Unit

## Fuel Consumption

The amount of heavy fuel oil consumed by the power stations totalled 895 517 metric tonnes, compared to 1 057 815 metric tonnes the previous year, representing a decrease of 15,34%.

The total quantity of diesel fuel consumed by the power stations was 213 854 metric tonnes, compared to 111 682 metric tonnes consumed during 2011.

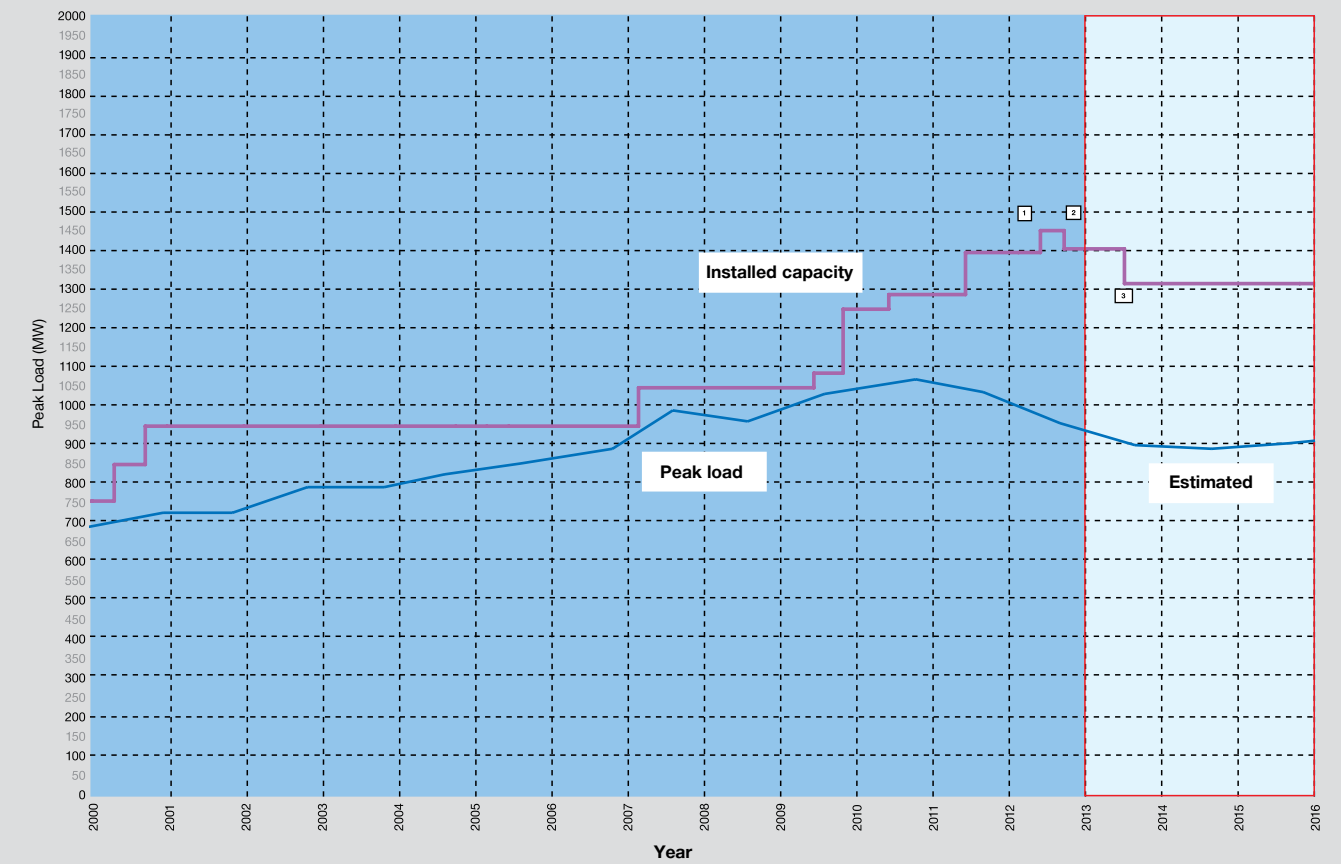
The average calorific value of the fuel oil used was 42 960 kJ/kg compared to 42 963 kJ/kg in 2011.

## Plant Efficiency

Average generating system efficiency in 2012, based on the total units generated by the EAC's three power stations, was 33,57% compared with 33,87% in 2011. The heat rate per kWh generated was 10 725 kJ/kWh compared to 10 630 kJ/kWh in 2011.

Due to the explosion at the Mari Naval Base and the damages of the Vasilikos Power Station premises, the obligatory use of the temporary generating units for the coverage of electricity demand, resulted to the decrease of the average generating systems efficiency of the three EAC Power Stations.

Figure 1



## DEVELOPMENT PLAN OF EAC

- (1) COMMISSIONING OF ADDITIONAL 75 MW  
(COMBINED CYCLE UNIT No. 5, VASILIKOS) - 2012
- (2) DE-COMMISSIONING 2 x 30MW = 60MW  
(TWO STEAM UNITS, MONI) - 2012 (September)
- (3) DE-COMMISSIONING 4 x 30MW = 120MW  
(FOUR STEAM UNITS, MONI) - 2013 (July)

# Generation Business Unit

Figure 2

## TOTAL GENERATION (Million kWh)

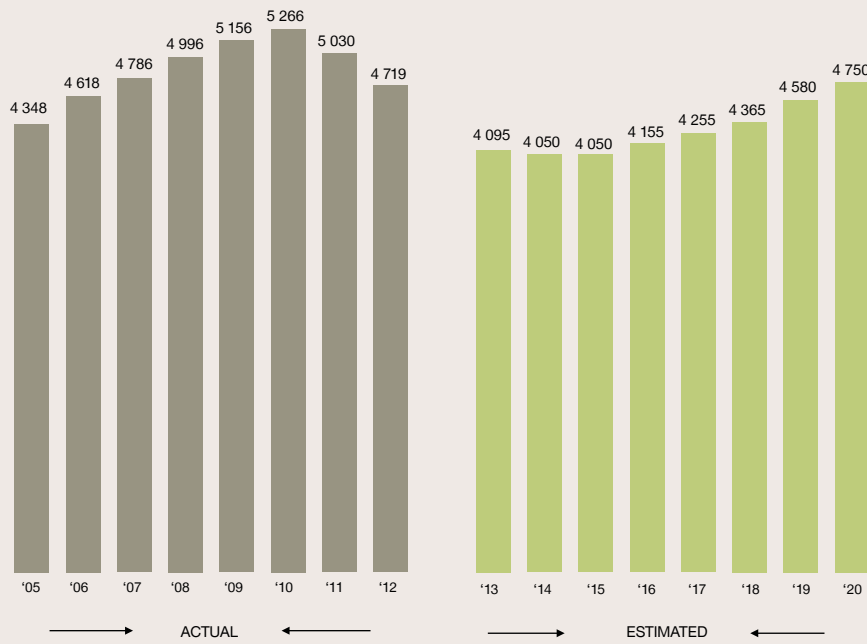
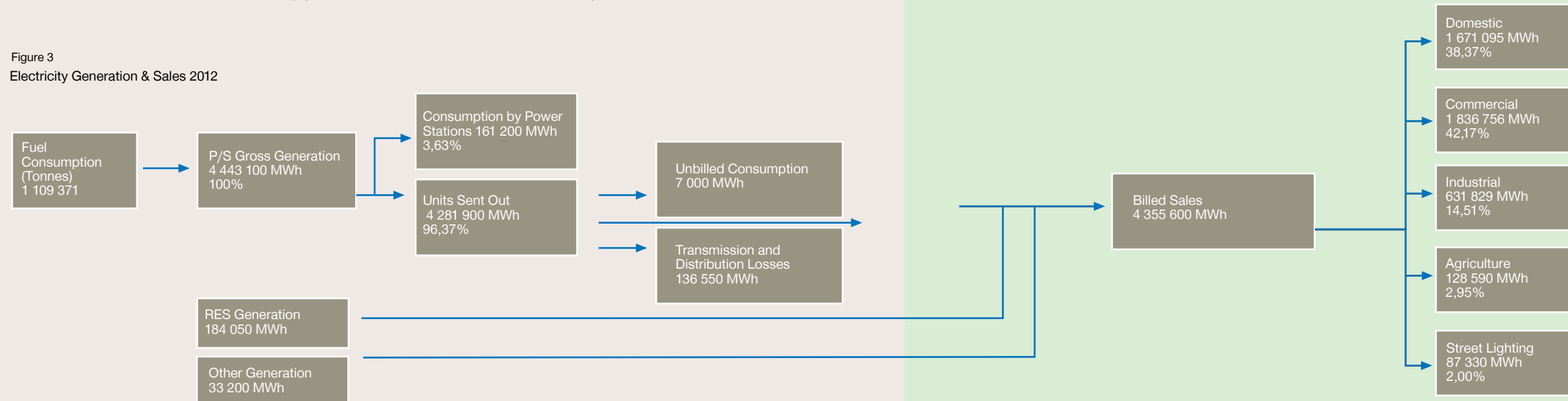


Figure 3

## Electricity Generation & Sales 2012



# Networks Business Unit

The Networks Business Unit (NBU) is the EAC's largest Business Unit and is responsible for the development, maintenance and management of the National Transmission and Distribution Networks.

Moreover, the Networks Business Unit is the Distribution System Operator (DSO) responsible for the operation of the Distribution System.

The Transmission and Distribution Management, the four (4) EAC Area Offices as well as the Electronics and Communications, Civil and Building Works and the GIS Network Data System sections all belong to the NBU.

## **ENERGY CRISIS MANAGEMENT AFTER THE MARI EXPLOSION**

Following the tragic events of 11 July 2011 which led to the loss of 53% of the EAC's installed capacity, the Networks Business Unit played a leading role in the successful management of the resulting crisis, in cooperation with the Crisis Management Group.

This was confirmed by the report of the representative of the UK company National Grid who was in Cyprus at the time as an envoy of the UK Foreign Office to provide advisory services if needed during the crisis management period. The representative not only praised the handling of the crisis but wrote a report, in which a considerable number of the actions taken by the EAC were presented as suggestions that National Grid should include in its own crisis management plans.

## **Progress in the Vasilikos Power Station Rebuilding Project**

In the framework of the project to bring Unit No. 4 of Vasilikos Power Station back into operation, damage to three high voltage transformers (ST41, ST42 & ST40) and the variable speed drive transformers was repaired. Three excitation transformers (ST41, ST42 & ST40), two fuel transformers, two backup transformers (14BHT10 & 14BHT20) and an SFC transformer for gas turbine 41 were replaced.

All the required specialised technical testing was carried out before energising.

## **Installation of New Temporary Generators at Moni**

To cover electricity supply requirements during the summer of 2012, mobile 120MW generators were installed and brought into operation on the site where the EAC's poles and pylons are stored at Moni Power Station.

For their successful installation by the deadline, a large number of staff of various specialisations from the Area Offices and the Management of the Networks Business worked on the project. The main tasks were as follows:

- Preparation of plans and construction drawings
- Preparation of the site
- Laying of a 132kV cable to connect the mobile generators to the Moni substation
- Construction of equipment bases
- Installation of a compact type Medium Voltage substation
- Preparation of grounding grids
- Installation of 132kV equipment
- Installation of 3 40MVA transformers
- Installation of a Control Room
- Installation of terminal cables at the Moni substation
- Carrying out of pre-operational testing, connecting and operation of all equipment

## **Dismantling of Temporary Generators**

On 15 September 2012 the 120MW mobile generators that had been installed at Moni Power Station were dismantled.

On 31 August 2012 the mobile generators installed in summer 2011 at the Dhekelia, Moni and Vasilikos power stations were also dismantled.

## **TRANSMISSION NETWORK**

### **INTRODUCTION**

The transmission network is the backbone of the EAC's system, connecting the power stations with the load centres.

Development works respond to the ever-increasing demand for electricity and, at the same time, increase transmission system reliability.

During the year under review, the installed capacity of the transmission substations increased by 269 MVA.

### **CONSTRUCTION PROJECTS**

In 2012, the Network Development Project Management carried out the following development and upgrading works on the Transmission Network:

#### **New substations**

##### **Psevdas 132/22-11 kV Substation**

The Psevdas 132/22-11kV Substation was energised in August 2011. The Substation connects the 20 MVA Agia Anna Wind Park to the Authority's Transmission Network. It has been expanded through the installation of a 40MVA transformer and a Medium Voltage panel with the aim of connecting two new wind parks, each with an installed capacity of 10,8 MVA. The Moglia Wind Park and its equipment were energised in May 2012 while commissioning of the TSP Aeolian Dynamics is pending.



# Networks Business Unit

## Stroumbi 132/22-11kV Substation

Commissioning of the substation has been postponed for early 2013. It is at the pre-commissioning testing stage. It will be linked to the Anatoliko and Polis Substations.

## Athienou 132/22-11kV Substation

About 85% of the work on the Athienou 132/22-11kV Substation has been completed. The estimated completion date is May 2013.

## Xeropotamos 132/22-11kV Substation

Phase 2 of the new Xeropotamos 132/22-11kV Substation was energised on 17 of January 2012. The dismantling of the old Substation was completed the same day.

## Upgrading / Dismantling of existing Substations

### Vasilikos South 132/22-11kV Substation

After being disconnected from the temporary generators at Vasilikos on 9 November 2012, both transformers at the Vasilikos South Substation now function as a 132/22-11kV step-down transformer.

### Moni 132/11kV Substation

Following the dismantling in September 2012 of the temporary generators installed in June 2012, the cut-off and transformer installations were reinforced with an 22kV circuit breaker panel to monitor units being used as inductors. In March 2013 they will be further reinforced with the installation of inductors with a total capacity of 64 MVAR.

### Dhekelia 132/22-11kV Substation

Following the explosion at the Evangelos Florakis Naval Base, a 73 MVA 11/132kV transformer was installed at the Dhekelia 132/22-11kV Substation and connected to temporary generators. In September 2012, the generators were disconnected.

### Polis 132/66/11kV Substation

The substation has been upgraded with interconnection ports to the Stroumbi Substation via a 132kV/66kV autotransformer and to the Akoursos Substation which increases the area's reliability indicator. The upgrade was completed in November 2012.



## International Airport Substation

It will be upgraded from a 2 x 31, 5 MVA to a 3 x 40 MVA open type GIS substation. In 2012 the two 31,5 MVA transformers were dismantled and the two 40MVA (T2 & T3) were activated. Additionally, open type GIS equipment was installed and energised. Work is due to be completed in March 2013.

## Anatoliko 132/66/11kV Substation

The substation has been upgraded with a port that fed an autotransformer which has been dismantled and adapted to power the overhead power line connected to the Stroumbi Substation. The upgrade was completed in September 2012.

## Overhead Power Lines / Underground Transmission Cables

### Ypsonas-Trimiklini 132kV overhead power line

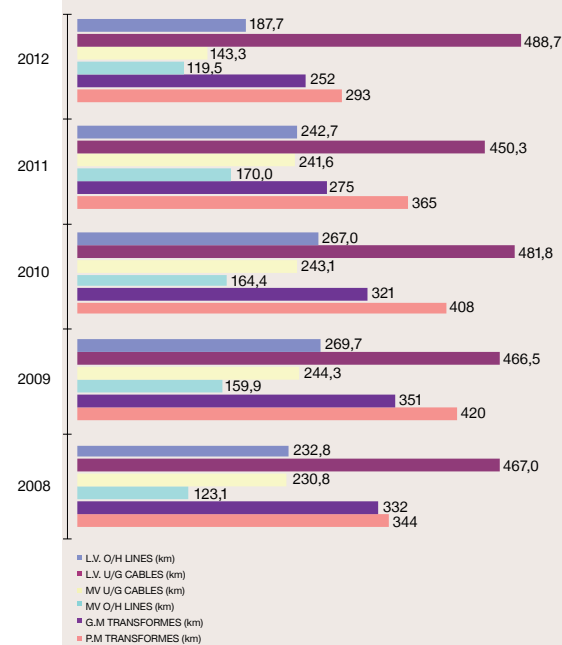
Construction work is ongoing on the new Ypsonas-Trimiklini 132kV double circuit overhead power line, approximately 17km in length as far as the new location of the Trimiklini substation. Some 4km of cable remains to be installed. Consent is expected soon on a new route in the Lania area.

### Stroumbi-Polis 132kV overhead power line

Construction and commissioning of the new 132kV double circuit power line, some 21km in length, from Stroumbi to the Polis Substation was completed in March 2012 and the old 66kV 21km Stroumbi-Polis single circuit line was dismantled.

Figure 4

NEW DISTRIBUTION PROJECTS EXECUTED IN THE LAST FIVE YEARS



## **Athienou 132kV overhead power line**

The new 7,5km overhead power line will connect the Athienou Substation to the Dhekelia-Free Industrial Zone line. The project is due for completion in March 2013.

## **Orounta-Tembria 132kV overhead power line**

In April 2012 the 5km section of the 132kV Orounta-Tembria overhead power line from Korakou to Tembria was completed and energised while the old 4km 66kV single circuit line from the Tembria Substation to Korakou was dismantled.

## **Dismantling of the 132kV Alambra-Athalassa overhead power line**

The 16km double circuit 132kV Alambra-Athalassa power line was dismantled.

## **Dismantling of the 132kV Moni-Polemidia overhead power line**

The 31km double circuit 132kV Moni-Yermasoyia-Ayia Phyla-Polemidia power line was dismantled and undergrounded.

## **Undergrounding of Overhead Power Lines in Lemesos and its suburbs**

In the context of the overhead power line undergrounding project for Limassol and its suburbs, 54,4km of 132kV underground cables were installed and 31,3km of overhead double circuit power lines were dismantled. The project was completed and delivered in January 2012.

## **Tseri-Lakatamia Underground Cable**

The 132kV Tseri-Lakatamia double circuit underground cable was delivered in January 2012.

## **Larnaka Free Industrial Zone-Alexigros Underground Cable**

The 132kV single circuit Larnaka Free Industrial Zone-Alexigros underground cable was also delivered in January 2012.

## **Other Projects**

### **Transmission System Reactive Power Compensation**

Some time ago, the Networks Business Unit studied the effect on the Transmission System of the flow of reactive power following the increase in length of High Voltage cables under conditions of low demand.

The financial situation created in the wake of the destruction of Vasilikos Power Station meant that a planned project which included the installation of a Static Reactive Power Compensator (90 MVar) could not go ahead.

The Networks Business Unit, in collaboration with the Transmission System Operator and the Generation Business Unit implemented measures and methods and continues to study ways of dealing with the problem with all the means at its disposal, to monitor the flow of reactive power.

### **They may be summarised as follows:**

- The balanced removal of cables and monitoring of the absorption of reactive power by the generators for the safe operation of the system.
- The immediate purchase of 64MVar 22 kV inductors to be installed at Moni substation, due to be completed by March 2013.
- The issuing of a tender for the purchase of 2x75MVar 132kV variable inductors to be installed at Moni substation in February 2014.
- The immediate installation of backup power transformers on the Medium Voltage network to act as inductors of a total of 28MVar into the system.
- Monitoring of coordinated control of the High Voltage network, resulting in a 20-30MVar reduction in reactive power, reducing voltage to around 127kV.
- Confirmation monitoring of the operation of the controls and of the minimum underexcitation limiters on the gas turbines at Moni Power Station. This monitoring will continue on all the generators in the system with the hoped-for gain being approximately double the permitted amount of absorbed reactive power from the generators regarding the limits determined by the Cyprus Transmission System Operator, giving more leeway for a dynamic control of the flow of reactive power and maintaining the reliability of the system.

### **TRANSMISSION SYSTEM DEVELOPMENT STUDIES**

In 2012 the following Transmission Network studies were prepared:

#### **Lefkosia Area:**

The following studies were completed and approved for Lefkosia and the district:

- Review of the study to underground the overhead power line connecting the Athalassa-Tseri and Athalassa-Kokkinotrimithia substations.

The following studies are planned:

- Powering the new Engomi closed type GIS 3x40MVA 132/22-11kV Substation.

#### **Lemesos Area:**

The following studies were completed and approved for Lemesos and the district:

- Preliminary Study on the Ypsonas Industrial Area nodal transmission Substation.
- Upgrading of the Moni transmission Substation from 66kV open-type to 132kV GIS closed-type.
- Preliminary Study on a new Vasilikos-Ypsonas double circuit overhead power line (rbus twin), Polemidia-Ypsonas, Anatoliko-Ypsonas, Kolossi-Ypsonas and Trimiklini-Ypsonas.
- Preliminary Study for a new Vasilikos-Moni overhead power line (rbus twin).

# Networks Business Unit

The following studies are also planned:

- Final Study on the Ypsonas Industrial Area nodal transmission Substation.
- Final Study on the upgrading of the Moni transmission Substation from 66kV open-type to 132kV GIS closed-type.
- Final Study on the new Vasilikos-Ypsonas double circuit overhead power line (rubus twin), Polemidia- Ypsonas, Anatoliko-Ypsonas, Kolossi-Ypsonas and Trimiklini-Ypsonas.
- Final Study on a new Vasilikos-Moni overhead power line (rubus twin).
- Establishment of the CUT closed-type GIS transmission Substation and its interconnection with other Substations.
- Upgrade to the Yermasoyia-Ayios Athanasios connection cable from 630mm<sup>2</sup> to 800mm<sup>2</sup>.

#### **Larnaka-Ammochostos Area:**

The following studies were completed and approved for the districts of Larnaka and Ammochostos:

- Preliminary Study on the establishment of a new Klavdia transmission Substation.
- Preliminary Study on the upgrading of the open-type 66kV Mari substation to a closed-type GIS 132kV Substation.
- Preliminary Study on a new Vasilikos-Kofinou overhead power line (Rubus Twin).
- Preliminary Study on a new Alambra-Kofinou overhead power line (Rubus Twin).

The following studies are also planned:

- Interconnection of the Pyla and Commercial Centre transmission substations via a double circuit underground transmission cable.
- Final Study on the establishment of a new Klavdia transmission Substation.
- Final Study on the upgrading of the open-type 66kV Mari Substation to a closed-type GIS 132kV Substation.
- Final Study on a new Vasilikos-Kofinou overhead power line (Rubus Twin).
- Final Study on a new Alambra-Kofinou overhead power line (Rubus Twin).

#### **Pafos Area:**

The following studies were completed and approved for Pafos and the district:

- Undergrounding of a section of the Anatolikos-Hadjipaschalis overhead power line.

The following studies are also planned:

- Connecting the new Ikaria transmission substation to the New Pafos and Hadjipaschalis Substations.

#### **Other Studies:**

The following studies have also been completed:

- Preliminary Study on the connection of pump-storage generators in four different locations.
- Dismantling of temporary 120 MW internal combustion units connected to the System for summer 2012.

The following studies are planned:

- Continuous Modelling of the Transmission System and Equipment and System Analysis.
- Transmission System Reliability for summer 2013.
- Ten-Year Development Plan 2013-2022.

All Transmission System studies are carried out in collaboration with the Transmission System Operator (TSO) which is directly responsible for the operation and development of the Transmission System.

## **DISTRIBUTION NETWORK**

### **INTRODUCTION**

The Distribution Network is the link between the EAC's transmission system and its customers.

### **SPECIFICATIONS, TECHNOLOGY & DEVELOPMENT PROJECTS**

#### **Technical Specifications**

The Networks Business Unit is responsible for the drawing up of technical specifications for all Distribution Network equipment and materials.

These technical specifications are under constant revision due to changes to international standards, improvements in technology and/or alterations in the use of materials. There are, in total, 267 approved technical specifications concerning 1 720 materials. In 2012 four new technical specifications were drawn up while 12 were revised.

#### **Code of Practice**

The correct and uniform application of Distribution Network construction work requires the existence of a detailed Code of Construction Practice. Revision of the code for overhead power lines has been completed and revisions take place at regular intervals to cover new applications and improved construction practices aimed at raising productivity and increasing personnel and public safety.



# Networks Business Unit

## Network Construction Specifications

In order to carry out studies that include distribution networks, Distribution Network Specifications have been drawn up for all types of construction. The Distribution Network Specifications are maintained and reviewed by the Networks Business Unit to ensure the proper use of materials and the correct costing of studies.

## Evaluation of Tenders – Materials Supply and Service Provision Contract Management

The role of the Networks Business Unit in the evaluation of tenders and the subsequent management of contracts for the supply of materials and the provision of services is of crucial importance.

Safety issues and the uninterrupted supply of electricity to customers require the implementation of strict quality criteria in the choice and manufacture of equipment and materials.

In 2012 the Unit's distribution section participated in the evaluation of 49 international tenders and 37 local ones. At the same time it was responsible for the technical management of 102 materials supply and service provision contracts.

## Distribution Network Maintenance

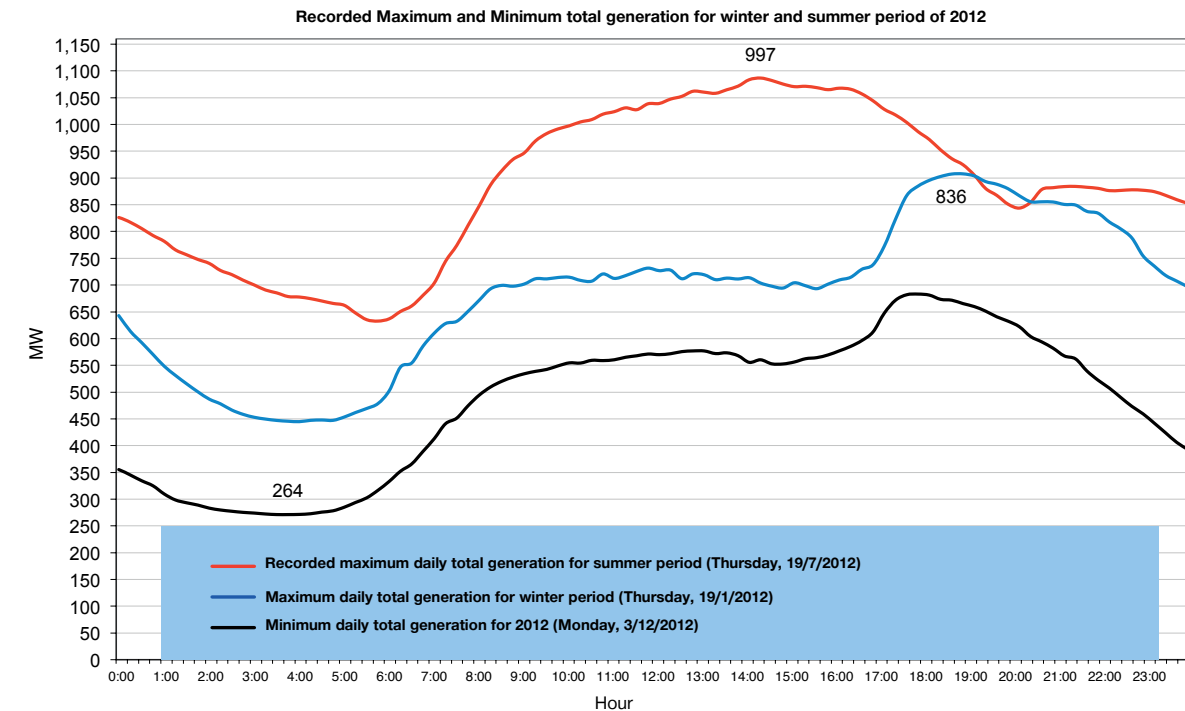
In the framework of creating a Project Management Environment across the complete range of Network works, a plan was drawn up and implemented that brings all Distribution Network maintenance work together as a single, unified, annual major Network project.

This experiment was extremely successful since it focused the attention of all those involved and, through regular monitoring of progress, it achieved its aim of carrying out all maintenance tasks to a great extent.

## Smart Meters & Smart Grids

In recent years there have been significant developments in power electronics, electronic metering systems and telecommunications systems and these have resulted in the implementation of distributed management, interactive movement of electricity and data as well as smart metering systems which have enabled electricity companies to offer their customers a broader and higher-quality range of services.

Figure 5



Note: As shown in TSO 2012 Annual Report

Following ratification of the EU Directive 2009/72/EK, member states are obliged to install smart meters on 80% of customer premises by 2020, provided that the results of the required cost/benefit study are positive.

The EAC has taken the strategic decision to implement, initially on a trial basis, an Automatic Meter Management (AMM) system which supports the following functionality:

- Automatic gathering, processing, transmission, management and use of the data gathered by the meters.
- Automatic meter management – connection/disconnection.
- Interactive communication with meters.
- Availability at the right time of targeted information on consumption to all involved parties and their systems, including consumers.
- Support of services that can improve energy saving, both regarding consumption by customers and that lost within the system (generation, transmission, distribution).
- Capability for expansion/upgrading so as to support Smart Grid operations.

All of the above lead to increased productivity and a drastic reduction in operating costs.

The Authority has already appointed the Dutch consultancy firm KEMA to draw up the technical specifications for a tender for the procurement of the above system. The tender was published in July 2012 and the winner is due to be announced during the first half of 2013.

## **Virtual Power Plant**

This project aims to take advantage of generators that are privately-owned by consumers who, all together, will comprise a Virtual Power Plant that will be available to the Distribution System Operator to energise when required by the balance of demand and the adequacy of supply. Through the use of state-of-the-art telecommunications and strategic cooperation with various professionals, academic bodies and companies, the Distribution System Operator, upon instructions from CERA, is planning to integrate a number of privately-owned generators into the country's energy resources for use when required.

It is expected that the VPP will be used in the following situations:

- In cases of energy emergencies, e.g. following the failure of a generation unit resulting in a sudden reduction of the available load. In such a case, the VPP will be activated at once in order to take up part of the load lost as a result of the fault in question.
- As a static backup to deal with part of the backup requirements during periods of peak demand.

Planning for the project is already at an advanced stage. The EAC has reached agreement on the purchase of the necessary equipment for the establishment of the Virtual Power Plant. Moreover, the Authority has drawn up agreements with a number of customers whose generators will be connected to the VPP.

So far, 14 generators with a total installed capacity of 7,8MW have been integrated into the VPP. A further 23 applications have been studied and approved for a further 17,2MW of power.

## **Electric Vehicle Charging Points**

This Project involves the purchase and installation of 20 electric vehicle charging points in municipal car parks. It is being carried out in collaboration with the Cyprus Energy Agency and the municipalities that will provide charging areas have been selected jointly.

The EAC drew up the necessary specifications in 2012 and it will issue a tender in February 2013 with the aim of installing and operating the charging points before summer 2013.

## **Pilot Implementation of Aerial Bundled Conductors**

The Networks Business Unit has decided to introduce aerial bundled conductors throughout the low voltage overhead network.

The relevant specifications have been drawn up and a tender has been published for the introduction of the above technology to the Authority's Transmission Network.

The Tender includes a provision for the pilot construction of 10km of low voltage lines by EAC employees who will be trained beforehand by qualified personnel from the successful Tenderer. Construction of the network will be carried out under the guidance and supervision of personnel from the successful Tenderer. At a later stage, the Authority's own personnel, having received training, will undertake the training of the remaining employees in overhead line construction. The successful Tenderer, in addition to supplying the aerial bundled conductors, related parts, tools and equipment, will be obliged to prepare a Code of Practice for the Construction of Low Voltage Overhead Power Lines with the use of Aerial Bundled Conductors and parts.

Work on the construction of the pilot network using aerial bundled conductors is expected to start in early April and be completed in mid-May.

Upon completion of the work, the Authority will issue a Tender for the purchase of the necessary materials, tools and equipment for the construction of the Low Voltage Network using only aerial bundled conductors by the whole of the EAC's overhead line staff from 1 January 2014.

## **Faults Recording and Performance Indicator Export System**

The faults recording system was completed and brought into operation on the SAP system in order to create an archive of data on power cuts to consumers. It is expected to be extended to include planned power cuts.

Recording faults with SAP software is of strategic importance for the preparation of reports and performance indicators, as required by law and demanded by CERA and the European Union for the purpose of monitoring the reliability of the EAC Network.

## **Individual Equipment, Tools & Instruments Charging**

The Individual Equipment, Tools & Instruments Charging system was added to the SAP system. For now it covers approximately 600 stores codes as set out in Process D-T-206.

The process followed until now reveals gaps which allowed the provision of individual equipment, tools and instruments without any possibility of effective control.

This system will bring about considerable savings to our daily operational expenses.

## **Distribution Network Development Projects**

Distribution Network Development Projects are carried out and monitored by the relevant departments in the Area Offices.

The cost of construction work on the expansion and development of the distribution system in 2012 amounted to €54 million, compared to €65 million in 2011.

## **DISTRIBUTION SYSTEM DEVELOPMENT STUDIES**

Distribution Network Development Studies are carried out and monitored by the relevant departments in the Area Offices.

In order to expand and develop the distribution system, 5 646 studies were completed by the Area study sections in 2012 compared with 6 557 in 2011.

# Networks Business Unit

## AREA OFFICES

The Area Offices belong to the Networks Business Unit and their purpose is to provide services related to the EAC's operations. These range from the settlement of bills to the construction of networks and repairing faults.

The objective of the Area Offices is to offer the best possible customer service with the ultimate aim of providing an uninterrupted, reliable, high-quality supply of electricity.

For better quality customer service, the Area Offices have obtained ISO 9001 Quality Certification and have a commitment to CERA to maintain the Customer Charter with guaranteed services.

### The EAC's Area Offices are the following:

- Lefkosia –Keryneia – Morfou
- Lemesos
- Ammochostos – Larnaka
- Pafos

The Area Offices are organised by Section:

- (a) Studies
- (b) Planning
- (c) Construction and Maintenance
- (d) Customer Service
- (e) Financial and General Services

## Studies

The Studies Section comprises the Studies Department and the Drawing Office. The main work of the Studies Department is the management of customer or producer applications to be connected to the EAC network for network relocation, the carrying out of studies for expansion of the Network for the connection of customers and producers and studies for the upgrading/development of the Distribution Network, monitoring of Distribution Network reliability and stating the views of the EAC to the responsible authorities and interested parties on the method of supplying power to a particular development project.

The main job of the Drawing Office is to maintain the Network Database and to make it available to all Internal and External Customers.

## Planning

The main work of the Planning Section is to obtain the consent of landowners whose property is affected by Network development, and obtaining Government Approval for Network Development, local contracts for the purchase of materials, services and premises/buildings for the location of substations.

## Construction & Maintenance

The Construction & Maintenance Section is divided into four subsections:

- Ground Constructions, which deals with the expansion and upgrading of the Underground Distribution Network and the construction of underground supply lines to premises.
- Overhead Line Constructions which deals with the expansion and upgrading of the Overhead Distribution Network and the construction of overhead supply, with the installation of meters and the construction of the Street Lighting network.
- System Operation, which deals with load monitoring, the operation of the Medium Voltage Distribution System (power cuts and handling), load recording at distribution substations and faults detection.
- Transmission/Distribution Substation Maintenance, which deals with the construction/expansion/maintenance of substations and the maintenance of Medium Voltage Network equipment.

## Customer Service

The main activities of the Customer Service Section are the operation of the Contact Centre for the provision of information, receiving and processing applications, complaints handling, etc., publishing terms and conditions, connections/disconnections/reconnections of providers, meter reading, inspection of premises, maintenance of street lighting and the provision of alerts and emergency services to customers during faults.

## Financial and General Services

The main activities of the Financial and General Services section are bill settlement, cost management, materials management, archive maintenance and personnel issues, building maintenance, preparation of financial statements and performance indicators and the preparation and monitoring of budgets.

## DISTRIBUTION SYSTEM MANAGEMENT

The Networks Business Unit is, according to the recent review of Cypriot legislation, the owner or the Transmission Network and Owner/Operator of the Distribution Network. The particular responsibilities, rights and obligations concerning the Distribution Network create a special requirement for their optimum implementation for the benefit of consumers and the economy. A particular characteristic of the Unit is that it deals with what is by its very nature the monopolistic part of the EAC's work and this creates a need for strict regulation so that the objectives laid down by the EU and the Republic of Cyprus are achieved.

The Networks Business Unit has long aimed at the best technological solutions which can bring about the most reliable supply of electricity at the lowest possible cost. Now, in particular, with the arrival of distribution generation and the development of two-way communication between consumers and network monitoring points through a modern, reliable telecommunications infrastructure, everything is in place for the creation of a smart network with all the benefits that come with it.



# Networks Business Unit

The coming smart network is an electricity grid which, with optimum financial solutions, can effectively incorporate the behaviours and actions of all users that are associated with it – generators, consumers and those that do both – in order to secure the most economical, efficient and sustainable energy system with low leakage rates, high quality and safety levels, and safe delivery.

In today's environment of new technologies, the more distributed generation is strengthened and demand is managed with the appearance of additional loads such as electric cars and heat pumps, so does the line separating the various activities (generation, networks, trade) become dimmer. In commerce the link between energy sales and load management, distributed generation and making use of all the information from the smart network is creating the prospects for new markets and crews with other services.

It is clear that the work of the TSO is the operation, maintenance and development of the Electricity Distribution Network in Cyprus and the provision of transparent, impartial access to consumers and all network users. It aims securing a reliable power supply to consumers, the quality of that supply and constant improvements to the quality of service.

On the basis of the provisions of the law presently in force, the work carried out by the TSO concerns:

#### **Satisfying the demands of users:**

- New connections for consumers and producers
- Changes to previous supply (increased voltage to existing connections)
- Network relocation

#### **Network Development:**

- Reinforcing, improving and modernising the Network
- Construction of a Distribution Centre and the required interconnection network

#### **Network Operation and Exploitation:**

- Distribution Network Operation
- Network Inspection and Maintenance
- Faults Repairing
- Network User Assistance
- Provision of additional services
- Consumption measurement
- Support of the TSO in the operation of the system, providing all the necessary information for the operation of the network.



#### **The smooth and efficient operation of the Electricity Market at network level:**

- Management of data on the interconnected Distribution Network with the implementation of a smart network architecture for the benefit of all those involved in the electricity market.
- Taking care of distributed generation with systems that provide net-metering, load demand prediction, the operation of virtual power plants, etc.
- Customer service via load demand management for the optimum exploitation of the Distribution infrastructure so as to satisfy all consumer demands.

#### **TELECOMMUNICATIONS AND ELECTRONIC SYSTEMS**

##### **INTRODUCTION**

The Electronic Systems and Telecommunications section deals mainly with the development and support of the EAC's electronic telecommunications systems and with the security systems that protect the Authority's installations.

##### **SDH/PDH Optical Fibre Telecommunications System**

The Authority's SDH/PDH Optical Fibre Telecommunications System uses digital multiplexers to interconnect transmission stations, power stations and the Authority's offices with the objective of catering for the requirements of the SCADA/EMS systems, Transmission Line Teleprotection, Telephony, Load Management (Ripple Control), IT and other services.

In 2012 the system's SDH/PDH digital multiplexers were upgraded in four locations, while in June, equipment in the Management Centre at the Vasilikos Power Station was restarted for the SCADA/EMS system in Unit No. 4 and Unit No. 5.

## **10Gbps/MPLS - Metro Ethernet Optical Fibre Telecommunications System**

A project is under way to install a high-speed next generation telecommunications network which will respond to the EAC's data transfer requirements via an optical fibre network. The installation of 10Gbps/MPLS equipment on seven EAC premises is due for completion in February 2013.

Furthermore, in 2012 new Metro Ethernet equipment was installed at seven points to cover the increased needs of the Protective Security, SCADA/EMS and IT systems.

## **Optical Fibre Network**

The Authority has an extensive overhead and underground optical fibre network along the length of the Transmission Network. In 2012 the optical fibre network was extended to connect nine additional transmission substations and other EAC premises. Additionally, collaboration continued with the Authority's two strategic partners in telecommunications, PrimeTel and Cablenet.

## **Supervisory Control and Data Acquisition and Energy Management System (SCADA/EMS)**

The computerised real-time Supervisory Control and Data Acquisition and Energy Management System (SCADA/EMS) was first implemented in 1997. Via the Energy Control Centre (ECC) and the Area Control Centres, it controls the Generation, Transmission and Primary Distribution Network systems. A Backup Energy Control Centre has also been in operation since 2006.

SCADA/EMS implementation was extended in 2012 to control two additional transmission substations while control equipment was upgraded in another five substations.

All the above were carried out in collaboration with the TSO.

## **Load Management System (Ripple Control)**

This system for controlled load management on customer premises (solar heaters, centralised climate control systems, water pumps, street lighting, etc.) uses the Transmission and Distribution Networks as a telecommunications tool.

The EAC intends to expand and upgrade the Load Management System by 2015 by replacing the Central Monitoring and Planning Unit.

## **Machine-to-Machine M2M Wireless Communication System**

Radius Servers were installed for M2M wireless communication via GPRS/3G for the monitoring units of the generators of the Virtual Power Plant and remote SCADA/EMS terminals.

## **Protective Security**

Work continued on the installation of access monitoring systems, unauthorised access alarm systems and monitoring with cameras of transmission/distribution substations, power stations, stores, offices and EAC customer service centres. The Section also provided technical support for the Authority's installed security systems.

## **Telephone Network and Systems**

Technical support continued to be provided for telephone systems, connections of the existing telephone network and systems of the Contact Centre and for the internal networking of the EAC's telephone systems.

## **Wireless Communication**

Wireless Relay Stations for improved communications were installed in Lefkosia, at Vasilikos and Dhekelia, as were phone bases in vehicles and substations.

Radiotelephone support and maintenance continued on an islandwide basis to meet the Authority's needs.

## **Civil Defence & Emergency Planning**

Checks and regular testing of telecommunications links continued in accordance with the directives and recommendations of the relevant ministries.

## **CIVIL AND BUILDING WORKS SECTION**

### **INTRODUCTION**

The Civil and Building Works Section is part of the Networks Business Unit and deals with all the EAC's construction projects.

### **Power Stations**

#### **Reconstruction of Vasilikos Power Station**

In 2012 the Section focused with all its might on the enormous project to reconstruct Vasilikos Power Station. Immediately after the explosion on 11 July 2011, it was called upon to undertake the task of repairing and renovating all the station's buildings and constructions.

The cost of the work carried out until the end of 2012 is approximately €13.000.000, while some 25 contracts were drawn up for a total of €16.000.000. It is estimated that the total cost of the Civil Engineering works will amount to €18.000.000.

#### **Desalination Plant at Vasilikos**

Regarding the Desalination Plant, work restarted in 2012 once the effects of the explosion of 11 July 2011 had been evaluated. Intensive construction work began during the course of the year. The project is due for completion in the first half of 2013.

## LNG Terminal

Making the most of the geotechnical and other research carried out by the EAC either for the immediate needs of the LNG Terminal or for the development of the infrastructure of Vasilikos Power Station, the Section collaborated with the responsible state services and those studying the development of the LNG Terminal with the aim of speeding up progress on the project.

## Application for a Building Permit for a Solar Thermal Power Station

Since 2009, in the context of its strategy for the development of Renewable Energy Sources (RES) in Cyprus, the EAC has been studying the construction of a 50MW Solar Thermal Power Station in the Akrotiri area of Lemesos on land owned by the Lemesos Bishopric. A cooperation agreement has already been signed between the EAC and Lemesos Bishopric for the realisation of the project and techno-economic evaluations and environmental studies have been carried out on the establishment of a Solar Thermal Power Station.

Architectural and other plans were drawn up by the Civil and Building Works Section and the departmental process of submitting an application for a Building Permit began. A second package of plans was submitted in early April 2012 and the remaining planning work is under way.

## Transmission/Distribution Systems Projects

Under the supervision of the Civil and Building Works Section, construction work was carried out in various areas, such as transmission substation maintenance and expansion and supervision of the installation high voltage overhead power lines, while the Section provided support to the Authority's Area offices regarding the maintenance of distribution substations.

## Area Offices

Construction work on the new Pafos Area Offices was completed towards the end of 2012, apart from the public park area which is ongoing and expected to be completed in the next two months.

Construction work on the new Larnaka Area Offices has been postponed for the time being due to the new financial/economic situation.

Additionally, the following projects were undertaken:

- Various renovation/maintenance/refurbishment projects in the Lefkosia, Lemesos and Larnaka Area Offices.
- The planning and drawing up of specifications for a tender were completed for the Data and IT Systems Recovery Centre in the new Lemesos Stores.



- Planning is under way for a new Data Centre to be located in the Lefkosia Area Offices.
- Following an application by the Town Planning Department, the Old Engine Room in Lemesos has been declared a Listed Building and plans for its preservation are being drawn up.

## GIS NETWORK DATA MANAGEMENT SYSTEM

The establishment of the upgraded GIS operation environment which, among other things, enables the provision of data at much higher speeds, was completed.

The new operating environment offers an upgraded Geobase infrastructure regarding data quality, the implementation of strict data quality certification and monitoring processes and basic functional improvements to the updating of the Network and the workflow management system.

Furthermore, the network is enhanced vectorially as follows:

- For the Transmission System, all transmission substation premises and monitoring buildings, the route and circuits of the overhead power lines and underground cables, together with their connections, have been registered.
- For the Distribution System, updating the Medium Voltage Network is 95% complete in all Areas. Moreover, action has started for the digitisation of the overhead Low Voltage Network and customer supply.
- Immediate updating of the underground network Data Management System.

All the membranes of the network and the Master Plan have been swept, georeferenced and incorporated into the system. Additionally, the online Area Offices Master Plan has been enhanced by entering of the topographical work of the Medium Voltage overhead network into the GIS which also offers the infrastructure for entering the overhead Medium Voltage Network.

The following training sessions on the Network Data Management System were held for the technical staff in the Drawing Offices, Studies and Construction Sections:

- Entering Overhead and Underground Network data
- Entering Applications
- Entering Commissioning of Overhead and Underground lines/cables
- Project Management by Local Cores
- Monitoring of underground, overhead network and substation works
- Entering Transmission Network data (High level)



# Customer Service Business Unit

## CONSUMERS

At the end of 2012, the total number of consumers in the government-controlled areas of Cyprus stood at 548 498, a net increase of 4 588 or 0,8%.

Table 1 (page 49) shows the number of consumers by category as well as the percentage increase over the previous year.

## BILLED SALES OF ELECTRICITY

Billed sales of electricity in the government-controlled areas amounted to 4 355,6 GWh, compared to 4 594,9 GWh the previous year, representing a decrease of 5,2%.

Table 2 (page 49) shows the allocation of billed sales of electricity by consumer category, as well as the percentage increase over the previous year.

Sales for the years 2010, 2011 and 2012 are shown in Fig. 6 (page 51). Sales and revenue for 2012 are shown by consumer category and as a percentage of the EAC's total sales and revenue in Fig. 7 (page 55).

## OFF-PEAK SUPPLIES

Off-peak sales (tariff Code 55) totalled 82 919 MWh representing a reduction of 2 850 MWh or 3,3% compared to 2011. This was due mainly to the prevalence of low temperatures. The average per kWh charge rose from 12,22 cents in 2011 to 17,52 cents in 2012.

Consumers opting for the off-peak tariff totalled 21 663, representing a reduction of 81. Of these, 21 307 (98,4%) were domestic consumers with an average consumption of 3 791 kWh compared to 3 908 kWh in 2011.

## TARIFFS

The EAC Tariffs Group continued to work with its external consultants in 2012 on the introduction of new marginal cost tariffs in the context of Cyprus' liberalised electricity market.

In the framework of the decision by the Cyprus Energy Regulatory Authority (CERA) for the gradual rebalancing of tariffs with the objective of removing cross-subsidies among the various tariffs, and following a series of negotiations with CERA, the EAC proposed a number of possible scenarios for the rebalancing of tariffs.



Table 1

### NUMBER OF CONSUMERS

CONSUMER CATEGORY	AS AT 31.12.2012	AS AT 31.12.2011	CHANGE %
Domestic	427 184	422 655	1,1
Commercial	85 198	85 325	(0,1)
Industrial	10 805	11 255	(4,0)
Agricultural	14 978	14 692	1,9
Street Lighting	10 333	9 983	3,5
<b>TOTAL</b>	<b>548 498</b>	<b>543 910</b>	<b>0,8</b>

Table 2

### BILLED SALES OF ELECTRICITY (MWh)

CONSUMER CATEGORY	AS AT 31.12.2012	AS AT 31.12.2011	CHANGE %
Domestic	1 671 095	1 721 663	(2,9)
Commercial	1 836 756	1 854 782	(1,0)
Industrial	631 829	796 187	(20,6)
Agricultural	128 590	136 747	(6,0)
Street Lighting	87 330	85 502	2,1
<b>TOTAL</b>	<b>4 355 600</b>	<b>4 594 881</b>	<b>(5,2)</b>

# Customer Service Business Unit

By its decision 688/2011, CERA approved the rebalancing of the EAC's tariffs which involves increases and reductions in various customer categories. The purpose of these is the gradual removal of cross-subsidies among consumer categories which do not provide any financial benefit to the EAC. In accordance with CERA's decision, the EAC revised its existing tariffs and introduced new charges based on a basic fuel cost of €300 per metric tonne in compliance with the above decision. The new tariffs were approved by CERA and published in the official Gazette of the Republic. Furthermore, by decision 754/2012, CERA reduced the one-off charge imposed on all consumer bills due to increased fuel costs resulting from the Mari incident from 6,96% to 5,75%

In the context of the upgrading of the EAC's services and its efforts aimed at energy conservation, we once again sent out an annual statistical report to all our monthly billed customers. This report includes information on monthly consumption and peak demand for their premises, as well as monthly voltage and load indicators, which are directly linked to proper energy use and conservation.

In the framework of the special domestic tariff (code 08) for large and needy families, by the end of December 2012 some 14 357 customers were benefiting from this. The total benefit to customers in 2012 and, consequently, the reduction in revenue to the EAC as a result of this special tariff, was €8.898.043 compared to what it would have been if these customers had remained on tariff codes 05, 06 and 07.

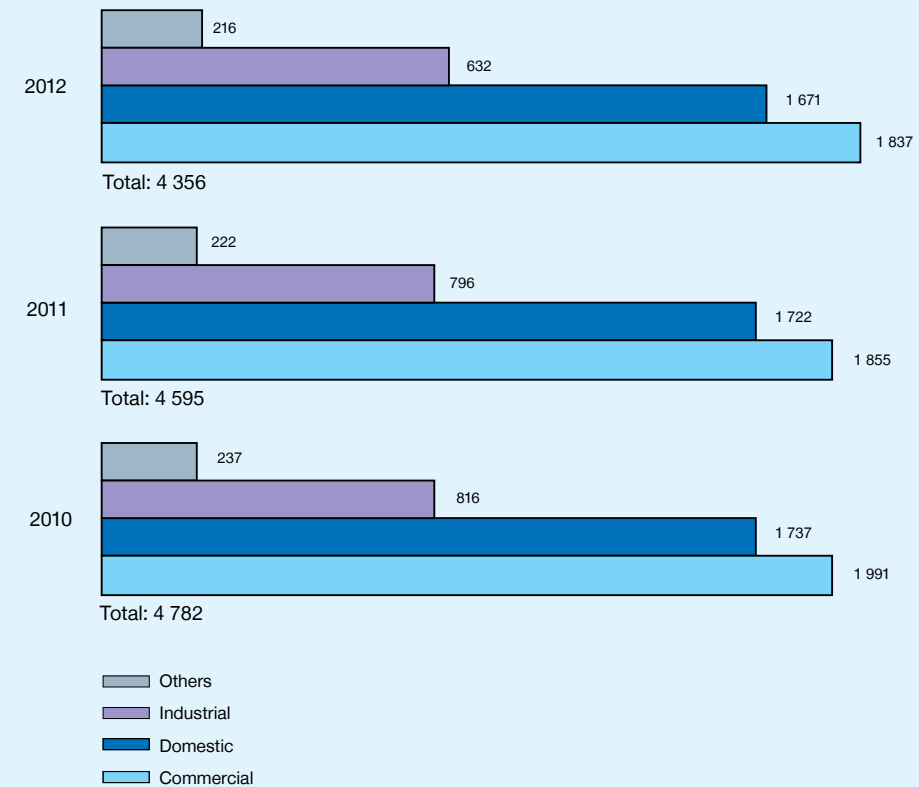
The average selling price of electricity per kWh in all categories rose from 18,668 cents in 2011 to 22,188 cents in 2012 or 18,9%, as a result of higher tariffs, increased fuel costs and the automatic fuel cost adjustment.

## LOAD RESEARCH AND CONTROL

In the context of its efforts to upgrade its Load Research, the EAC uses a software programme by which meter data is retrieved automatically. This programme enables the direct monitoring of customer loads, the automatic retrieval of data and the timely preparation of Load Research reports. During 2012, the EAC continued to implement this Load Research method for all its corporate customers who are supplied at high and medium voltage and for low-voltage commercial and industrial customers. The data obtained was analysed, processed and subsequently used in the drawing up of the relevant reports. The conclusions of these studies are used for revised tariff structuring and for load forecasting and management.

Figure 6

## SALES OF ELECTRICITY (millions kWh)



## CUSTOMER SERVICE AND BILLING SYSTEM

In order to provide the best possible service and information to the Organisation's customers, in May 2008 the EAC adopted a new, modern customer service and billing system, which has responded satisfactorily to the demands of the new competitive environment created by the liberalisation of the electricity market.

Since the implementation of this new system, the standard of EAC customer service and information has improved significantly. Moreover, the system facilitates and speeds up the day-to-day work of the EAC's Customer Service departments to a considerable degree.

The entire system is the main tool and source of information for the EAC Contact Centre.

Since 1 December 2008, the EAC has enabled customers to settle their electricity bills at no additional charge by credit card at all EAC Customer Service Offices and via the EAC website ([www.eac.com.cy](http://www.eac.com.cy)) or the JCC website ([www.jccsmart.com](http://www.jccsmart.com)). In 2009, customers were also given the opportunity to settle their bills online via the websites of the commercial banks. Additionally, since September 2010 customers have also had the option of receiving their bills by e-mail upon request.

# Customer Service Business Unit

## **CONTACT CENTRE**

The EAC's decision to set up a Contact Centre was of strategic importance since the Organisation already finds itself in a competitive environment following the liberalisation of the energy market.

The Contact Centre enables the EAC to provide good quality service and information to consumers/customers quickly and efficiently, to promote the image of a progressive and dynamic organisation and, in general, to respond to the expectations of consumers/customers.

### **Meter Reading Service**

In May 2010, the first Contact Centre service, that of Meter Reading, came into operation. This service enables customers whose meters have not been read because, for example, their premises were closed, to call the freephone number 80006000 at any time. On request, customers key in the 10-digit "Premises Number" that appears on the card left by the responsible EAC official. They then key in the meter reading which, if correct, is automatically accepted. If, for some reason, the customer cannot give the correct reading, the call is redirected to member of staff at the Contact Centre. In 2012, the Meter Reading Service received approximately 20 000 calls.

### **Billing Service**

The Billing Service enables customers to call the islandwide four-digit number 1801 and be informed of the amount of their bill by keying in their bill number. They may also receive information and clarifications about bills, methods of settlement, connections, reconnections, disconnections, transfers, domestic tariffs, how to become a first-time customer, etc. In 2012, the Billing Service received approximately 218 000 calls.

### **Faults Reporting and Complaints Service**

Since April 2011, the Contact Centre's Faults Reporting and Complaints Service has replaced and improved the services previously provided by the Islandwide Faults Reporting Centre (IFRC).

The aim of this service is to provide customers with a full, top quality telephone response during major faults causing lengthy power cuts as well as during daily, isolated faults on the EAC network, on customer premises and to street lighting.

Furthermore, customer complaints are recorded on issues concerning the EAC network such as tree pruning, street lighting problems, etc.

Customer calls are routed via the islandwide four-digit number 1800 to Customer Service Officers at the Contact Centre where the faults are recorded automatically and subsequently reported to Area technical crews for repairs.

In 2012, the Faults Reporting and Complaints Service received approximately 296 000 calls.

### **New Applications Service**

In January 2012, the Contact Centre began providing the New Applications Service, initially serving the Ammochostos and Larnaka districts and later Lemesos and Lefkosia. The service will be extended to the Pafos Area in early 2013.

Customers can dial the islandwide four-digit number 1802 to be informed either automatically or by a Contact Centre officer about the documentation required to accompany an application for electricity supply and about what stage their application has reached. In 2012, the service received approximately 13 000 calls.

## **RENEWABLE ENERGY SOURCES**

In accordance with the provisions of European Directive 2009/28/EC (previously 2001/77/EC), issued during Cyprus' accession process and its compliance with the directives, legislation and regulations of the European Union, the Government proceeded with, among other things, the necessary legislative, regulatory and administrative measures for the promotion of the use of Renewable Energy Sources (RES) and, more generally, of energy conservation with the ultimate goal of increasing the contribution of RES to the country's energy balance. As the main producer and supplier of electricity in Cyprus, the EAC could not but contribute actively to this effort, so as to satisfy the demands of the European Union regarding RES, while acting within the strict framework of Cyprus' appropriately adapted and amended Laws and Regulations.

The EAC enjoys good cooperation with the Institute of Energy of the Ministry of Commerce, Industry & Tourism, with the Cyprus Energy Regulatory Authority (CERA) and the Transmission System Operator (TSO) regarding joint action on the subject of RES. Interested applicants are given all possible technical assistance and priority in the examination of their applications to install units for generating electricity from RES.

In accordance with existing legislation and the relevant decisions of the Council of Ministers, the EAC is obliged to purchase electricity produced from Renewable Energy Sources and to distribute it on its grid at an avoidance cost price determined by the Cyprus Energy Regulatory Authority (CERA). To this end, an Electricity Purchase Agreement is signed between the RES Producer and the EAC. In addition to the purchase price paid to the Producer by the EAC, the Producer receives a subsidy for the generated kilowatts of electricity from the Special Fund for Grants/Subsidies, having been approved/registered with the Special Fund for Grants/Subsidies.

By the end of 2012, a total of 1 039 photovoltaic systems had been installed and were producing up to 150 kW (compared to 797 photovoltaic systems at the end of 2011, i.e. an increase of 30,4%), with a total installed voltage of 16 363,74 kW (9 329,35 kW at the end of 2011, i.e. an increase of 93,8%). It should also be noted that by the end of 2012, some 12 Generation Units using biomass/biogas were in operation with a total installed capacity of 8 764 kW and a total production of 37 634 158 kWh.

Furthermore, the five Wind Parks of 146,7 MW operating on the island generated 185 049 124 kWh in 2012. Considerable interest has been shown in new photovoltaic systems, despite the relatively high capital outlay required for the installation of such systems, and in Biomass/Biogas Generation Units and Wind Parks.



# Customer Service Business Unit

## TECHNICAL ISSUES

During 2012 the department of the Customer Service Business Unit responsible for Technical Issues carried out the following tasks:

1. Electricity meter calibration
2. Preparation of fully wired electricity metering devices
3. Training Area Office staff on issues concerning on-site meter monitoring
4. Programming and monitoring of ripple control receivers
5. Dealing with street lighting issues
6. Dealing with electrical installation inspection
7. Dealing with processes and policies pertaining to EAC revenue protection
8. Testing of the reliability of gloves for high-voltage work
9. Preparation of specifications for the publication of tenders for the purchase of materials concerned with electricity metering, street lighting and electrical installations

During the year under review, 44 879 meters were checked and calibrated and 1 278 certificates of calibration were issued. Some 309 metering devices were prepared. Additionally, 1 277 Ripple Control Receivers were programmed and tested, and 17 760 inspections of electrical installations were carried out.

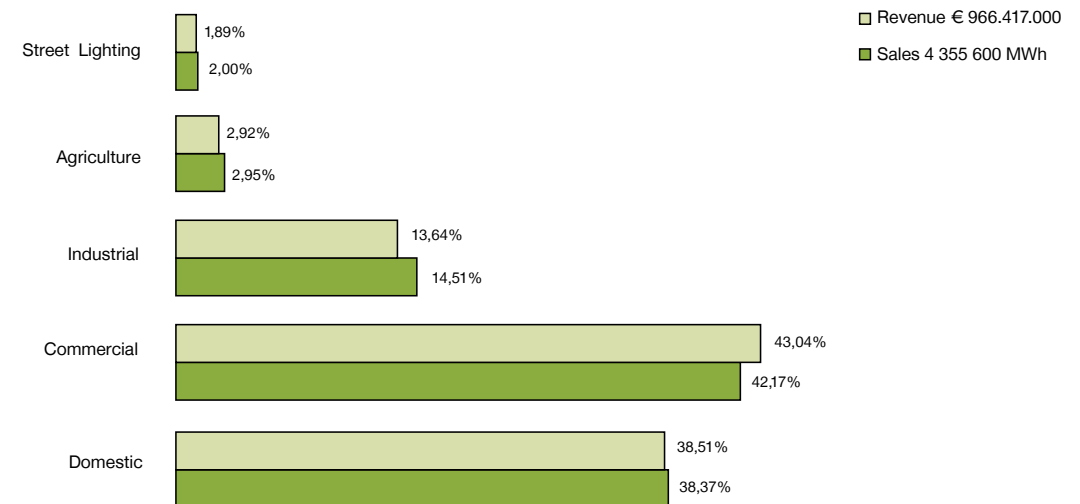
## EAC REVENUE PROTECTION

In 2012, personnel dealing with EAC revenue protection from electricity theft checked 18 473 meters on the premises of high-risk customers, following reports by meter readers. Of these, 2 068 were found to be intact, 14 940 had been tampered with, though they showed no sign of electricity theft and 1 465 meters were found to have been tampered with and there were signs of electricity theft. In relation to these, a total of €1.455.352 was recovered in costs for investigating the cases, damage to meters/equipment, additional load/exceeding the approved load, disconnection of supply due to non-payment of bills and unrecorded consumption due to unauthorised tampering with meters.

Investigations that began in 2001 into 168 cases of electricity theft (the Masouras case) continued during 2012. The total value of unrecorded consumption has been estimated at €4,95 million and, up to now, payment of approximately €3 million has been arranged. The EAC has taken legal action against those involved in order to recover the outstanding amount.

Figure 7

## ELECTRICITY SALES & REVENUE BY CONSUMER CLASS



## ACCREDITATION OF THE METER AND RELAY TESTING CENTRE

In the context of its stated policy of upgrading the quality of its operations and its customer services, the EAC maintains an ISO 17025 accredited workshop in the Meter and Relay Testing Centre (MRTC). During the annual evaluation of the workshop by the Hellenic Accreditation System and the Cyprus Organization for the Promotion of Quality, it successfully completed the evaluation process and maintained its ISO 17025 accreditation.

# Common Services Business Unit

## INFORMATION TECHNOLOGY DEPARTMENT

The mission of the Information Technology (IT) Department is to select, provide and support IT systems, to ensure that Information Technology is used as a strategic tool to achieve the EAC's business aims in a reliable, fast and efficient manner, and to cultivate in the Authority's personnel a modern mentality that is fully in tune with IT.

In this framework, the IT Department deals with:

- The provision of information services.
- IT services for internal customers.
- The development, implementation and maintenance of IT software and systems.
- Technical infrastructure services.
- Security services and Administration.

During the period January-December 2012:

- SAP Software Package was successfully upgraded from version to ECC5 to ECC6.
- The providences of Laws 191(I) 2011, 192(I) 2011, 193(I) and 168(I) 2012 were successfully incorporated and implemented within the SAP Payroll and Pensions System.
- The Tax deductions Form IR59 was designed and successfully implemented to operate via electronic mail for the monthly paid employees.
- The analysis of the Business Requirements for the real-time administration of Overtime as well as the design of the corresponding Software Application System were carried out successfully.
- The analysis of the Business Requirements for the payment of Vendors via e-Bank transfers as well as the design of the corresponding Software Application System were carried out successfully.
- Six big municipalities were incorporated in the Plan for The Automatic Payment of Electricity Bills.
- Specifications were prepared and a Request for Tender was issued for the provision of outside services in the case of the company's Printing and Enveloping Machines malfunction and/or after a fatal damage.
- Specifications were prepared and a Request for Tender was issued for the renting of services of a Telematics and Navigation System for the EAC's Vehicles' Fleet.

- Specifications were prepared for a Request of Tender for the purchase and implementation of a Queuing System in the Authority's Area offices and Customer Service Centres.
- Specifications were prepared for a Request of Tender for the purchase of a new Information Technology Infrastructure.
- The analysis and the preparation of specifications for the creation of a new IT Disaster Recovery Site were successfully completed.
- The IT Network was successfully upgraded through the replacement of its Access Switches.
- The offline interface between PLS-CADD package and the GIS system for the design of Underground Distribution Network was successfully completed, as well as the capability of automatic presentation of Low and Medium Voltage Distribution Network was successfully activated in GIS.
- The offline interface between PLS-CADD package and the GIS system for the design of Overhead Distribution Network was successfully completed as well as the capability of automatic presentation of the Network in the Master Plan (Network under construction).
- The Microsoft Lync Mobile application software for the operation of Teleconferencing through smart phones and tablets was installed successfully.
- The Microsoft Configuration Manager application software was successfully upgraded from version 2007 to version 2012.
- The Active Directory Forest Level application software was successfully upgraded from version 2003 to version 2008.
- VMware vSphere infrastructure (Primary & Disaster Recovery Sites) was successfully upgraded from version 5 to version 5.1.
- The Microsoft Exchange 2007 infrastructure was successfully upgraded to SP3 update rollup 8 V2 so as to prepare the infrastructure for the upgrade to Microsoft Exchange 2010.
- A Software Application System for the automatic transfer of electricity readings from the manufacturers' meters, installed at EAC big Consumers' premises, to the Customers Care and Billing System was successfully designed and developed.
- For the further improvement of Customers' Service a software application system providing, on a yearly basis, comparisons for "alternative Customer tariffs" was successfully completed and implemented.
- The installation of the last version of Viena software as well as its activation in all EAC Areas and Customer service Centres was successfully completed. This software is used for the registration of the EAC Customers' electricity readings via Hand Held Terminals.
- The Internet Connections through two separate providers X 10Mbps, based on Tender 123/2011, were successfully activated.
- The review of the Directive 'Usage and Security of IT Hardware' was successfully completed.
- The Directive for the monitoring/managing of Security Incidents was prepared and successfully implemented.
- A training for PC users in Security Awareness was successfully completed.
- The Directive for 'IT Systems Security Policy' was prepared and successfully implemented.

# Common Services Business Unit

## **PURCHASING DEPARTMENT**

The mission of the Purchasing Department is to draw up contracts for the supply of materials, services and works at competitive prices for the safe and smooth operation of the Authority, to ensure strict adherence to the principles of Equality and total Transparency and to properly apply EU and National Legislation, Regulations and Internal Directives related to the awarding of contracts.

In this framework, the Purchasing Department deals with:

- Formulating policy on issues concerning the processes that lead to the award of contracts.
- Ensuring the implementation of this policy.
- Issuing all the tenders of the Business Units and autonomous Sections, apart from local tenders and small purchases.
- Supporting the Business Units and autonomous Sections in the management of their contracts.
- Monitoring, planning and securing adequate stocks of materials and equipment.
- Centrally managing EAC's fleet of vehicles.

During the period January – December 2012:

- 16 contracts were awarded, of a total value of €48.352.753, as a result of EU Tenders issued for the execution of works, the provision of services and the supply of materials and equipment, as stipulated by the provisions of the Law 11(I)/2006 and EU Tender Regulations.
- 363 contracts were awarded, of a total value of €123.055.069, as a result of Tenders issued for the execution of works, the provision of services and the supply of materials and equipment, the value of which fall below the threshold, as stipulated by the provisions of the Law 11(I)/2006.

One hundred of the above mentioned contracts, of an approximate value of €98.826.283 were urgently awarded for the rehabilitation works at Vasilikos Power Station due to the damages caused by the explosion at Mari naval base.

- Two contracts were awarded with a total value of €657.000.000 for the supply of Heavy Fuel Oil.
- One contract was awarded with a total value of €411.600.000 for the supply of Gasoil.

## **ADMINISTRATION SECTION**

The mission of the Administration Section is to provide swift, reliable, professional and efficient administrative support to the other Business Units.

Within this framework, the Administration Section deals with:

### **Contract Management**

- Agreements concerning the leasing of buildings, parking space, stores, housing for technical consultants
- Canteen management agreements
- Maintenance agreements for photocopiers, fax machines, lifts, etc.

In 2012, 41 such agreements were concluded or renewed.

### **Publication of Announcements/Notices**

Announcements/Notices concerning tenders, job vacancies, interruptions to the power supply, etc. are published in the local press and the Official Gazette of the Republic and are sent to the CyBC for broadcast.

In 2012, the Authority published 192 such announcements.

### **Head Office Building Maintenance**

Maintenance of the Head Offices involves:

- Ensuring that the building is clean.
- Functionality regarding electrical/mechanical issues, repairs and office operations.
- The Building Monitoring System (BMS).
- Photovoltaic system monitoring.
- Access Cards.

In 2012, the Section dealt with 621 requests from personnel concerning their office operations.

### **Telephony Support**

This involves carrying out all the necessary procedures concerning the Authority's telephone connections.

A total of 26 applications were made to CYTA concerning the installation of telephone lines, transfers, obtaining GSM cards, etc.

### **Head Office Archive Operations**

This concerns the computerisation and archiving of incoming and outgoing correspondence.

Customs-related issues were dealt with, together with the daily distribution of correspondence within all the Authority's Units/Sections, Area Offices and Power Stations.

### **Purchase and Supply of Stationery and General Provisions**

This relates to the supply of all the Authority's Units/Sections, Area Offices and Power Stations with stationery and general provisions.



# General Management

## PUBLIC RELATIONS

The Public Relations Department is responsible for planning integrated PR campaigns aimed at upgrading the EAC's image, consolidating its corporate identity, improving its relations with various sections of the public, involving it in society and ensuring that people are fully aware of the EAC's activities and services.

On 30 October 2012, the EAC celebrated its 60th year of existence, during which it has made a decisive contribution to the island's social development and economic growth. In the framework of its 60th anniversary, blood donor sessions were held at all EAC offices and power stations.

Throughout the course of the year, the EAC's Public Relations Department organised numerous visits by various associations and organisations as well as press conferences at the Vasilikos Power Station on progress in the work to repair the damage caused to the station by the explosion at Mari and the tragic events of 11 July 2011.

The EAC continued to provide advisory services to all its customers on matters of interest to them in 2012. The general terms governing the provision of electricity, the EAC's charging policy on electrification, tariffs and general information are topics that are always of interest. As happens every year, during 2012 lectures were given to organised groups and to EAC customer groups on issues concerning energy saving, the safe use of electricity, new tariffs and electromagnetic fields.

In the framework of improving relations among personnel, the Organisation publishes the quarterly magazine "EAC News" which is distributed not only to EAC personnel but also to various other groups, individuals and services outside the Organisation.

The "Light up a Life" event, jointly organised every December by the Cyprus Anti-Cancer Society and the Electricity Authority of Cyprus, has become a firmly established institution, providing financial support and helping the Society to achieve its aims. In December 2012 Christmas events were again held in all the island's towns, during which the EAC/Cyprus Anti-Cancer Society's Christmas tree lights were switched on.

In addition to these established events, a special day for children was held for the third year running at the EAC's Head Offices in Lefkosia. All the proceeds from these events, amounting to around €14.500, were donated to the Cyprus Anti-Cancer Society.

Another event that has become an institution is the SavEnergy exhibition, organised jointly with the Employers and Industrialists Federation with the aim of promoting products that contribute to energy conservation as well as to raising public awareness of environmental protection issues.



In the framework of its efforts to contribute to the provision of a rounded education to our young people, the Electricity Authority has always funded sport and in 2012, it was the main sponsor of the Men's National Basketball Team.

In 2012, the EAC continued its support of those enclaved in the Karpas Peninsula for the ninth successive year. We consider it a duty and a privilege to support the efforts of our heroic enclaved fellow-citizens to remain in the place of their birth in the occupied part of Cyprus. Our support will continue. At the beginning of every year, members of the Board and Management visit the schools in the Karpas Peninsula.

# General Management

## LEGAL SERVICES DEPARTMENT

The mission of the Legal Services Department is to provide legal advice and support to the Executive and Management as well as to the Area Offices on all issues arising from the EAC's activities.

### Handling of Legal Cases:

In this context, during 2012 the Legal Services Department dealt with the following cases:

- 20 appeals against decisions by the EAC Board regarding promotions, appointments and transfers of personnel.
- One appeal against a decision of the EAC Board regarding the publication of a retention order.
- Two appeals against decisions of the EAC Board related to demands by employees.
- One appeal against the Authority regarding the correctness of a sum imposed on a bill.
- One appeal against a decision by the Authority regarding disciplinary action taken against one of its employees.
- Three cases of legal action against the Authority in which the Plaintiffs are demanding compensation or orders related to the location of EAC power lines/network on their immovable property.
- Legal action against third parties in 14 cases relating to pending final bills and unpaid invoices.
- Four disciplinary investigations resulting from infringements by employees of the Authority in accordance with the Authority's Code of Conduct.

### Expropriations/Leasing/Property Disputes:

This Section of the Legal Services Department provides specialist services relating to the following:

#### 1. Expropriations

Preparation of a detailed report for approval by the EAC Board of Directors and its subsequent submission to the Ministry of Commerce & Industry for the required approval by the Minister responsible. Obtaining from the relevant Land Registry Office all the necessary documentation to allow the publication of a Notice of Expropriation and/or Requisition in the Official Gazette of the Republic, with the corresponding compensation paid to the owners. In cases where an objection is filed against the intended expropriation, a new report is prepared, explaining the need for the particular expropriation, which is presented to the Ministerial Committee for a decision.

#### 2. Retention Orders

Preparation of a detailed report and its submission to the EAC Board of Directors for the necessary approval. Submission of the report to the Ministry of Commerce & Industry for approval by the Council of Ministers. Publication of the Retention Order in the official Gazette of the Republic.

#### 3. Obtaining evaluation reports from registered property valuers on land and buildings relating to the Authority's transmission and distribution substations.

#### 4. Monthly monitoring of leasing agreements concerning contracts for the Authority's substations with government services and private individuals.

#### 5. Preparation of contracts where this is not possible on a regional level.

#### 6. Withdrawal of contracts from the district Land Registry Offices wherever necessary and the preparation of consent forms and/or any other required documentation regarding EAC substations.

#### 7. Archiving of the immovable property of the Authority using SAP software and cross-checking of the data with the Land Registry archives.

#### 8. Monitoring the Official Gazette of the Republic.

#### 9. Carrying out the required procedures relating to compensation to property owners affected by the EAC's 132kV overhead power lines following the relevant approval by the General Manager.

#### 10. Daily cooperation with all the EAC's offices and with government services on issues pertaining to the Authority's substations.

### Insurance Department:

In the framework of securing its property and the interests of its Human Resources, the Electricity Authority of Cyprus insures its movable and immovable property and its employees' interests.

To this end, in 2012 tenders were published and awarded for two lapsed insurance policies - Employers' Liability and Third Party Responsibility.

Additionally, in cooperation with the insurance companies, the Insurance Section takes care of cases of accidents involving EAC personnel, damage to property belonging to third parties and to the Authority, the insuring of merchandise imported/exported by the Authority, and insurance cover for its vehicles.

In view of the events arising from the explosion at the Evangelos Florakis Naval Base at Mari on 11 July 2011 and the damage suffered by the Vasilikos Power Station, it should be noted that the Authority has insured all its property with Atlantic Insurance Co. Public Ltd. The existing policy was effective as of 16 February 2011, expiring on 15 February 2012 but a three-month extension until 15 May 2012 was given, in accordance with the terms of the relevant tender.

Following a decision by the EAC Board of Directors, the Authority went ahead with the relevant negotiations with Atlantic Insurance Co Ltd. and signed a contract for an All Risks Property Insurance Policy covering its property, coming into force on 16 May 2012 and expiring on 15 May 2014, with the option of automatic renewal for one more year, and a Construction Insurance Policy covering the restoration work starting on 25 May 2012 and expiring on 25 July 2013.

## General Management

From 1 July 2011 the Authority had insured Unit No. 5 at Vasilikos for its open cycle operations for the period 1 July-15 September 2011 with Eurosure Insurance Company Ltd.

The Authority was compensated by Atlantic Insurance Co Ltd. and is in constant communication with Eurosure Insurance Company Ltd. which had insured Unit No. 5 for compensation for the damage suffered due to the explosion at the “Evangelos Florakis” Naval Base at Mari on 11 July 2011.

### **Legal Support and Consultancy Services:**

In addition to the above, the Legal Services Department provided legal support for the drawing up of contracts and Memoranda of Cooperation with energy companies and/or other companies active in the energy sector.

The Legal Services Department also provided legal advice to the Authority’s Supplies Management relating to the drawing up of Confidentiality Agreements and/or the best legal cover for the Authority through amendments to contracts.

Furthermore, legal advice was provided to the Financial Business Unit regarding stamp duty on contracts, the drawing up of rental agreements, bill settlement agreements, dealing with the special consumer taxes paid by the Authority and with reimbursements to financial institutions and banks, and for the drawing up of set-off agreements for outstanding amounts, among other things.

Additionally, a proposal was promoted for the interlinking of the ESC archive and that of the Office of the Registrar of Companies for the easier identification of firms under liquidation and bankrupt companies owing amounts to the Authority.

The necessary amendments to the Law on the Electricity Authority (Employees’ Pension and Grants Scheme) Regulations of 2011 RAA188-97, Table Three of Regulation 42, Overtime Payments and Regulation 29A, Early Retirement, to the Law on the Electricity Authority of Cyprus (Terms of Service) Regulations of 1986, RAA 291/86, article 25 of the Development of Electricity Law, Cap. 171, on Port Rights and article 61 of the Electricity Law, Cap. 170, via the Ministry of Commerce, Industry & Tourism, were sent for approval by the House of Representatives.

Legal support was also provided to the Networks Business Unit for the preparation and drawing up of a contract for the Virtual Power Plant.



Additionally, legal commentary was given to the Authority’s IT management concerning the drawing up of procedures, a manual and documentation pertaining to IT systems security management, among other things.

Legal advice was provided to the Customer Service Business Unit and to the Lefkosia-Keryneia-Morfou, Lemesos, Ammochostos-Larnaka and Pafos area offices regarding questions of a legal nature and consumer complaints to the EAC, CERA and the Ombudsman on issues of compensation, approval for disconnections, connections and transfers of consumers, meter transfers, the provision of information to consumers and illegal tampering with meters, among other issues.

In 2012, the Legal Services Department represented the Authority, supporting the management of the Vasilikos Power Station at the Industrial Relations Department of the Ministry of Labour & Social Insurance in the labour dispute between the Authority and the SEK and PEO trade unions, with a positive outcome and a compromise solution accepted by all sides.

Over and above all this, the Legal Services Department represented the Authority in the House of Representatives at the stage of voting on legislation affecting the EAC.

Additionally, the Legal Services Department is responsible for checking and submitting invoices from the EAC’s legal advisers and for archiving the Official Gazette of the Republic.



# Human Resources Management

## The Authority's staff

	2012	2011
Professional Staff	261	277
Clerical Staff	377	389
Technical Staff	1 632	1 704
<b>Total Permanent Employees</b>	<b>2 270</b>	<b>2 370</b>
Other Staff	49	50
<b>Total</b>	<b>2 319</b>	<b>2 420</b>

«Other» employee refers to employees which their conditions of employment are regulated by a certain collective agreement.

## The Authority's pensioners

The total number of pensioners at the end of the year who received pension was 1 142 (including 9 missing persons since the Turkish invasion of 1974) compared to 1 061 at the end of the previous year. In addition 275 pensions were paid to widows and orphans of deceased pensioners/employees compared to 272 at the end of the previous year.

## Manpower indicators and Productivity

Variations in productivity are shown in Figure 8 (page 68) which indicates the relationship between the Authority's manpower, the total units billed and the number of consumers during the ten year period 2003-2012.

Absenteeism due to sickness and/or industrial accidents was 2,8% or 10 days per EAC employee compared to 3,1% or 11 days per employee at the end of the previous year, while comparing the 2011 and 2012 sick leave totals, that is 27 123 and 23 631 days respectively, there is a reduction of 12,9% (3 492 days). These figures show that the set goal for a 10% reduction on sick leave by the year 2012 has already being surpassed and this is attributed to the introduction of a new system for managing sick leave.

## INDUSTRIAL RELATIONS

2012 has been a challenging year for the Authority's Human Resources Management, since the deteriorating economic conditions in Cyprus led to economic measures, which were enforced through legislation and state directives, which affected to a great extent the Labour Relations established practices.



Legislation and directives, calling for salary cuts, changes in pension benefits and prohibitions for new recruitments created a number of serious issues for discussion with the employee Unions.

At the same time, the Human Resources Management played an important role in the proceedings with the Unions for the Organisation's Structure reorganisation and the implementation of rules for alternating personnel duties. During the month of April 2012 a relevant agreement with the Unions was reached and signed.

One important provision in the agreement was about the implementation of an early retirement scheme, prepared by the Human Resources Management and accepted by the Unions. Unfortunately, due to the prevailing economic uncertainty, the Ministry of Finance informed EAC that the implementation of such a scheme should be examined at a later date. This unfortunate drawback did not discourage EAC on its efforts to continue the dialogue with the Unions for completing the reorganisation for the whole of the Organisation's structure.

Further meetings between the Authority's Human Resources Management and the Employee Unions were conducted during the year, for examining staff issues, the electrical installations inspection by EAC, various issues relating to personnel problems caused by new laws and regulations, the reexamination of the "minimum service requirements" etc.

It is worth noting that the Human Resources Management, the Employee Unions and a mediator from the Ministry of Labour & Social Insurance dealt with reaching a settlement on industrial disputes.

# Human Resources Management

## HUMAN RECOURCES DEVELOPMENT

### Education and Training

During 2012, 1 462 members of the staff attended 70 in-house courses and seminars, organised by the Authority's Training School, which covered a wide range of topics. We had 101 more participations from employees in various open educational programmes and training courses, organised by local educational institutions and organisations, whilst eight members of the professional staff attended training courses or participated in conferences and seminars abroad. In total 1 571 employees attended training courses at an overall cost €18,29 per employee. The in-house training courses were subsidised by the HRDA with the amount of €56.936,08.

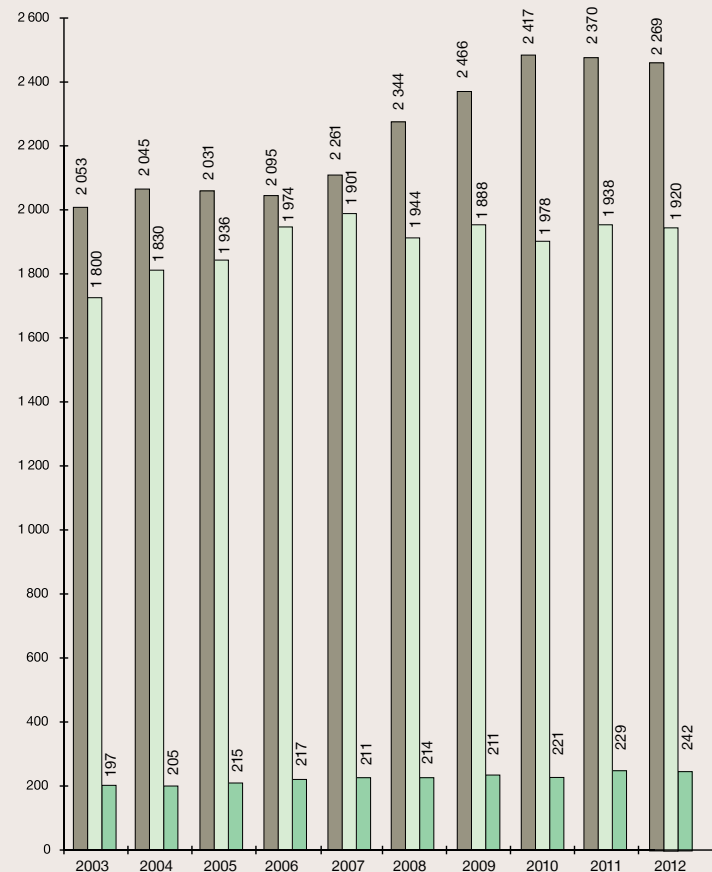


Figure 8

### MANPOWER INDICATORS

- EMPLOYEES IN SERVICE
- SALES (thousand kWh) PER EMPLOYEE
- CONSUMERS PER EMPLOYEE

### Promotions

During 2012 the procedure for promoting 11 employees was completed.

### Recruitment/Retirements/Termination of Employment

In compliance with the certain instructions by the Ministry of Economic affairs, EAC did not recruit any new employees. It should be noted that during the year 15 employees retired, 41 employees took advantage of the early retirement scheme, 23 employees chose early retirement, two employees terminated their services, two employees retired for health reasons and one employee deceased.

### SAFETY, HEALTH AND WELFARE

#### Medical Care

During the year EAC contributed €7.533.663,18 (€7.095.483,75 in 2011) to EAC Employees Medical Fund. Additionally EAC contributed to the Fund retroactively, the amount of €299.088,68 for 2010 and €311.558,86 for 2011 based on the renewal of the collective agreement for the period 2010-2012 which provides for the increase of EAC contribution to the Fund from 5,65% to 5,90%. Furthermore EAC contributed the amount of €51.260,00 (same as in 2011), to the Special Medical Fund which is set up in order to cover for the cost of the treatment of major medical cases, in Cyprus and abroad. The beneficiaries of the Fund, as at 31 December 2012 were 9 214 (2 278 employee-members, 1 141 pensioners and 5 795 dependants).

#### Benevolent Funds

The EAC's Employees Benevolent Funds continued to function satisfactorily during the year. The financial relief offered to needy members, pensioners or members of their families, exceeded €304.000. This sum includes the monthly financial assistance offered by the EAC to ex-employees who retired prior to 1978 with Provident Fund benefits, as well as to their widows. It also includes the financial assistance to other ex-employees due to the recognition of their previous service with the ex-private Electric Companies after their being undertaken by the EAC. The members of the Funds, as at 31 December 2012 were 2 187.

#### Welfare Funds

EAC Employees' Welfare Funds continued to function satisfactorily during the year offering several facilities to the members and their families.

#### Long Service Certificates and Awards

The following Awards were presented:

- The EAC's Long Service Certificates were awarded to 79 employees, who retired during 2012 and had completed more than 20 years of service.
- The EAC's silver metals were awarded to 21 employees who had completed 30 years of service.

# Human Resources Management

## OCCUPATIONAL HEALTH AND SAFETY

### Health and Safety Management

The Electricity Authority of Cyprus has successfully completed the project on the development of the "Health and Safety Management System" and it has been uploaded on the EAC portal server aiming to become a useful tool in the workplace. An introduction course on the implementation of the "Health and Safety Management System", which aims at the continuous development and improvement on occupational health and safety matters within the Organisation, has been organised by the Safety Officers in collaboration with the District and Power Stations management.

Furthermore, a Health and Safety booklet was prepared and printed out, in a simple comprehensible language. The booklet contains information and directives on health and safety matters of the work and activities of the Electricity Authority of Cyprus which all members of the staff should be aware of.

### Health and Safety in the working environment

The Safety Committees held regular meetings during the year, adhering to legislation requirements and gave their professional views to the Management for dealing and solving various problems concerning health and safety issues.

The Safety Officers of the Organisation in addition to the general tasks they perform in their workplace, investigate working accidents, dangerous occurrences and hazardous malfunctions, monitor the implementation of the Health and Safety Management System, study Health and Safety plans submitted by the contractors and made recommendations for completeness and functionality as far as the legislation requirements are concerned. They also performed on site safety audits, which covered all the works carried out by the Electricity Authority and gave consultation on health and safety matters to the personnel. Furthermore, audits were also carried out on sub-contracted projects to ensure, that they comply with the health and safety issues and legislations.

### Education / Training

A complete in depth training on working with safety at height was delivered successfully to the technical staff, who work in the overhead construction of EAC's District Area. Furthermore, a relevant training took place to cover the Power Stations' needs. All persons who received the above training have been equipped with a complete set of the necessary Personal Protective Equipment for working at height.

Further training and seminars on Health and Safety matters have been organised during the year by the Safety Officers according to the needs of

the Organisation. Furthermore, during the Safety Week, fire drills have been organised in all District Areas and Power Stations.

### Accidents

During the past year a total number of 29 occupational accidents occurred with 29 injuries, two of which were road accident. All the accidents have been investigated and evaluated by the Central Safety Committee.

The graphs below show the variation of the three indexes, Frequency Index (F), Severity Index (S) and Occurrence (FO) for the period 2006 to 2012. The Frequency index shows the number of accidents in relation to the total worked hours in the Organisation and the Severity Index shows the days lost in relation to the worked hours in the Organisation and the Occurrence Index shows the number of accidents in relation to the number of employees.

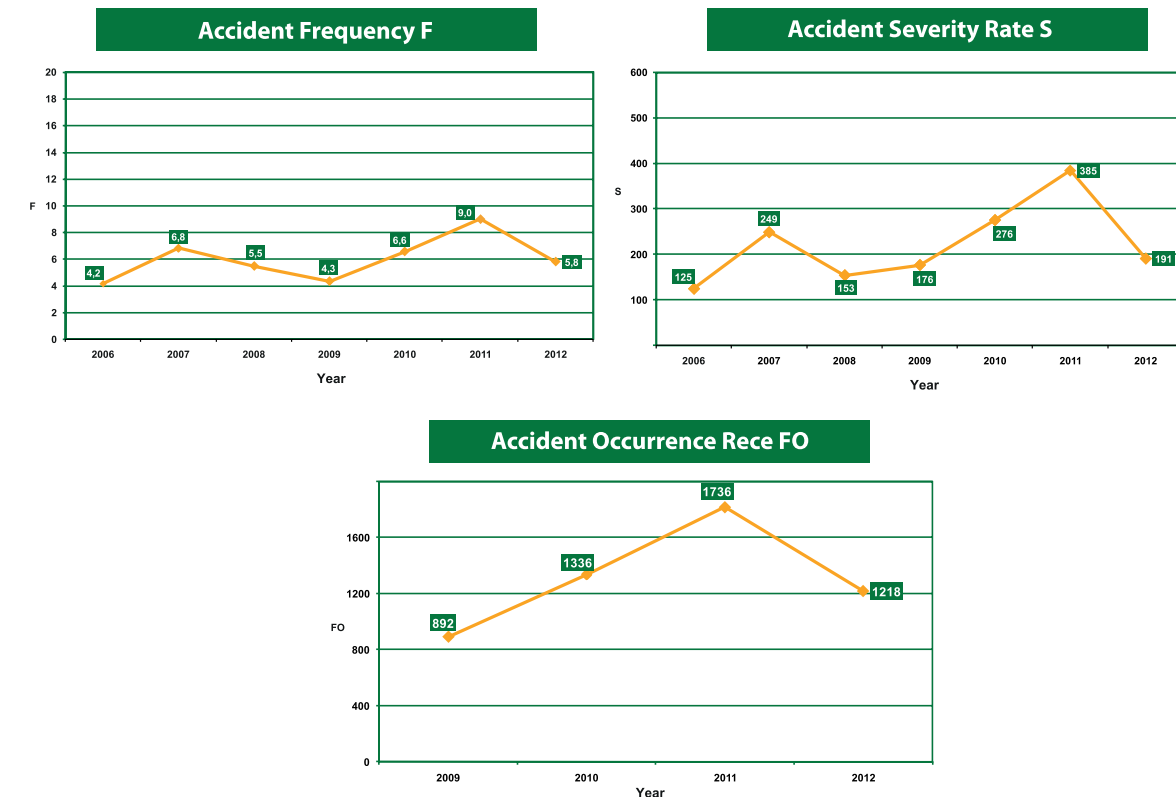
The Frequency Index (F) for EAC in relation to the previous year has been decreased from 9,0 to 5,8 , the Severity Index (S) has been decreased from 385 to 191 and the Occurrence Index has been decreased from 1 736 to 1 218.

### Safety Week and Fire drill exercises

The EAC's Safety Week was once more organised with success in the beginning of February 2012. During the Safety Week various events took place, including lectures on occupational safety and health matters, fire drills and evacuation exercises in co-operation with the Fire Department. These activities gave the opportunity to staff to get engaged with the matters of occupational health and safety matters.

### Safety Awards

The safety award in memory of Archbishop Makarios III for the year of 2012 was given to Ammochostos - Larnaka District Area. The safety award in memory of Georgios Kontopoulos was given to the Dhekelia Power Station.





# Corporate Business Development Unit

## STRATEGIC PLANNING MANAGEMENT

### EAC Strategy

With the aim of ensuring the Organisation's efficient operation in an environment where the business equilibrium is going through a transitional yet decisive stage, due to the partial liberalisation of the Energy Market, and taking into consideration the forthcoming competition, the Electricity Authority of Cyprus is using a systematic process for Strategy development, Policy formulation and Annual Business Planning, via the Balanced Scorecard method. The process focuses on the alignment of efforts and the optimum use of resources by all the Organisation's Units, for the achievement of the EAC's Strategic Aims and the realisation of its Vision. All of the above will have an important contribution towards the Business Improvement of the Organisation.

The revision of the Corporate Business Strategy of EAC, for the three years period of 2013-2015, has started. The main domains of the Corporate Business Strategy of the Organisation 2013-2015, are the following:

- Electricity domain (Production, Transmission, Distribution and Supply)
- Other business activities – Liquefied Natural Gas, Renewable Energy Sources, Desalination, Telecommunications
- Improvement of the Organisation's Procedures

### Business Continuity Management System

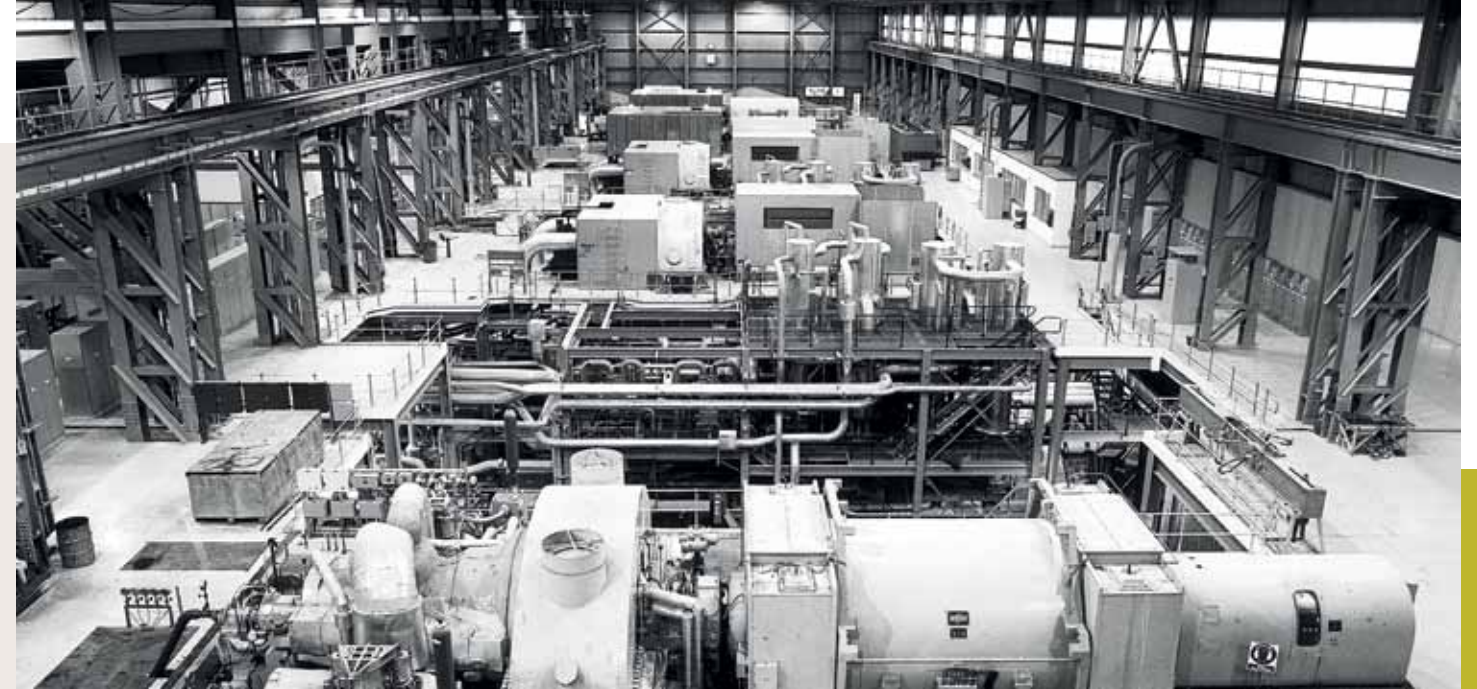
The ability of the Organisation to recover its critical Processes and Business Operations from a disaster through a Business Continuity Plan became an extremely important matter for EAC, especially after the loss of the Vasilikos Power Station on the 11th of July 2011.

Due to the above, EAC decided to study the design and the implementation of a Business Continuity Management System in the Organisation.

### Renewable Energy Sources (RES)

Part of EAC's Strategy is the generation of electricity from Renewable Energy Sources (RES). The Department of Strategic Planning is participating in the development of various proposals and/or projects as follows:

- The establishment of a Solar Thermal Power Station at the Akrotiri in Lemesos.



- The announcement of an Invitation for Expressions of Interest to prequalify potential strategic partners for participation in a joint venture company with EAC, for the development of large photovoltaic plants in Cyprus.
- The announcement of a Tender for a long-term renting of land for the development of photovoltaic plants in Cyprus.
- The preparation and completion of six (6) proposals for the participation of EAC to the Government's Tendering (Auctioning) Procedure for the development of photovoltaic systems in Cyprus.

## NEW BUSINESS DEVELOPMENT

The New Business Development department focused on the development of new activities and the use of new technology as a counterbalance to the predicted reduction in the EAC's share of the liberalized electrical energy market.

### Telecommunications

In 2012 EAC continued leasing part of its infrastructure to its strategic partners, for the commercial use of optical fiber network and other facilities and services for telecommunication purposes.

Various technical and economic issues were resolved with the two EAC's strategic partners, Primetel PLC and Cablenet Communications Systems Ltd.

In the context of its development into new activities EAC continued leasing land to MTN in the Vasilikos Power Station and in the Athalassa Substation, in an area which is EAC property, for the installation of antennas for mobile telephony. Also consultations commenced between EAC and CYTA for possible renting of EAC's infrastructure by CYTA for telecommunication purposes.

### Desalination

After a relevant request by the Water Development Department of the Ministry of Agriculture, Natural Resources and Environment, EAC invited for tenders for the construction of a desalination plant at Vasilikos Power Station.

# Corporate Business Development Unit

The unit will have a production capacity of 60 000m<sup>3</sup> of desalinated water per day and was expected to commence commercial operation in February 2012.

After the explosion at Mari Naval Base and the destruction of Vasilikos Power Station the erection work of the desalination unit stopped. After evaluating the damages, work was resumed at site. The contractor submitted a new work programme and the unit is expected to commence the production of desalinated water at the beginning of 2013.

## Renewable Energy Sources (RES)

Various proposals for joint ventures are being studied for the generation of electricity by Renewable Energy Sources (RES).

In particular studies are being carried out for the installation of a solar thermal power station at Akrotiri in Lemesos in an area which belongs to the Bishopric of Lemesos. A cooperation agreement has already been signed between EAC and the Bishopric of Lemesos for implementing the project and techno-economic and environmental studies have already been completed. Architectural and construction drawings have been prepared and submitted to the District Administration of Lemesos for obtaining a Building Permit.

EAC called for tenders for the installation of a Photovoltaic Park in Tseri Substation area. EAC and the successful tenderer have submitted proposals for the area in the Tseri Substation and other five locations to participate in the auction to be announced by the Government for photovoltaic parks of capacity up to 10MW.

Also, EAC announced the Invitation for Expressions of Interest to prequalify potential strategic partners for participation in joint venture companies with EAC, for the development of large photovoltaic plants, more than 5 MW, in Cyprus.

In addition, the involvement of EAC as a partner in wind energy projects is being examined. EAC requested an Expression of Interest to develop a wind farm in cooperation with potential partners who have already been granted the subsidy from the Special Fund of RES and Conservation of Energy.

In the context of a financing program of the European Union, NER 300, for the financing of innovative technologies in the renewable energy sources sector, the relative files were prepared and six applications were submitted for financing of RES projects with EAC participation. The European Commission announced that all applications in which EAC participates have been rejected. It must be pointed out that according to the techno-economic evaluation which had been carried out by the Consultants of the European

Investment Bank (EIB), EAC's applications were ranked first and second in their category. The issue is reviewed in collaboration with the Department of Environment, Ministry of Agriculture, Natural Resources and Environment and a clarification letter is expected from the European Commission.

## RESEARCH AND DEVELOPMENT UNIT

During 2012, EAC has continued its active participation in four research projects, 7MW-WEC-by-11, MACCSol, STEP-EW and IntelliSYS. 7MW-WEC-by-11, MACCSol and IntelliSys are funded by the Seventh Framework Program, while STEP-EW is funded by the Cross-border Cooperation Program Greece-Cyprus 2007-2013.

Brief description of the above four research projects is given below:

- 7MW-WEC-by-11 Research Project: "Pilot demonstration of eleven 7 MW-Class WEC at Estinnes in Belgium". The aim of this project is to design, develop, construct and operate a large scale pilot wind park made up of eleven 7 MW wind turbines incorporating innovative power electronics and highly reliable wind forecasting technologies. It is envisaged that these technologies will improve the power grid stability and also the cost effectiveness of the wind park. Within the scope of 7MW-WEC-by-11 is to transfer the learned technical expertise into the islanding power system of Cyprus. More specifically, special simulation software will be developed for the evaluation of the development of large scale wind parks in Cyprus potential, with the use of innovative technology for power grid stability, which will take into consideration the special requirements of the small and isolated power system of Cyprus.
- MACCSol Research Project: "The development and verification of a novel modular air cooled condenser for enhanced concentrated solar power generation". The aim of this project is to develop an efficiently competitive air cooled condenser technology compared to water cooled condenser technologies used in concentrated solar thermal power technologies in areas with low water quantities. Within the scope of MACCSol is the development of mathematical models for techno-economic analysis of the financial viability of the developed technology. This emerged technology has been put under the research priorities of the European Union since it is expected by the 2020, that 10 units of solar thermal systems will be installed for commercial use in the countries of the South Europe and North Africa.
- STEP-EW Research Project: "Solar thermal production of electricity and water". The aim of this project is the technical confirmation of the innovative idea of cogeneration of desalinated water and electricity in a small scale and in real conditions. At the same time, the best way to integrate this technology into Cyprus and Greece will be investigated.
- IntelliSYS Research Project: "Intelligent Monitoring, Control and Security of Critical Infrastructure Systems". The main objective of this project is to form a European-wide scientific and technology knowledge platform and instigate interdisciplinary interaction in the development of innovative intelligent monitoring, control and safety methodologies for critical infrastructure systems, such as electric power systems, telecommunication networks, and water systems.

The Research and Development unit of EAC has co-organised the Workshop "State of the Art of renewable energy systems (RES) and future prospects in Cyprus and Mediterranean region by Cyprus natural gas", in Lefkosia at 04 February of 2012, the Workshop "Workshop on the Reconstruction of Vasilikos Power Station", in Lefkosia at 26 April of 2012, the International Conference "1st Conference on Power Options for the Eastern Mediterranean Region", in Lemesos between 19 and 21 November of 2012, and the Workshops "Workshop on the Solar Thermal Cogeneration of Electricity and Water: The STEP-EW project" and "Workshop on the Cyprus Energy Crisis and the Vasilikos Power Station Reconstruction", in Lemesos at 21 November of 2012, in order to disseminate the results of research and development activities.

Finally, the Research and Development unit of EAC carried out several studies regarding large scale battery systems for electricity storage, worldwide breakouts due to natural disasters and human errors and nuclear energy. Furthermore, the unit carried out parametric cost benefit analysis for an innovative air-cooled condenser optimum geometry and parametric feasibility study for the integration of pumped

# Corporate Business Development Unit

storage in Cyprus power system. In addition, the unit has carried out an assessment of feed-in tariff and net metering supporting schemes for household photovoltaic systems and a study regarding the electricity demand in Cyprus. Moreover, the unit has produced a number of papers published in referred international journals and has presented the research and development activities of EAC in a number of international conferences and workshops.

## **QUALITY ASSURANCE & BUSINESS EXCELLENCE**

The Electricity Authority of Cyprus, as the Organisation responsible for the generation, transmission, distribution and supply of electricity in Cyprus, understands that it has obligations and responsibilities towards the Cypriot consumer. For this purpose and with the aim of continuously improving the quality of services it provides, while at the same time minimising the unwanted effects of its activities on the environment, EAC is implementing Quality and Environmental management systems, certified to ISO9001:2008 and ISO14001:2004 standards respectively.

Key objectives are: minimising operational cost, increasing productivity, improving Quality and minimising EAC's carbon footprint.

During 2012, in the context of continuous improvement, the following actions were carried out:

### **Integrated Management System**

In October, an audit of the Integrated Management System of EAC was carried out by the Cyprus Certification Company (CCC). As a result, it was confirmed that EAC's management system satisfies fully both the ISO 9000:2008 and the ISO 14001:2004 standards. A number of non conformances were raised and a relevant plan of action was devised in order to deal with all these non conformances.

### **Cyprus Energy Regulator Authority (CERA) Performance Indicators**

The results of the system measuring all performance indicators related to Κ.Δ.Π 571/2005 (legislation regarding Custom Service) are calculated and sent on an annual basis both to CERA and to EAC's top management.

### **SAP Performance indicators system**

A new system for measuring process performance indicators via the SAP system has been implemented. The new system allows for the process flowcharts to be documented, so as to aid the understanding of how the processes work and what actions need to be taken for every process.

In addition, the new system makes performance indicator comparisons between Areas more accurate and reliable as it ensures that the indicators range (start-finish) is the same for all Areas.

### **Updating of records in Intranet Portal**

As part of EAC's continuous improvement system, the systematic updating of records and documents of the Management system is continuing in the Intranet portal, after all the necessary approvals by the Key process owners are completed.

### **Target setting**

The procedure for target setting, has been designed and approved by the General Manager. All Key Process owners are in the process of finalising their key process indicators, which are necessary to achieve the Corporate key process indicators and targets.

All work has been done in line with EAC's medium term strategic objectives. In this way, all indicators for all EAC processes and procedures will be aligned aiming towards achieving the targets set by the top management for the following year. In total thirty two indicators have been selected and these indicators now form the General Manager's scorecard. These indicators are divided into five dimensions: Customer, Financial, Processes, Learning and Environment.

### **Implementation of a workflow based electronic system for managing audit non-conformances, employee suggestions and planning of internal audits**

The project for setting up a fully workflow-based electronic system, operating in the Portal environment is continuing. Through this system, management of all employee suggestions and innovative ideas and also internal audits and non-conformances will be done substantially faster and more efficiently than before, reducing the overall cost associated with the management of these systems. The system is expected to commence during the first half of 2013.

### **Workshops for re-engineering and process harmonisation**

A number of workshops have been conducted with the aim of achieving continuous improvement and harmonising the various processes and procedures in all EAC areas and Head Office. These workshops were conducted in close coordination with all relevant Key process owners. During 2013, the aim is for the number of workshops to be increased, involving all possible Key processes thus simplifying EAC operations, reducing the costs associated with its operations, reducing time to serve customers and improving productivity.

### **Management Reviews**

Three Management reviews have been completed and presented to the Management Council. These reviews include all business results for 2011, as regards the Integrated Management system of EAC.

### **Corporate Social Responsibility (CSR)**

The EAC has decided to implement a CSR system to cover all operations in the areas, Head Office and power stations. As a result, the project teams were identified and a relevant plan of action was devised and approved by the General Manager.

The project is expected to be completed in October 2013.



## FINANCIAL STATEMENTS

The financial statements of the EAC for the year 2012 together with the supporting statements are set out in pages 92 to 134. The principal financial statistics for the ten-year period 2003-2012 are summarized on page 82.

**TABLE 3**

**Consolidated income statement for the year ended 31 December 2012 and changes from previous year**

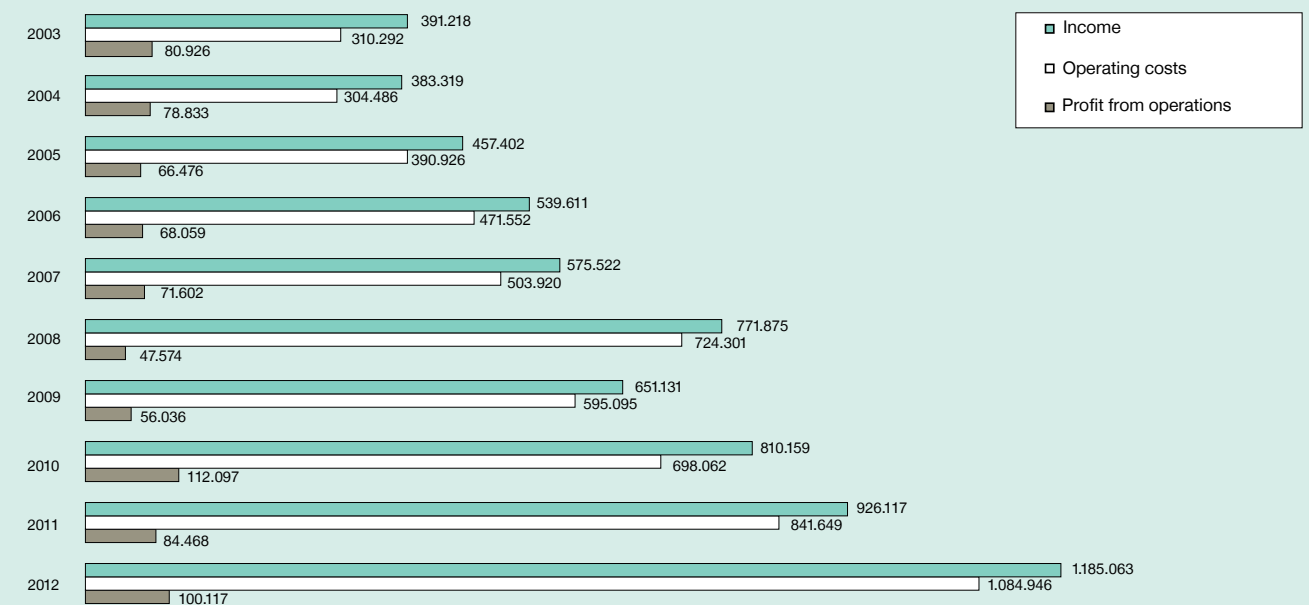
€000		
	2012	Increase (Decrease)
<b>INCOME</b>		
Sales of electricity	966.552	108.776
Temporary Surcharge	61.680	41.822
Temporary Generators Cost Recovered by the Republic of Cyprus	31.702	14.473
Compensation from Insurance	89.301	89.301
Consumers' capital contributions	19.973	926
Other operating income	14.053	3.425
Finance income	1.802	223
	<b>1.185.063</b>	<b>258.946</b>
<b>OPERATING COSTS</b>	(1.084.946)	(243.297)
Operating profit	100.117	15.649
Finance costs	(13.960)	(4.969)
Profit before tax	86.157	10.680
Tax	(8.935)	(1.147)
Provision as a result of Tax Council Decision		(1.896)
<b>Net profit for the year</b>	<b>77.222</b>	<b>7.637</b>
<b>Units sold (million kWh)</b>	4 355,6	(239,3)

## FINANCIAL RESULTS

The financial results for the year and the changes from the previous year are shown in Table No. 3 above. The income from sales of electricity for the year, totalled to €966.552.000 showing an increase of €108.776.000 or 12,7%.

Figure 9

## Income, operating costs & profit from operations (Euro Thousand)



The total operating costs were €1.084.946.000 showing an increase of €243.297.000 or 28,9%. After accounting for finance costs amounting to €13.960.000 there was a profit before tax of €86.157.000 compared to a profit of €75.477.000 in the previous year. After the deduction of tax amounting to €8.935.000, the net profit was €77.222.000 (2011:€69.585.000).

## ANALYSIS OF OPERATING COSTS

Table 4 (page 80) gives an analysis of the operating costs according to each category. The principal factors underlying the changes are reviewed below:

The average cost of fuel oil used by the EAC power stations increased by 25,8% to €581,30 per metric tonne. The consumption decreased by 5,1% to 1.109,7 thousand metric tonnes. As a result of the above the fuel oil bill increased by €104.608.000 to €645.049.000.

The purchase of electricity from third parties €42.084.000 decreased by 9% due to the decrease in purchase from third parties by €19.802.000 and increase in purchase from renewable sources by €15.663.000.

For the cost of temporary generating units €35.302.000, an amount of €31.702.000 has been included in income as recoverable from the Republic of Cyprus, for which there is a provision of €24.465.000.

Repair costs amounting to €104.508.000 represent the expenditure to repair the damages at Vasilikos power station caused by the explosion at Mari.

The total salaries, related costs and deficiency contribution to pension schemes amounted to €116.192.000 out of which €20.959.000 was capitalised in fixed assets and work in progress and €4.055.000 is included in repair costs of Vasilikos power station. The amounts capitalised relate to expenditure for development projects executed by the Authority's employees during the year. An amount of €91.178.000 or 78,5% was charged to the income statement. The decrease of €20.197.000 or 14,8% to the total salaries and related costs charge is due mainly to the suspension of salary increases and price indices and the zero payment of deficiency contribution to pension schemes.

Materials services and other expenditure were €52.549.000 (increase of €7.726.000 or 17,2%).

The depreciation charge was €89.811.000 (increase of €12.755.000 or 16,6%).

# Corporate Finance Unit

**TABLE 4**  
**Analysis of Operating costs**

	2012		Increase(Decrease) over 2011		
	€000	%	Cents per kWh sold	€000	%
Fuel oil	645.049	59,4	14,810	104.608	19,4
Purchase of electricity from third parties	42.084	3,9	0,966	(4.139)	(9,0)
Temporary Generators Cost	35.302	3,3	0,811	18.073	104,9
Provision for the non recoverability of Temporary generators cost	24.465	2,3	0,562	24.465	100,0
Repair costs of Vasilikos power station	104.508	9,6	2,399	104.508	100,0
Salaries and related costs	91.178	8,4	2,093	(8.552)	(8,6)
Deficiency contribution to pension schemes	-	0,0	0,00	(16.147)	(100,0)
Materials, services and other expenditure	52.549	4,8	1,206	7.726	17,2
Depreciation	89.811	8,3	2,062	12.755	16,6
<b>TOTAL</b>	<b>1.084.946</b>	<b>100,0</b>	<b>24,909</b>	<b>243.297</b>	<b>28,9</b>

## CAPITAL REQUIREMENTS AND SOURCES OF FINANCE

Capital expenditure during the year amounted to €99.863.000 compared with €214.718.000 in 2011 (decrease of €114.855.000).

The amount paid for taxation during the year amounted to €6.607.000 (2011:€28.435.000).

Loan and bank overdraft repayments amounted to €66.126.000 (2011: €44.607.000).

Out of the total financing requirements of €172.596.000 internal sources and consumers contributions provided €97.596.000 and the balance of €75.000.000 was covered by loan. Table 5 (page 81) shows the financing requirements during the year and the sources of finance.

**Table 5**

## Financing Requirements and Sources of Finance

	2012		2011	
	€000	%	€000	%
<b>FINANCING REQUIREMENTS</b>				
Tax	6.607	3,8	28.435	9,9
Capital expenditure	99.863	57,9	214.718	74,6
Bank overdraft / loan repayments	66.126	38,3	44.607	15,5
	<b>172.596</b>	<b>100,0</b>	<b>287.760</b>	<b>100,0</b>
<b>SOURCES OF FINANCE</b>				
Profit before tax	86.157	49,9	75.477	26,2
Depreciation less consumers' contributions	69.838	40,5	58.009	20,2
Proceeds from disposal of fixed assets	100	0,1	111	0,1
Unrealised foreign exchange (profit)/ loss	(192)	(0,1)	60	0,0
Consumers' contributions	26.434	15,3	33.077	11,5
Working Capital changes	(84.741)	(49,1)	(11.756)	(4,1)
	<b>97.596</b>	<b>56,6</b>	<b>154.978</b>	<b>53,9</b>
Bank overdrafts/ Loans	75.000	43,4	132.782	46,1
	<b>172.596</b>	<b>100,0</b>	<b>287.760</b>	<b>100,0</b>

## FINANCIAL POSITION AT END OF YEAR

The historical cost of the assets employed at 31 December 2012 was €2.905.787.000 and total provision for depreciation was €969.040.000. As a result the written down value of the assets employed was 66,7% of the original cost. The total net assets at 31 December 2012 were €1.937.358.000. Finance derived from loans (€432.447.000 or 22,3 %) other long term liabilities (€481.196.000 or 24,8 %) and the balance (€1.023.715.000 or 52,9%) from own sources.

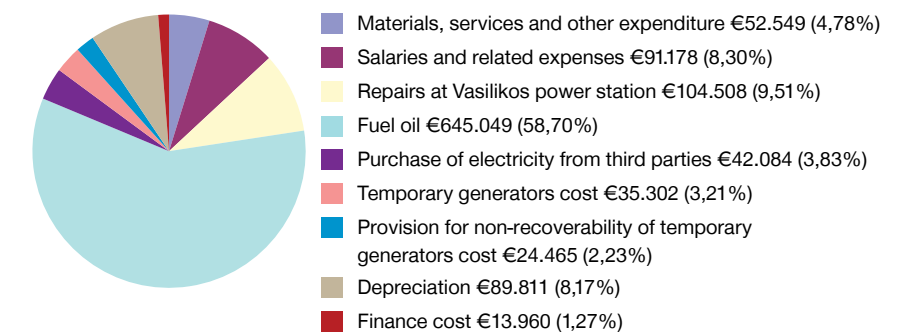
C. TSOURIS  
CHAIRMAN

S. STYLIANOY  
GENERAL MANAGER

Figure 10

### Expenditure

(Euro Thousand)  
As percentage  
of total expenditure



# Corporate Finance Unit

TABLE 6

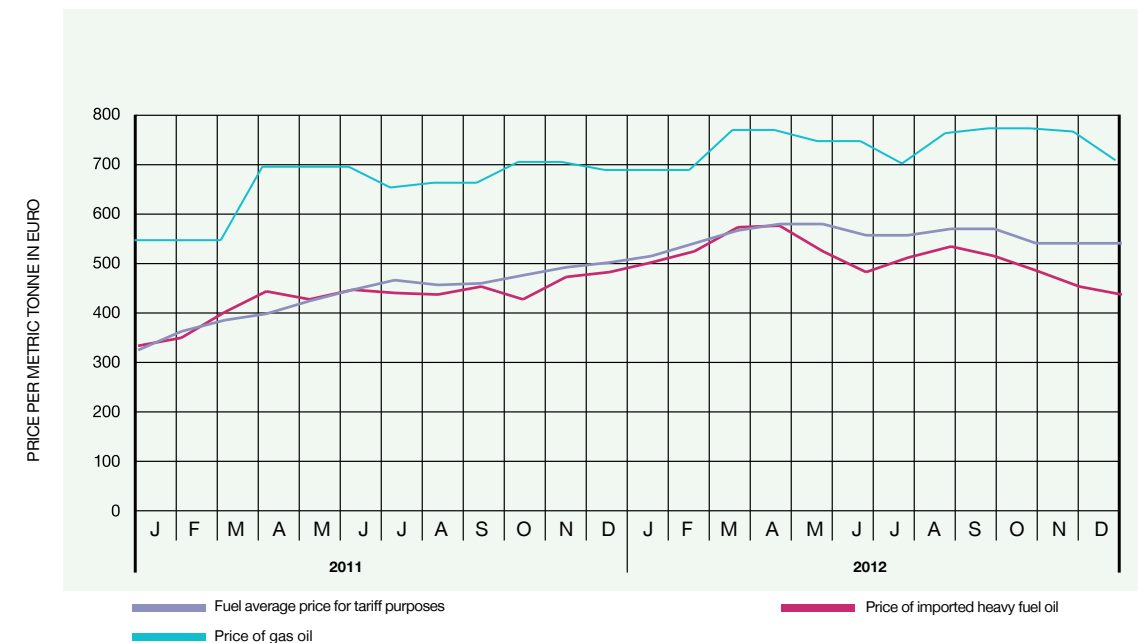
**Principal Financial Statistics 2003 - 2012  
During the Financial Year to 31 December**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Units sold (million kWh)	3 696	3 742	3 933	4 135	4 298	4 556	4 656	4 782	4 595	4 356
Consumption in the turkish occupied area (million kWh)	7	8	7	7	8	9	8	8	7	7
Total units (million kWh)	3 703	3 750	3 940	4 142	4 306	4 565	4 664	4 790	4 602	4 363
<b>Installed capacity (MW)</b>	988	988	988	988	1 118	1 168	1 388	1 438	965	1 493
<b>INCOME (€ THOUSAND)</b>										
Sales of electricity	373.464	361.041	432.177	513.105	546.737	736.215	627.253	776.390	857.776	966.552
Consumers capital contributions	10.286	11.138	12.064	13.085	14.241	15.389	16.655	17.855	19.047	19.973
Temporary Generators Cost Recovered by the Republic of Cyprus									17.229	31.702
Compensation from insurance										89.301
Temporary surcharge									19.858	61.680
Other operating income	866	2.421	905	3.182	4.869	5.575	5.846	15.174	10.628	14.053
Finance income	6.602	8.719	6.976	4.799	2.615	2.637	1.377	740	1.579	1.802
<b>Total Income</b>	<b>391.218</b>	<b>383.319</b>	<b>452.122</b>	<b>534.171</b>	<b>568.462</b>	<b>759.816</b>	<b>651.131</b>	<b>810.159</b>	<b>926.117</b>	<b>1.185.063</b>
<b>OPERATING COSTS (€ THOUSAND)</b>										
Operating costs	264.560	258.352	332.034	411.365	438.661	652.539	523.569	622.669	747.364	830.860
Temporary Generators Cost									17.229	35.302
Provision for the non recoverability of temporary generators cost										24.465
Repairs at Vasilikos power station										104.508
Depreciation	45.732	46.134	53.612	54.747	58.199	59.703	71.526	75.393	77.056	89.811
<b>Total operating costs</b>	<b>310.292</b>	<b>304.486</b>	<b>385.646</b>	<b>466.112</b>	<b>496.860</b>	<b>712.242</b>	<b>595.095</b>	<b>698.062</b>	<b>841.649</b>	<b>1.084.946</b>
Operating profit	80.926	78.833	66.476	68.059	71.602	47.574	56.036	112.097	84.468	100.117
Finance costs	(14.585)	(12.363)	(8.551)	(13.182)	(14.779)	(19.310)	(10.757)	(10.243)	(8.991)	(13.960)
Profit before tax and exceptional item	66.341	66.470	57.925	54.877	56.823	28.264	45.279	101.854	75.477	86.157
Exceptional item	(42.715)	(25.629)	(1.184)	-	-	-	-	-	-	-
Profit before tax	23.626	40.841	56.741	54.877	56.823	28.264	45.279	101.854	75.477	86.157
Tax	(7.953)	(16.235)	(16.671)	(16.251)	(16.802)	(7.933)	58.305	(10.440)	(7.788)	(8.935)
Provision as a result of the Tax Council Decision								(18.239)	1.896	-
<b>Net profit for the year</b>	<b>15.673</b>	<b>24.606</b>	<b>40.070</b>	<b>38.626</b>	<b>40.021</b>	<b>20.331</b>	<b>103.584</b>	<b>73.175</b>	<b>69.585</b>	<b>77.222</b>
<b>RATIOS TO TOTAL INCOME</b>										
Profit from operations (%)	20,7	20,6	14,7	12,7	12,6	6,3	8,6	13,8	9,1	8,4
Profit before tax (%)	6,0	10,7	12,5	10,3	10,0	3,7	7,0	12,6	8,1	7,3

## CONSOLIDATED BALANCE SHEET AT 31 DECEMBER

ASSETS (€THOUSAND)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Non Current assets</b>										
Property, plant and equipment	977.057	1.082.047	1.124.526	1.185.076	1.285.124	1.387.312	1.583.500	1.789.271	1.926.871	1.936.747
Trade and other receivables	5.081	4.685	3.812	2.860	1.898	1.800	1.845	2.302	2.028	2.242
	982.138	1.086.732	1.128.338	1.187.936	1.287.022	1.389.112	1.585.345	1.791.573	1.928.899	1.938.989
<b>Current assets</b>	377.181	288.349	302.096	293.755	280.641	325.719	259.762	329.501	372.388	480.679
<b>Total assets</b>	<b>1.359.319</b>	<b>1.375.081</b>	<b>1.430.434</b>	<b>1.481.691</b>	<b>1.567.663</b>	<b>1.714.831</b>	<b>1.845.107</b>	<b>2.121.074</b>	<b>2.301.287</b>	<b>2.419.668</b>
<b>RESERVES AND LIABILITIES (€THOUSAND)</b>										
<b>Reserves</b>										
Revenue reserve	564.783	589.389	629.459	642.456	682.478	702.809	806.393	879.568	943.913	1.008.160
Government grant	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555
	580.338	604.944	645.014	658.011	698.033	718.364	821.948	895.123	959.468	1.023.715
<b>Non - current liabilities</b>										
Borrowings	295.950	290.874	276.462	243.396	265.372	334.773	300.750	451.597	403.608	432.447
Deferred tax liabilities	73.996	73.075	79.231	84.036	91.042	98.056	38.402	24.479	27.762	33.652
Deferred Income	266.254	285.679	307.533	332.807	356.580	382.973	406.250	428.704	441.808	447.544
	636.200	649.628	663.226	660.239	712.994	815.802	745.402	904.780	873.178	913.643
<b>Current Liabilities</b>	142.781	120.509	122.194	163.441	156.636	180.665	277.757	321.171	468.641	482.310
<b>Total Liabilities</b>	<b>778.981</b>	<b>770.137</b>	<b>785.420</b>	<b>823.680</b>	<b>869.630</b>	<b>996.467</b>	<b>1.023.159</b>	<b>1.225.951</b>	<b>1.341.819</b>	<b>1.395.953</b>
<b>Total reserves and liabilities</b>	<b>1.359.319</b>	<b>1.375.081</b>	<b>1.430.434</b>	<b>1.481.691</b>	<b>1.567.663</b>	<b>1.714.831</b>	<b>1.845.107</b>	<b>2.121.074</b>	<b>2.301.287</b>	<b>2.419.668</b>

Figure 11  
Prices paid for fuel oil & average prices used for tariff purposes (Fuel adjustment clause)





# Auditor's Report and Financial Statements

## Report and consolidated financial statements 31 December 2012

### Contents

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Report of the Board of Directors	87
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## **Board of Directors and other officers**

### **Board of Directors**

Chairman: Charalambos Tsouris (appointed on 16.1.2013)  
Harris Thrassou (resigned on 16.1.2013)

Vice-Chairman: Georgios Pistentis

Members: Filitsa Ioannou  
Panayiotis Hadjicharalambous  
Sotos Shialaros  
Yiannis Ioannou  
Angelos Tzitzos  
Andreas Oratis  
Kyriacos Kyriacou

### **Legal Advisers**

Ioannides Demetriou, Nicosia

### **Auditors**

Auditor General of the Republic  
PricewaterhouseCoopers Limited

## **Report of the Board of Directors**

1. The Board of Directors presents its report together with the audited consolidated financial statements of the Authority and its subsidiaries Elektriki Ltd and EAC LNG Investments Company Ltd (together the "Group") for the year ended 31 December 2012.

### **Principal activities**

2. The principal activities of the Authority, which have not changed since last year, is the generation, transmission, distribution and supply of electricity in Cyprus. Following an amendment in the Law on 24 November 2000 the Authority has been empowered to engage in activities that are relevant with the exploitation and development of its assets, technical capabilities, installations, services and knowhow.

### **Review of business developments, position and performance of the Authority's business**

3. The profit of the Authority for the year ended 31 December 2012 was €77.222 thousand (2011: profit of €69.585 thousand). On 31 December 2012 the total assets of the Authority were €2.419.668 thousand (2011: €2.301.287 thousand) and the net assets were €1.023.715 thousand (2011: €959.468 thousand). The financial position of the Group as presented in the consolidated financial statements is considered satisfactory. The Board of Directors is not anticipating any significant changes in the activities of the Authority in the near future.

4. On the 11th of July 2011 an explosion in the Evangelos Florakis Naval Base, near Vasilikos Power Station, caused extensive damages on the property, plant and equipment of the Station taking the Station out of commission. The Station provided 60% of EAC's generation. The Station will be fully restored by September 2013.

### **Principal risks and uncertainties**

5. The principal risks and uncertainties faced by the Authority are disclosed in notes 3 and 26 of the financial statements.

### **Future developments of the Authority**

6. The Board of Directors of the Authority does not expect any significant changes or developments in the operations, financial position and performance of the Authority in the near future.

### **Results**

7. The results of the Group for the year are presented on page 92. The net profit for the year is transferred to reserves.



#### **Board of Directors**

8. The members of the Board of Directors at 31 December 2012 and at the date of this report are presented on page 10. All were members of the Board throughout 2012. Mr. Harris Thrassou who was a member as at 31 December 2012 resigned on 16 January 2013 and was replaced by Mr. Charalambos Tsouris on 16 January 2013.

9. There were no significant changes in the assignment of responsibilities and remuneration of the Board of Directors.

#### **Events after the balance sheet date**

10. Except of the issue discussed in Note 29 of the consolidated financial statements, there were no other material post balance sheet events which have a bearing on the understanding of the consolidated financial statements.

#### **Branches**

11. The Group did not operate through any branches during the year.

#### **Independent Auditors**

12. The Independent Auditors, PricewaterhouseCoopers Limited, have expressed their willingness to continue in office.

#### **By order of the Board of Directors**

**Charalambos Tsouris**  
Chairman

**6 August 2013**  
Nicosia

# Independent auditors' report To the Members of Electricity Authority of Cyprus

#### **Report on the consolidated financial statements**

We have audited the accompanying consolidated financial statements of Electricity Authority of Cyprus (the "Authority") and its subsidiaries (together with the Authority, the "Group"), which comprise the consolidated balance sheet as at 31 December 2012, and the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### **Board of Directors' responsibility for the financial statements**

The Board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union (EU) and the requirements of the Electricity Development Law Cap. 171, the Public Corporate Bodies (Audit of Accounts) Laws of 1983-2007, the Laws Regulating the Electricity Market of 2003-2012 and the Cyprus Companies Law, Cap. 113, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### **Auditor's responsibility**

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of consolidated financial statements that give a true and fair view 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 accounting policies used and the reasonableness of accounting estimates made by the Board of Directors, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion.

#### **Basis for qualified opinion**

The impairment to the value of property, plant and equipment of the Vasilikos Power Station of €103.6 million caused by the event of 11th July 2011 at Man (Note 1) has not been recognised in the consolidated financial statements for the year ended 31 December 2011. Also the amounts spent by 31 December 2011 for the restoration of the property, plant and equipment of the Vasilikos Power Station of €8.6 million, have been included in the consolidated statement of comprehensive income for the year ended 31 December 2012 as operating costs. This accounting treatment in our opinion does not comply with the requirements of IAS 16 "Property, plant and equipment" and IAS 36 "Impairment of Assets". As a result of the above, the depreciation charge for the year ended 31 December 2011 and the net book value of property, plant and equipment as at 31 December 2011 should be reduced by €2 million and €93 million respectively.



# Independent auditors' report To the Members of Electricity Authority of Cyprus

As discussed in Note 1 of the consolidated financial statements, the amounts spent in the year ended 31 December 2012 and 2011 for the restoration of the property, plant and equipment of the Vasilikos Power Station of €88.9 million and €8.6 million respectively have been included in the consolidated statement of comprehensive income for the year ended 31 December 2012 as operating costs. This accounting treatment in our opinion does not comply with the requirements of IAS 16 "Property, plant and equipment", which requires the capitalisation of the above amounts. As a result of the above, the operating costs before the depreciation charge and the depreciation charge for the year ended 31 December 2012 should be reduced by €97.5 million and €2.6 million respectively. The net book value of property, plant and equipment as at 31 December 2012 should be reduced by €1.5 million.

Also, as discussed in Note 24 to the consolidated financial statements, an amount of €9.6 million that had been received by 31 December 2011 by insurance companies and netted off with an amount of €8.6 million spent by 31 December 2011 for the restoration of the property, plant and equipment of the Vasilikos Power Station, was recognized upon receipt and has been included in trade and other payables for the year 2011 and as income and expense for the year 2012. In addition, at 31 December 2012 an amount of €53 million relating to compensation income from insurance companies has been included in trade and other payables. This accounting treatment in our opinion does not comply with the requirements of IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" and IASi6 "Property, plant and equipment". As a result of the above, the other operating income for the year ended 31 December 2012 and 2011 should be increased by €43.4 million and €9.6 million respectively. At 31 December 2012 and 2011, trade and other payables should be reduced by €53 million and €1 million respectively.

#### Qualified opinion

In our opinion, except for the effects of the matters described in the basis for qualified opinion paragraph, the consolidated financial statements give a true and fair view of the financial position of the Group as at 31 December 2012, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the EU and the requirements of the Electricity Development Law Cap. 171, the requirements of the Public Corporate Bodies (Audit of Accounts) Laws of 1983-2007, the requirements of the Laws Regulating the Electricity Market of 2003-2012 and the requirements of the Cyprus Companies Law, Cap. 113.

#### Report on other legal requirements

Pursuant to the requirements of the Auditors and Statutory Audits of Annual and Consolidated Accounts Law of 2009, we report the following:

- We have obtained all the information and explanations we considered necessary for the purposes of our audit.

- In our opinion, proper books of account have been kept by the Authority, except as explained in the basis for qualified opinion paragraph.
- The Authority's consolidated financial statements are in agreement with the books of account.
- In our opinion and to the best of our information and according to the explanations given to us, the consolidated financial statements give the information required by the Cyprus Companies Law, Cap. 113, in the manner so required, except as explained in the basis for qualified opinion paragraph.
- In our opinion, the information given in the report of the Board of Directors is consistent with the consolidated financial statements.

#### Other matter

This report, including the opinion, has been prepared for and only for the members of the Electricity Authority of Cyprus, as a body, the Minister of Commerce, Industry & Tourism, the House of Representatives and the Auditor General of the Republic in accordance with the Electricity Development Law Cap. 171, the Public Corporate Bodies (Audit of Accounts) Laws of 1983-2007, the Laws Regulating the Electricity Market of 2003-2012 and Section 34 of the Law of 2009 on Statutory Audits of Annual and Consolidated Accounts and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whose knowledge this report may come to.

Loizos A Markides  
Certified Public Accountant and Registered Auditor for and on behalf of

PricewaterhouseCoopers Limited  
Certified Public Accountants and Registered Auditors

Nicosia,  
6 August 2013

#### Report of the Auditor General of the Republic to the Electricity Authority of Cyprus

I have examined the foregoing report on the consolidated financial statements on pages 92 to 134 of the Electricity Authority of Cyprus for the year ended 31 December 2012, submitted by the appointed auditors in accordance with section 3(1) of the Public Corporate Bodies (Audit of Accounts) Laws and I am satisfied that it is appropriate.

Chrystalla Georghadji  
Auditor General of the Republic

Nicosia  
8 August 2013

# Consolidated Financial Statements

## Consolidated statement of comprehensive income for the year ended 31 December 2012

	Notes	2012 €000	2011 €000
Revenue	6	966.552	857.776
Other operating income	7	218.587	68.293
Other (losses)/gains	8	(76)	48
Operating costs	9	(1.084.946)	(841.649)
<b>Operating profit</b>		<b>100.117</b>	<b>84.468</b>
Finance costs	11	(13.960)	(8.991)
<b>Profit before tax</b>		<b>86.157</b>	<b>75.477</b>
Tax charge	12	(8.935)	(5.892)
<b>Profit for the year</b>		<b>77.222</b>	<b>69.585</b>
<b>Other comprehensive income for the year</b>		<b>-</b>	<b>-</b>
<b>Total comprehensive income for the year</b>		<b>77.222</b>	<b>69.585</b>

The notes on pages 96 to 134 are an integral part of these financial statements.

## Consolidated balance sheet at 31 December 2012

	Notes	2012 €000	2011 €000
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	16	1.936.747	1.926.871
Trade and other receivables	17	2.242	2.028
		<b>1.938.989</b>	<b>1.928.899</b>
<b>Current assets</b>			
Inventories	18	159.451	145.803
Trade and other receivables	17	236.872	183.919
Greenhouse gasses emission allowances		1.808	1.808
Short-term deposits	19	69.937	33.078
Cash and cash equivalents	20	12.611	7.780
		<b>480.679</b>	<b>372.388</b>
<b>Total assets</b>		<b>2.419.668</b>	<b>2.301.287</b>
<b>Reserves and liabilities</b>			
<b>Reserves</b>			
		<b>1.023.715</b>	<b>959.468</b>
<b>Non-current liabilities</b>			
Borrowings	21	432.447	403.608
Deferred tax liabilities	22	33.652	27.762
Deferred Income	23	447.544	441.808
		<b>913.643</b>	<b>873.178</b>
<b>Current liabilities</b>			
Trade and other payables	24	209.520	185.832
Current tax payable		11.038	1.625
Borrowings	21	241.054	261.211
Deferred Income	23	20.698	19.973
		<b>482.310</b>	<b>468.641</b>
<b>Total liabilities</b>		<b>1.395.953</b>	<b>1.341.819</b>
<b>Total reserves and liabilities</b>		<b>2.419.668</b>	<b>2.301.287</b>

On 6 August 2013 the Board of Directors of the Electricity Authority of Cyprus authorised these financial statements for issue.

C. TSOURIS  
Chairman

S. STYLIANOU  
General Manager

H. HADJIYEROU  
Executive Manager Finance

The notes on pages 96 to 134 are an integral part of these financial statements.

# Consolidated Financial Statements

## Consolidated statement of changes in equity for the year ended 31 December 2012

	Capital Reserve (1) €000	Revenue Reserve €000	Total €000
Balance at 1 January 2011	15.555	879.568	895.123
Defence charge on Deemed Dividend Distribution for the year 2009		(5.240)	(5.240)
<b>Comprehensive Income</b>			
Profit for the year	-	69.585	69.585
<b>Balance at 31 December 2011/ 1 January 2012</b>	<b>15.555</b>	<b>943.913</b>	<b>959.468</b>
Defence charge on Deemed Dividend Distribution for the year 2010	-	(12.975)	(12.975)
<b>Comprehensive income</b>			
Profit for the year	-	77.222	77.222
<b>Balance at 31 December 2012</b>	<b>15.555</b>	<b>1.008.160</b>	<b>1.023.715</b>

(1) The Capital Reserve represents a government grant.

(2) For the year 2009 and onwards, organisations which do not distribute 70% of their profits after tax, as defined by the Special Contribution for the Defence of the Republic Law, during the two years after the end of the year of assessment to which the profits refer, will be deemed to have distributed this amount as dividend. Special contribution for defence at 20% (15% until 31.8.2011 and 17% for the period 1.9.2011 - 31.12.2011) will be payable on such deemed dividend at the end of the period of two years from the end of the year of assessment to which the profits refer. The amount of this deemed dividend distribution is reduced by any actual dividend paid out of the profits of the relevant year at any time. This special contribution for defence is paid by the Authority on behalf of the Government of Cyprus.

The notes on pages 96 to 134 are an integral part of these financial statements.

## Consolidated Statement of cash flows for the year ended 31 December 2012

	Notes	2012 €000	2011 €000
<b>Cash flows from operating activities</b>			
Profit before tax		86.157	75.477
Adjustments for:			
Depreciation of property, plant and equipment	16	89.811	77.056
Amortisation of consumers' capital contributions	23	(19.973)	(19.047)
Loss/(Profit) on sale of property, plant and equipment	8	76	(48)
Interest expense and unrealised exchange loss	11	16.084	12.824
Interest income		(1.802)	(1.579)
		170.353	144.683
Changes in working capital:			
Inventories		(13.648)	12.323
Trade and other receivables		(52.984)	(52.315)
Trade and other payables		24.042	31.206
<b>Cash generated from operations</b>		<b>127.763</b>	<b>135.897</b>
Tax paid		(6.607)	(28.435)
<b>Net cash from operating activities</b>		<b>121.156</b>	<b>107.462</b>
<b>Cash flows from investing activities</b>			
Short-term deposits		(36.859)	(1.467)
Purchase of property, plant and equipment	16	(99.863)	(214.718)
Proceeds from sale of property, plant and equipment		100	111
Additions to consumers' capital contributions	23	26.434	33.077
Interest received		1.618	1.847
<b>Net cash used in investing activities</b>		<b>(108.570)</b>	<b>(181.150)</b>
<b>Cash flows from financing activities</b>			
Proceeds from long term borrowings		75.000	-
Repayments of long term borrowings		(47.869)	(44.607)
Interest paid		(16.629)	(13.065)
<b>Net cash (used in) from/financing activities</b>		<b>10.502</b>	<b>(57.672)</b>
<b>Net (decrease)/increase in cash, and cash equivalents and bank overdrafts</b>		<b>23.088</b>	<b>(131.360)</b>
<b>Net bank overdrafts at beginning of year</b>		<b>(205.360)</b>	<b>(74.000)</b>
<b>Net bank overdrafts at the end of the year</b>	20	<b>(182.272)</b>	<b>(205.360)</b>

The notes on pages 96 to 134 are an integral part of these financial statements.



# Consolidated Financial Statements

## Notes to the consolidated financial statements

### 1. General Information

The Electricity Authority of Cyprus is a Public Corporate Body which was established in Cyprus under the Electricity Development Law Cap.171 of 1952. It is managed by a Board of Directors, consisting of a Chairman, Vice-Chairman and seven members, who are appointed by the Council of Ministers.

The address of the Authority's Head Office is at 11 Amfipoleos Street, Strovolos, P.O.Box 24506, CY-1399 Nicosia, Cyprus.

The Electricity Authority of Cyprus pursuant to the above Law is engaged in the generation, transmission, distribution and supply of electricity. Following an amendment in the Law on 24 November 2000 the Authority has been empowered to engage in activities that are relevant with the exploitation and development of its assets, technical capabilities, installations, services and knowhow.

With the accession of Cyprus to the European Union and the opening up of the electricity market to competition, the Electricity Authority of Cyprus in preparing for its harmonization with the European Union has taken all the necessary steps in order to conform with Directive 2003/54/EC of the European Parliament and of the Council of 19th December 1996 concerning common rules for the internal market in electricity.

#### Explosion at the Naval Base at Mari

On 11th of July, 2011 an explosion occurred at the naval base "Evangelos Florakis" in Mari, close to Vasilikos Power Station, resulting in extensive damage to property, plant and equipment of the station which was taken out of commission. The station covered 60% of EAC's generation .

At the date of the event Unit 5 was under construction and was insured by the contractor of Unit 5. The Authority had signed a separate insurance policy, with the insurance company of the contractor, for the value of the equipment which was delivered on the 1st July for temporary operation amounting to € 125,6 million with a deductible amount of € 250.000 (excess).

The rest of the plant as well as inventory is covered by an insurance policy with another company for the amount of € 662,7 million and €20 million respectively. The insurance policy covering all assets of the Authority of approximately € 1,9 billion provides maximum compensation from an incident of € 600 million and an amount of € 800.000 as deductible (excess).

The total losses are not identified and evaluated by the date of approval of the financial statements for 2011. An amount of € 9,6 million that had been received until 31 December 2011 was offset by an amount of € 8,6 million spent until 31 December 2011 for the repair and the remaining amount of €1 million was included in trade and other creditors.

The restoration of Vasilikos Power Station continued during 2012 with total expenditure amounting to €104,5 m. The repairs did not represent replacement of machinery or substantial repairs of the Generating Units. They related to the peripherals of the Units, that is parts and accessories, with their net book value and useful life not increasing, something which was confirmed by the Report of the Special Consultant.

Due to the above all reconstruction expenditure have been included in operating expenditure as repairs.

After the out of court settlement between the Government, the insurance company and the reinsurers, total compensation of € 132,5 million was paid to EAC for Units 1-4. Until 31 December 2012 an amount of € 60 million has been received, while the remaining amount of € 72,5 million was received in 2013. For Unit 5 an amount of € 9,6 million was received until 31 December 2012 while the final compensation amount has not yet been agreed.

An amount of € 89,3 million has been recognized, in Other Income which corresponds to the restoration costs until 31 December 2012, less deductions and less the amount not yet agreed with the insurance company of Unit 5.

The balance of the agreed compensation of €52,89 million was included in trade and other payables as deferred income.

#### Operating environment in Cyprus

The Cyprus economy has been adversely affected over the last few years by the international credit crisis and the instability in the financial markets. During 2012 there was a considerable tightening of financing availability from Cypriot financial institutions, mainly resulting from financial instability in relation to the Greek sovereign debt crisis, including the impairment of Greek Government Bonds, and its impact on the Cyprus economy. In addition, following its credit downgrades, the ability of the Republic of Cyprus to borrow from international markets has been significantly affected. The Cyprus government entered into negotiations with the European Commission, the European Central Bank and the International Monetary Fund, in order to obtain financial support.

Cyprus and the Eurogroup (together with the International Monetary Fund) reached an agreement on 25 March 2013 on the key elements necessary for a future macro-economic adjustment programme which includes the provision of financial assistance to the Republic of Cyprus of up to €10 billion. The programme aims to address the exceptional economic challenges that Cyprus is facing and to restore the viability of the financial sector, with the view of restoring sustainable economic growth and sound public finances over the coming years.

Based on this agreement the Eurogroup decision on Cyprus includes plans for the restructuring of the financial sector and safeguards deposits below € 100.000 in accordance with EU legislation. More specifically, the uninsured depositors of Laiki are entitled to receive 18% of the equity of Bank of Cyprus. This should be managed by the liquidator and its proceeds will be shared between the uninsured depositors. The Bank of Cyprus uninsured depositors have received in total 81% of the Bank of Cyprus new shares through a conversion of 47,5% of their deposits (amounts over €100.000). The holders of equity and other mezzanine instruments have received approximately 1% of the Bank of Cyprus new equity instruments. These instruments have not been admitted for trading in the Stock exchange as yet. In addition the corporate tax rate will increase from 10% to 12,5%. The fair value of these instruments is still unknown and very difficult to calculate due to the unavailability of public information and active market. The Authority's preliminary assessment is that the Organisation's deposits of €9,5m held in these two Banks, at 26 March 2013, have suffered an impairment of approximately €4,5m.

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On 22 March 2013 the House of Representatives voted legislation relating to capital controls affecting transactions executed through banking institutions operating in Cyprus. The extent and duration of the capital controls is decided by the Minister of Finance and the Governor of the Central Bank of Cyprus and were enforced on 28 March 2013 and have subsequently been relaxed but are still in place.

In addition the Pension Fund held bank deposits, securities and shares in the two above Cypriot banks and as a result an impairment loss of €40,2 m is expected to occur. As a result, the Authority will be requested to increase its pension fund contribution.

The uncertain economic conditions in Cyprus, the unavailability of financing, together with the current instability of the banking system and the anticipated overall economic recession, could affect the (1) the ability of the Authority to obtain new borrowings or re-finance its existing borrowings at terms and conditions similar to those applied to earlier transactions, (2) the ability of the Authority's trade and other debtors to repay the amounts due to the Authority and (3) the consumption of electricity resulting to decreased turnover for the Authority.

The deterioration of operating conditions could also have an impact on the cash flow forecasts of the Authority's management and their assessment of impairment of financial and non-financial assets. The basic assumptions that have been used in the assessment of the Authority's ability to continue as a going concern are explained in Note 2.

The Authority has assessed whether any impairment provisions are deemed necessary for the financial assets carried at amortised cost by considering the economic situation and outlook at the end of the reporting period. Provisions for trade receivables are determined using the incurred loss model required by the applicable accounting standards. These standards require recognition of impairment losses for receivables that arose from past events and prohibit recognition of impairment losses that could arise from future events, no matter how likely those future events are.

The Authority is unable to predict all developments which could have an impact on the Cyprus economy and consequently, what effect, if any, they could have on the future financial performance, cash flows and financial position of the Authority.

On the basis of the evaluation performed, the Authority has concluded that no additional provisions or impairment charges are necessary.

The Authority believes that it is taking all the necessary measures to maintain the viability of the organisation and the development of its business in the current business and economic environment.

## 2. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all years presented in these consolidated financial statements unless otherwise stated.

### Going Concern Basis

The consolidated financial statements have been prepared on a going concern basis.

Specifically, the Authority has prepared a Liquidity Response Plan (the "Plan") to ensure continuity of operations. On the basis of this Plan, the Authority can meet its liquidity needs for the next twelve months.

More specifically, in respect of bank facilities totaling €102,5 m. which were due to expire from 1st January 2013 until the date of approval of these financial statements, an amount of €48 m. has been renewed. On 6 August 2013, date of approval of these financial statements, the bank facilities totaled to an amount of €185,5 m. These facilities include amounts of €52,5 m. from local banks which are under the process of recapitalization.

Out of the total bank facilities of €185,5 m. mentioned above, an amount of €148 m. banking facilities expire during the Plan. From the up to date actions taken and the responses received from the banking institutions, the Authority believes, without any formal commitment at the present from these banking institutions, that €90 m. of these banking facilities will be renewed and as a result they have been taken into account in the determination of the available bank facilities for the duration of the Plan. Also, for bank facilities of €15 m. that will be renewed, the attainment of government guarantee is outstanding.

The Plan has been prepared on the basis of the following assumptions:

- A decrease in sales (kWhs) of 18% compared to forecasted sales as per the Approved Budget of 2013, which represents a 16% decrease compared to sales of the year ended 31 December 2012. Actual quantity of sales in kWhs for the period April - June 2013 decreased by 10% compared to sales in the corresponding period of 2012.
- Sales revenue is based on the current tariffs for 2013 as they have been revised after the recent change in the fuel adjustment clause but do not take into account the expected changes in tariffs as from January 2014.
- The temporary reduction of 5% is taken into account on all basic tariffs for the entire Plan period of the plan.
- All costs have been included based on the budget of the Authority approved by the Cyprus House of Representatives.

The Authority has secured the acceleration of the disbursement of the loan of €50 m. from the European Investment Bank, which was released in June 2013. Additional loan of €125 m. has been approved by the European Investment Bank and will be disbursed upon the ratification of the supplier of the interim solution for delivery of natural gas. The Authority is taking actions to disburse part of the loan before the final ratification of the gas supplier in order to expedite the implementation of the approved program of capital expenditure.

Additionally, the Plan includes a sensitivity analysis for further reduction in kWhs sales by 4%, under which there are no major concerns about the applicability of the going concern basis.

Based on the initial decision of CERA for the temporary reduction of 5% on all basic tariffs, CERA will perform a review every two months. The Plan, as stated above, includes this temporary reduction throughout the whole period of twelve months.

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The Authority takes some other actions that are expected to further improve its liquidity and profitability. These actions include efforts to recover outstanding amounts, use of idle assets as well as reductions in operating costs and employee benefits other than those taken into account in the Authority's approved budget.

Based on the above the Authority is satisfied that the consolidated financial statements can be prepared on a going concern basis.

## **Basis of preparation**

The consolidated financial statements of the Electricity Authority of Cyprus have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the European Union (EU) the requirements of the Electricity Development Law, Cap. 171 the Laws regulating the Electricity Market of 2003-2012 and the Cyprus Company Law Cap. 113.

As of the date of the authorisation of the financial statements, all International Financial Reporting Standards issued by the International Accounting Standards Board (IASB) that are effective as of 1 January 2012 have been adopted by the EU through the endorsement procedure established by the European Commission, with the exception of certain provisions of IAS 39 "Financial Instruments: Recognition and Measurement" relating to portfolio hedge accounting.

The financial statements have been prepared under the historical cost convention.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates and requires management to exercise its judgment in the process of applying the Authority's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

## **Adoption of new and revised IFRSs**

During the current year the Authority adopted all the new and revised International Financial Reporting Standards (IFRS) that are relevant to its operations and are effective for accounting periods beginning on 1 January 2012. This adoption did not have a material effect on the accounting policies of the Authority.

At the date of approval of these financial statements the following financial reporting standards were issued by the International Accounting Standards

Board but were not yet effective:

## **(i) Adopted by the European Union**

### **New standards**

- IFRS 10, "Consolidated Financial Statements" (effective for annual periods beginning on or after 1 January 2014).
- IFRS 13, "Fair Value Measurement" (effective for annual periods beginning on or after 1 January 2013).
- IAS 27, "Separate Financial Statements" (effective for annual periods beginning on or after 1 January 2014).

### **Amendments**

- Amendment to IAS 12 "Income Taxes" on deferred tax relating to recovery of underlying assets (effective for annual periods beginning on or after 1 January 2013).
- Amendment to IAS 1 "Presentation of Financial Statements" on Presentation of items of other comprehensive income (effective for annual periods beginning on or after 1 July 2012).
- Amendments to IAS 19 "Employee Benefits" (effective for annual periods beginning on or after 1 January 2013).
- Amendments to IFRS 7 "Financial Instruments: Disclosures" on Offsetting Financial Assets and Financial Liabilities (effective for annual periods beginning on or after 1 January 2013).
- Amendments to IAS 32 "Financial Instruments: Presentation" on Offsetting Financial Assets and Financial Liabilities (effective for annual periods beginning on or after 1 January 2014).
- Amendment to IFRS 1 "First-time adoption of International Financial Reporting Standards" on IAS 20 'Accounting for Government Grants and Disclosure on Government Assistance' - exemption on the retrospective application of IFRSs in relation to government grants (effective for annual periods beginning on or after 1 January 2013).

### **New IFRICs**

- IFRIC 20 "Stripping Costs in the Production Phase of a Surface Mine" (effective for annual periods beginning on or after 1 January 2013).

## **(ii) Not adopted by the European Union**

### **New standards**

- IFRS 9 "Financial Instruments" (and subsequent amendments to IFRS 9 and IFRS 7) (effective for annual periods beginning on or after 1 January 2015).

### **Amendments**

- Amendments to IAS 36 'Recoverable amount disclosure for non-financial assets' (effective for annual periods beginning on or after 1 January 2014).
- Amendments to IFRS 10, IFRS 12 and IAS 27 on consolidation for investment entities (effective for annual periods beginning on or after 1 January 2014).

The Board of Directors expects that the adoption of these accounting standards in future periods will not have a material effect on the financial statements of the Authority with the exception of the following:



# Consolidated Financial Statements

- Amendment to IAS 1 “Financial Statements Presentation” on Presentation of Items of Other Comprehensive Income”. The main change resulting from this amendment is a requirement for entities to group items presented in ‘other comprehensive income’ (OCI) on the basis of whether they are potentially reclassifiable to profit or loss subsequently (reclassification adjustments). The amendment does not address which items are presented in OCI. This amendment is effective for annual periods beginning on or after 1 July 2012.
- Amended IAS 19, Employee Benefits (issued in June 2011, effective for periods beginning on or after 1 January 2013), makes significant changes to the recognition and measurement of defined benefit pension expense and termination benefits, and to the disclosures for all employee benefits. The standard requires recognition of all changes in the net defined benefit liability (asset) when they occur, as follows: (i) service cost and net interest in profit or loss; and (ii) remeasurements in other comprehensive income.

## Subsidiary undertaking

Subsidiary undertaking, is that entity in which the Authority has an interest of more than 50% of the voting rights or otherwise has the power to exercise control over its decisions. The subsidiary undertaking is consolidated from the date on which control is transferred to the Authority and is no longer consolidated from the date that control ceases. All intercompany transactions, balances and unrealized gains on transactions between group companies are eliminated as is also the case with unrealised losses unless cost cannot be recovered.

The purchase method of accounting is used to account for the acquisition of subsidiaries by the Authority. The cost of an acquisition is measured as the fair value of the assets given and equity instruments issued and liabilities incurred or assumed at the date of exchange. Costs directly attributable to the acquisition are recognized in the Income Statement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The excess of the cost of acquisition over the fair value of the Group’s share of the identifiable net assets acquired is recorded as goodwill. If the cost of acquisition is less than the fair value of the net assets of the subsidiary acquired, the difference is recognised directly in the consolidated income statement.

## Revenue recognition

Revenue comprises the fair value of consideration received or receivable for the sale of goods and services in the ordinary course of the Authority’s activities. Income is shown net of value added tax.

The Authority recognizes revenue when the amount can be reliably estimated, it is probable that future economic benefits will flow to the entity and when specific criteria have been met for each of the Company’s activities as described below:

## (a) Sales of electricity

Sales of electricity represent amounts receivable, based on consumption recorded by meters, net of V.A.T. Sales also include an estimate of the value of units supplied to consumers between the date of the last meter reading and the year end, and this estimate is included in receivables in the balance sheet.

## (b) Interest Income

Interest income is recognized on a time proportion basis using the effective interest method.

## (c) Consumers’ capital contributions

The Authority accepts applications for extension of its network in areas not yet covered by the existing network by individuals and legal entities. Furthermore the Authority accepts applications for additional load from the existing network. In both cases the Authority charges the applicants with the construction cost.

The fact that the cost is recovered from applicants results in not having to be recovered by consumers through electricity tariffs. Otherwise this cost would have been included in tariffs and consumers would have been billed for the consumption of electricity with higher prices. All network extension applicants are charged with capital contributions and all consumers are billed with the same tariffs.

Applicants ensure the right of permanent access to the network for an unlimited period of time. The Authority is committed to providing access for an unlimited period of time. Capital contributions represent the price for this continuous service and hence income is shown as deferred income and is gradually released to the consolidated income statement over a period identical to that of the assets constructed/ acquired for this purpose, and which have an average life of 33 1/3 years. This period is considered a reasonable approximation for calculating the period of the customer relationship.

Subsidies from the Authority in respect of such capital contributions are deducted from the amounts receivable and charged in the consolidated statement of comprehensive income at the time granted.

## Government grants

Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Authority will comply with all attached conditions. Government grants relating to costs are deferred and recognised in profit or loss over the period necessary to match them with the costs that they are intended to compensate.

## Foreign currency translation

### (a) Functional and presentation currency

Items included in the Authority’s consolidated financial statements are measured using the currency of the primary economic environment in which the entity operates (“the functional currency”). The consolidated financial statements are presented in Euro (€), which is the Authority’s functional and presentation currency.

### (b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in profit or loss.

# Consolidated Financial Statements

All foreign exchange gains and losses are presented in profit or loss within "finance costs".

## Employee benefits

The Authority operates two defined benefit plans and various other defined contribution plans the assets of which are held in separate trustee-administered funds. These plans are mainly funded by the Authority.

The present value of the obligation and the current service costs relating to the defined benefit plan are assessed using the projected unit credit method. The accumulated comprehensive surplus or deficit arising from the changes of the rate used for discounting projected future cash outflows concerning benefits and from differences between expected and actual return of the investments and other actuary judgements are deferred and charged to the consolidated comprehensive income statement over the remaining working lives of the employees participating in the relevant plans, in accordance with an actuary valuation performed every year.

The portion of actuarial gains and losses to be recognised is the excess, over and above the greatest of the 10% corridor of the present obligation of the Defined Benefit Plan and the 10% of the present value of the assets at the previous reporting period, divided by the expected average remaining working lives of the employees participating in the plan to the fact that the IAS permits earlier recognition of the accumulated actuarial losses and of a larger amount than the excess amount, it has been decided to recognise the amount of the unrecorded actuarial loss at the beginning of the year over a period of 5 years.

The Authority's contributions to the defined contribution plans are charged to the consolidated statement of comprehensive income in the year to which they relate.

## Current and deferred income tax

The tax expense for the period comprises current and deferred tax including interest and penalties. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income. In this case, the tax is also recognised in other comprehensive income.

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the country in which the Authority operates and generates taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. If applicable tax regulation is subject to interpretation, it establishes provision where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognised using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates and laws that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be recognized.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on the Authority where there is an intention to settle the balances on a net basis.

## Property, plant and equipment

All property, plant and equipment are stated at historical cost less depreciation. Historical cost includes expenditure that is directly related to the acquisition of property, plant and equipment. For projects carried out by external contractors, cost is based on the value of work executed and certified by engineering consultants. For projects carried out by the Authority's own staff, cost comprises of materials, labour and related overheads.

Major spare parts and stand-by equipment are accounted for as property, plant and equipment when the Authority expects to use them during more than one period.

Land is not depreciated. Depreciation on other property, plant and equipment is calculated using the straight-line method to allocate their cost to their residual values, over their estimated useful lives. The estimated useful lives of the major elements of property plant and equipment are as follows:

	Years
Freehold land	Indefinite
Power station buildings	30
Other buildings	35
Power station plant and machinery	25
Other plant and machinery	25-30
Lines and cables	35-40
Meters	15
Motor vehicles	7
Furniture, fittings and office equipment	10
Tools and instruments	10
Hardware	5
Software	3

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Expenditure for repairs and maintenance of property, plant and equipment is charged to the profit and loss of the year in which they were incurred. The cost of major renovations and other subsequent expenditure are included in the carrying amount of the asset or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Authority and the cost of the item can be measured reliably.

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Gains and losses on disposal of property, plant and equipment are determined by comparing proceeds with carrying amount and these are included in "other gains-net" in profit or loss.

## Greenhouse Gas Emission Allowances

Based on the Cyprus Law for the Scheme of Greenhouse Gas Emission Allowance Trading, N.132(I)/2004, greenhouse gas emission allowances are allocated to the various operators (companies) with the objective of reducing the level of pollution in the environment.

Each operator, whose annual emissions exceed the number of emission allowances allocated for the specific year, is obliged to buy as many emission allowances as required to cover the shortage and in addition to pay a penalty fee for each tonne of excess emission as well as to sell any surplus.

Granted CO2 emission allowances are initially recognised at nominal value (nil value) when the Authority is able to exercise control over these rights. Purchased CO2 emission allowances are initially recognised at cost (purchased price) within intangible assets. A liability is recognised when the level of emissions exceeds the level of allowances granted. The liability includes the total cost of the purchased allowances and any additional deficit at the current market value of the allowances as at the balance sheet date. Movements in the liability are recognised in the consolidated statement of comprehensive income.

The intangible asset is surrendered at zero value at the end of the compliance period reflecting the consumption of economic benefit. Surplus emission allowances can be carried forward and off-set future shortages (up to the end of the compliance period) or be sold. Proceeds from the sale of surplus emission allowances are recognized upon the sale of these rights.

## Impairment of non-financial assets

Assets that have an indefinite useful life, including goodwill, are not subject to amortisation and are tested annually for impairment. Assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Non-financial assets, other than goodwill, that have suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

## Financial assets

### (i) Classification

The Authority classifies its financial assets in loans and receivables. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of financial assets at initial recognition.

#### • Loans and receivables

Loans and receivables are non derivative financial assets with fixed or determinable payments that are not quoted in an active market and for which there is no intention of trading the receivable. They are included in current assets, except for maturities greater than twelve months after the balance sheet date. These are classified as non current assets. The Authority's loans and receivables comprise trade and other receivables and cash and cash equivalents in the balance sheet.

### (ii) Recognition and measurement

Loans and receivables are carried at amortised cost using the effective interest method.

Regular way purchases and sales of financial assets are recognised on the trade date which is the date on which the Authority commits to purchase or sell the asset.

Financial assets are initially recognised at fair value plus transaction costs. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Authority has transferred substantially all risks and rewards of ownership.

### (iii) Impairment of financial assets

The Authority assesses at the balance sheet date whether there is objective evidence that a financial asset or group of financial assets is impaired.

A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables category, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognised in the profit or loss. If a loan or held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the company may measure impairment on the basis of an instrument's fair value using an observable market price.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised (such as an improvement in the debtor's credit rating), the reversal of the previously recognised impairment loss is recognised in the profit or loss.



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## Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

## Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average cost method. Cost includes purchase cost, transport and handling costs. It excludes borrowing costs. Net realizable value is the estimated selling price in the ordinary course of business less applicable variable selling expenses. Provision is made for damaged, deteriorated, obsolete and unusable items where appropriate.

## Trade receivables

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost, using the effective interest method, less provision for impairment. A provision for impairment of trade receivables is established when there is objective evidence that the Authority will not be able to collect all amounts due according to the original terms of receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or delinquency in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the carrying amount and the recoverable amount, being the present value of estimated future cash flows, discounted at the effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account, and the amount of the loss is recognised in profit or loss within operating costs. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against operating costs in profit or loss.

## Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and the amount has been reliably estimated. Provisions are not recognised for future operating losses.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

## Cash and cash equivalents

Cash and cash equivalents include cash in bank and in hand, short term deposits held at call with banks with average maturity up to 90 days and bank overdrafts. Short term bank deposits with maturity of 6-12 months is included in short-term bank deposits. In the balance sheet bank overdrafts are shown within borrowings in current liabilities.

## Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost. Any difference between the proceeds (net of transaction costs) and the redemption value is recognised in profit or loss over the period of the borrowings, using the effective interest method, unless they are directly attributable to the acquisition, construction or production of a qualifying asset, in which case they are capitalised as part of the cost of that asset.

Borrowing costs are interest and other costs that the Authority incurs in connection with the borrowing of funds, including interest on borrowings, amortisation of discounts or premium relating to borrowings, amortisation of ancillary costs incurred in connection with the arrangement of borrowings, finance lease charges and exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset, being an asset that necessarily takes a substantial period of time to get ready for its intended use or sale, are capitalised as part of the cost of that asset, when it is probable that they will result in future economic benefits to the Authority and the costs can be measured reliably.

Borrowings are classified as current liabilities, unless the Authority has an unconditional right to defer settlement of the liability for at least twelve months after the balance sheet date.

## Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

## Segmental reporting

The financial statements are also presented in separate statements per business segment.

A business segment is a group of assets and operations engaged in providing products or services that are subject to risks and returns that are different from those of other business segments. A geographical segment is engaged in providing products or services within a particular economic environment that are subject to risks and returns that are different from those of segments operating in other economic environments.

The analysis per business segment is prepared for the activities of generation, transmission, distribution and supply which also complies with the requirements of the Laws regulating the Electricity Market of 2003-2012.

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## Comparative information

Where necessary comparative figures have been adjusted to conform with changes in presentation in the current year.

## 3. Financial risk management

### (i) Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk and cash flow interest rate risk), credit risk and liquidity risk.

The Group's risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. Risk management is carried out by a central treasury department under policies approved by the Board of Directors. The treasury department identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

- **Market Risk**

#### Foreign exchange risk

Foreign exchange risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Foreign exchange risk arises when future commercial transactions or recognised assets or liabilities are denominated in a currency that is not the Authority's functional currency.

The Authority is exposed to foreign exchange risk arising from various currency exposures with respect to the US Dollar, Pound Sterlings and Swiss Franks but believes that any change in foreign exchange rates will not have a material effect on its results.

The Authority's management monitors the exchange rate fluctuations on a continuous basis and acts accordingly.

The net foreign exchange difference credited to the consolidated statement of comprehensive income amounts to (€2.316.000) (2011: (€2.663.000)) which relates to financing activities (Note 11).

#### Cash flow interest rate risk

Interest rate risk is the risk that the value of financial instruments will fluctuate due to changes in market interest rates. The Authority's income and operating cash flows are dependent on changes in market interest rates.

The Authority's interest rate risk arises from long term borrowings. Borrowings issued at variable rates expose the Authority to cash flow interest rate risk. Borrowings issued at fixed rates expose the Authority to fair value interest rate risk.

At 31 December 2012, if interest rates on Euro-denominated borrowings had been 0,1% (2010: 0,1%) higher/lower with all other variables held constant, post-tax profit for the year would have been €660.250 (2010: €642.965) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings.

The Authority's management monitors the interest rate fluctuations on a continuous basis and acts accordingly.

- **Credit risk**

Credit risk arises from cash and cash equivalents, deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables and committed transactions.

Sales to retail customers are settled in cash or using major credit cards. See Note 15 for further disclosure on credit risk.

The Management does not expect any losses from non-performance by these counterparties.

- **Liquidity risk**

The table below analyses the Group's financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

	Less than 1 year €000	Between 1 and 2 years €000	Between 2 to 5 years €000	Over 5 years €000
<b>At 31 December 2011</b>				
Borrowings (Capital and interest)	269.512	52.560	141.815	244.197
Trade and other payables*	173.274	-	-	-
	<b>442.786</b>	<b>52.560</b>	<b>141.815</b>	<b>244.197</b>
<b>At 31 December 2012</b>				
Borrowings (Capital and interest)	250.236	60.437	153.719	304.153
Trade and other payables*	146.549	-	-	-
	<b>396.785</b>	<b>60.437</b>	<b>153.719</b>	<b>304.153</b>

\*Excluding statutory liabilities and deferred income.

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## (ii) Capital risk management

The Authority's objectives when managing capital are to safeguard the Authority's ability to continue as a going concern and to maintain an optimal capital structure to reduce the cost of capital.

The Authority monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings (including 'current and non-current borrowings' as shown in the balance sheet) less short term deposits and cash and cash equivalents. Total capital is calculated as 'equity' ('Reserves' and 'Deferred Income' as shown in the balance sheet) plus net debt.

During 2012, the Authority's strategy, which was unchanged from 2011, was to maintain the gearing ratio within 15% to 30%.

The gearing ratio at 31 December 2012 and 2011 was as follows:

	2012 €000	2011 €000
Total borrowings (Note 21)	673.501	664.819
Less: Short term deposits (Note 19)	(69.937)	(33.078)
Cash and cash equivalents (Note 20)	(12.611)	(7.780)
Net debt	590.953	623.961
Total equity	1.491.957	1.421.249
<b>Total Capital as defined by Management</b>	<b>2.082.910</b>	<b>2.045.210</b>
<b>Gearing ratio</b>	<b>28%</b>	<b>30%</b>

## (iii) Fair value estimation

The fair value of the financial assets and liabilities of the Group approximate their carrying values at Balance Sheet date.

## 4. Critical accounting estimates and judgments

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

## Critical accounting estimates and judgements

The Authority makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the actual results. The estimates 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 are discussed below:

### (i) Deferred income

The Authority accepts applications for extension of its network in areas not yet covered by the existing network by individuals and legal entities. Furthermore the Authority accepts applications for additional load from the existing network. In both cases the Authority charges the applicants with the construction cost. Construction cost is recognised in property, plant and equipment.

The fact that the cost is recovered from applicants results in not having to be recovered by consumers through electricity tariffs. Otherwise this cost would have been included in tariffs and consumers would have been billed for the consumption of electricity with higher prices. All network extension applicants are charged with capital contributions and all consumers are billed with the same tariffs.

Applicants ensure the right of permanent access to the network for an unlimited period of time. The Authority is committed to providing access for an unlimited period of time. Capital contributions represent the price for this continuous service and hence income is shown as deferred income and is gradually released to the consolidated income statement over a period identical to that of the assets constructed/acquired for this purpose, and which have an average life of 33 1/3 years. This period is considered a reasonable approximation for calculating the period of the customer relationship.

Subsidies from the Authority in respect of such capital contributions are deducted from the amounts receivable and charged in the consolidated statement of comprehensive income at the time granted.

### (ii) Tax

Significant judgement is required in determining the provision for income taxes. These are transactions and calculations for which the ultimate tax determination is uncertain due to the ordinary course of business. The Authority recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income tax assets in the period in which such determination is made.

Were the actual final outcome (on the judgment areas) to differ by 10% from management's estimates then the Authority would need to increase its current tax liabilities by €308.140 if the final outcome was not in the Authority's favor.

## 5. Segmental reporting

For 2011 and 2012, the Cyprus Energy Regulatory Authority with a regulatory decision, approved separate fees for the Transmission, Distribution and Transmission System Operation. The revenue derived from the approved fees (Transmission, 0.86/0.83 cents/kWh of invoiced energy for 2012/2011 respectively, Transmission System Operation 0.08/0.08 cents/kWh for 2012/2011 respectively, Distribution 1.33/1.28 cents/kWh for medium voltage for 2012/2011 respectively and 2.80/2.73 cents/kWh low voltage for 2012/2011 respectively) have been included for the first time in separate statements of comprehensive income. For Generation and Supply, for which no separate fees were approved a single statement of comprehensive income has been prepared. Deferred income for capital contributions of €19.973.000 (2011: €19.047.000) are included in unallocated other revenue as required by the Statement of Regulatory Practice and Tariff Methodology. Expenses and amortization were included in the income statements using the same methodology.

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The statements of comprehensive income and the related analysis is shown below:

	Generation/ Supply 2012 €000	Trans- mission 2012 €000	Distri- bution 2012 €000	Other 2012 €000	Unallo- cated amounts 2012 €000	Counter balanced amounts 2012 €000	Total 2012 €000
Electricity sales	965.409	-	-	-	1.143	-	966.552
Permitted revenue	29.183	40.942	104.074	-	-	(174.199)	-
Other income	186.828	328	4.283	1.472	25.676	-	218.587
Other (losses)/gains	(96)	3	17	-	-	-	(76)
<b>Total income</b>	<b>1.181.324</b>	<b>41.273</b>	<b>108.374</b>	<b>1.472</b>	<b>26.819</b>	<b>(174.199)</b>	<b>1.185.063</b>
Fuel	645.049	-	-	-	-	-	645.049
Purchase of electricity	42.084	-	-	-	-	-	42.084
Repairs at Vasilikos P/S	104.508	-	-	-	-	-	104.508
Cost of Temporary Generators	35.302	-	-	-	-	-	35.302
Provision for non-recoverability of compensation for temporary generating units	24.465	-	-	-	-	-	24.465
Salaries and related expenses	39.585	10.990	40.506	97	-	-	91.178
Depreciation	43.856	12.997	32.920	38	-	-	89.811
Other operating expenses	31.616	5.550	15.329	54	-	-	52.549
Ancillary services and energy reserve	29.183	-	-	-	-	(29.183)	-
Use of transmission network	37.458	-	-	-	-	(37.458)	-
Transmission System operating expenses	3.484	-	-	-	-	(3.484)	-
Use of Distribution System	104.074	-	-	-	-	(104.074)	-
<b>Total expenses</b>	<b>1.140.664</b>	<b>29.537</b>	<b>88.755</b>	<b>189</b>	<b>-</b>	<b>(174.199)</b>	<b>1.084.946</b>
Operating profit	40.660	11.736	19.619	1.283	26.819	-	100.117

	Generation/ Supply 2011 €000	Transmis- sion 2011 €000	Distribu- tion 2011 €000	Other 2011 €000	Unallo- cated amounts 2011 €000	Counter balanced amounts 2011 €000	Total 2011 €000
Electricity sales	854.938	-	-	-	1.191	-	856.129
Permitted revenue	30.326	41.814	105.374	-	-	(177.514)	-
Other income	41.006	84	3.123	1.350	24.377	-	69.940
Other gains	50	-	(2)	-	-	-	48
<b>Total income</b>	<b>926.320</b>	<b>41.898</b>	<b>108.495</b>	<b>1.350</b>	<b>25.568</b>	<b>(177.514)</b>	<b>926.117</b>
Fuel	540.441	-	-	-	-	-	540.441
Purchase of electricity	46.223	-	-	-	-	-	46.223
Cost of Temporary Generators	17.229	-	-	-	-	-	17.229
Salaries and related expenses	47.365	14.245	54.221	46	-	-	115.877
Depreciation	34.663	11.423	30.937	33	-	-	77.056
Other operating expenses	24.844	4.468	15.205	306	-	-	44.823
Ancillary services and energy reserve	30.326	-	-	-	-	(30.326)	-
Use of transmission network	38.138	-	-	-	-	(38.138)	-
Transmission System operating expenses	3.676	-	-	-	-	(3.676)	-
Use of Distribution System	105.324	-	-	-	-	(105.324)	-
<b>Total expenses</b>	<b>888.279</b>	<b>30.136</b>	<b>100.363</b>	<b>385</b>	<b>-</b>	<b>(177.514)</b>	<b>841.649</b>
Operating profit	38.041	11.762	8.132	965	25.568	-	84.468

The total assets and liabilities as at 31 December 2012 and 2011 are analysed below according to the Regulatory Practice and Tariff Methodology:

	Generation 2012 €000	Transmis- sion 2012 €000	Distribu- tion 2012 €000	Supply 2012 €000	Other Activities 2012 €000	Unallocated amounts 2012 €000	Counter balanced amounts 2012 €000	Total 2012 €000
Non current assets	755.352	332.929	809.453	1.814	39.441	-	-	1.938.989
Current assets	284.647	11.787	46.590	150.818	523	82.548	(96.234)	480.679
<b>Total Assets</b>	<b>1.039.999</b>	<b>344.716</b>	<b>856.043</b>	<b>152.632</b>	<b>39.964</b>	<b>82.548</b>	<b>(96.234)</b>	<b>2.419.668</b>
Current Liabilities	132.822	9.048	42.086	140.141	2.295	252.092	(96.234)	482.310
Non Current Liabilities	-	22.377	425.167	-	-	466.099	-	913.643
Reserves	-	-	-	-	-	1.023.715	-	1.023.715
Allocated Capital	907.117	313.291	388.790	12.491	37.669	(1.659.358)	-	-
	<b>1.039.999</b>	<b>344.716</b>	<b>856.043</b>	<b>152.632</b>	<b>39.964</b>	<b>82.548</b>	<b>(96.234)</b>	<b>2.419.668</b>



# Consolidated Financial Statements

The total assets and liabilities as at 31 December 2012 and 2011 are analysed below according to the Regulatory Practice and Tariff Methodology:

	Generation 2011 €000	Transmis- sion 2011 €000	Distribu- tion 2011 €000	Supply 2011 €000	Other Activities 2011 €000	Unallocated amounts 2011 €000	Counter balanced amounts 2011 €000	Total 2011 €000
Non current assets	788.498	330.921	774.214	1.972	33.294	-	-	1.928.899
Current assets	193.462	11.769	51.195	152.055	745	40.664	(77.502)	372.388
<b>Total Assets</b>	<b>981.960</b>	<b>342.690</b>	<b>825.409</b>	<b>154.027</b>	<b>34.039</b>	<b>40.664</b>	<b>(77.502)</b>	<b>2.301.287</b>
Current Liabilities	88.742	17.366	54.723	117.948	4.528	262.836	(77.502)	468.641
Non Current Liabilities	-	22.090	419.718	-	-	431.370	-	873.178
Reserves	-	-	-	-	-	959.468	-	959.468
Allocated Capital	893.218	303.234	350.968	36.079	29.511	(1.613.010)	-	-
	<b>981.960</b>	<b>342.690</b>	<b>825.409</b>	<b>154.027</b>	<b>34.039</b>	<b>40.664</b>	<b>(77.502)</b>	<b>2.301.287</b>

Analysis per geographical segment is not presented because all of the operations of the Group are performed in Cyprus.

## 6. Revenue from Sale of electricity

Sale of electricity does not include all of the consumption in the Turkish occupied area where the Group has no access due to the prevailing conditions. The unbilled electrical energy, calculated at a special rate, amounts to €1.395.000 (2011: €1.158.000).

## 7. Other operating income - net

	2012 €000	2011 €000
Income from damages to property of the Authority	232	295
Net income from maintenance of public lighting and sale of materials	494	462
Income from fees for telecommunication usage of optical fibres	1.472	1.303
Consumers' capital contributions	19.973	19.047
Greenhouse gas emission allowances cost recovered	3.759	2.623
Temporary Generators Cost Recovered by the Republic of Cyprus	31.702	17.229
Compensation from Insurance Companies	89.301	-
Temporary Surcharge for the recovery of the extra generation cost	61.680	19.858
Sundry income	8.172	5.897
Interest income:		
Bank balances	1.721	1.425
Other	81	154
	<b>218.587</b>	<b>68.293</b>

## 8. Other gains - net

	2012 €000	2011 €000
Property, plant and equipment (Note 16):		
(Loss)/Profit on sale	(76)	48

## 9. Analysis of operating costs by nature

	2012 €000	2011 €000
Fuel	645.049	540.441
Repairs at Vasilikos Power Station	104.508	-
Purchase of Electricity from third parties	42.084	46.223
Salaries and related costs (Note 10)	91.178	115.877
Depreciation (Note 16)	89.811	77.056
Temporary Generators Cost	35.302	17.229
Provision for non-recoverability of compensation for temporary generators cost	(24.465)	-
Repairs and maintenance	17.125	14.653
Auditors remuneration	83	101
Other expenses	35.341	30.069
	<b>1.084.946</b>	<b>841.649</b>

Other expenses disclosed above include fees amounting to €52.162 (2011: €106.048) for other non-audit services and tax consultancy fees €1.251 (2011: €4.580) charged by the Authority's Statutory Auditor.

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## 10. Staff costs

	2012 €000	2011 €000
Wages and salaries	87.200	88.240
Social insurance and other costs	9.114	9.250
Social Cohesion Fund	1.700	1.743
Pension costs - deficit contribution	-	16.147
- current year cost	13.588	16.895
Other defined contribution plans	4.590	4.114
	116.192	136.389

	2012 €000	2011 €000
The staff costs were allocated as follows:		
Statement of Comprehensive Income (Note 9)	91.178	115.877
Amount included in the Restoration of the Vasilikos P/S	4.055	1.221
Capitalized in fixed assets and work in progress	20.959	19.291
	116.192	136.389

## Defined Benefit Plan

The latest actuarial valuation was carried out as at 31 December 2012. The assets used for the purposes of the actuarial valuation were as extracted from the accounts of the Pension Fund for the year 2012.

It has been decided by the Authority to recognise the full amount of the unrecorded actuarial loss at the beginning of the year, over a period of 5 years.

The amounts recognized in the consolidated balance sheet of the Group as at 31 December 2012 are in accordance with the actuarial valuation as at 31 December 2012 for the defined benefit plan.

	2012 €000	2011 €000
Present value of defined benefit obligation	536.595	584.222
Fair value of plan assets	(574.149)	(587.899)
Net asset	(37.554)	(3.677)
Unrecognised actuarial gains	37.870	10.566
Net liability in balance sheet	316	6.889

The amounts recognized in the consolidated statement of comprehensive income of the Group for the year ended at 31 December 2012 are in accordance with the actuarial valuation as at 31 December 2012 for the defined benefit plan.

	2012 €000	2011 €000
Current service cost	14.020	16.895
Interest on obligation	28.972	30.213
Expected return on plan assets	(27.291)	(28.277)
Net actuarial (profit)/loss recognised in year	(2.113)	14.211
Total included in 'staff costs'	13.588	33.042
<b>Movements in balance sheet provision</b>		
Net liability at start of year	6.889	4.520
Expense recognised in the consolidated statement of comprehensive income	13.588	33.042
Employer contributions	(20.161)	(30.673)
<b>Net liability at end of year</b>	<b>316</b>	<b>6.889</b>

	2012 €000	2011 €000
<b>Change in present value of benefit obligation during the year</b>		
Present value of obligation at start of year	584.222	655.655
Current service cost	14.020	16.895
Members contributions	1.312	667
Interest cost	28.972	30.213
Benefits paid	(30.518)	(25.634)
Actuarial loss on obligation	(61.413)	(93.574)
<b>Present value of benefit obligation at end of year</b>	<b>536.595</b>	<b>584.222</b>

	2012 €000	2011 €000
<b>Change in fair value of plan assets during the year</b>		
Fair value of plan assets at start of year	587.899	580.079
Expected return on plan assets	27.291	28.277
Employer contributions	20.161	30.673
Employee contributions	1.312	667
Benefits paid	(30.518)	(25.634)
Actuarial loss on plan assets	(31.996)	(26.163)
<b>Fair value of plan assets at end of year</b>	<b>574.149</b>	<b>587.899</b>

## The principal actuarial assumptions used for the actuarial valuation were:

	2012 %	2011 %
Discount rate	3,53	5,05
Average expected return on plan assets	3,53	4,64
Average rate of salary increases	2013-16:0,00 2017+:3,5	2012: 0,00 2013: 1,00 2014+: 5,75
Pension increases	2013-16:0,00 2017+:1,5	2012/2013:0,00 2014+: 2,75
Price inflation	2,00	2,00
Mortality	80% of PA (90)	80% of PA (90)

A decrease in discount rate by 0,5% will result in an increase of the present value of the obligation by 8%.

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## 11. Finance costs

	2012 €000	2011 €000
Interest expense:		
Bank borrowings	17.987	16.262
Overdue taxation	9	38
Other	967	1.282
	<b>18.963</b>	<b>17.582</b>
Net foreign exchange transaction gains	(2.316)	(2.663)
	<b>16.647</b>	<b>14.919</b>

### The finance cost is allocated as follows:

	2012 €000	2011 €000
Operating costs	13.960	8.991
Cost capitalized under Fixed Assets or Buildings Under Construction	2.687	5.928
	<b>16.647</b>	<b>14.919</b>

## 12. Tax

	2012 €000	2011 €000
<b>Current tax:</b>		
Corporation tax	2.775	4.304
Defence contribution	266	201
Other taxes	4	-
Total current tax	<b>3.045</b>	<b>4.505</b>
<b>Provision due to the decision of the Tax Council (Note 13)</b>	<b>-</b>	<b>(1.896)</b>
<b>Deferred tax (Note 22)</b>		
Origination and reversal of temporary differences	5.890	3.283
	<b>8.935</b>	<b>5.892</b>

### Tax Charge

Tax on Group profit before taxation differs from the theoretical amount that would arise using the applicable tax rates as follows:

	2012 €000	2011 €000
Profit before taxation	<b>86.157</b>	75.477
Tax calculated at the applicable tax rates on income and defence contribution	<b>8.706</b>	7.614
Tax effect of expenses not deductible for tax purposes	<b>209</b>	174
Provision due to the decision of the tax council	-	(1.896)
Capital gains tax	<b>20</b>	-
Tax charge	<b>8.935</b>	5.892

The Group is subject to corporation tax on taxable profits at the rate of 10% (2011: 10%).

From the 1st January 2009 under certain conditions interest may be subject to defence contribution at the rate of 10%. This rate has been increased to 15% from the 31st August 2011.

### 13. Provision due to the decision of Tax Council

The tax authorities have issued final assessments for the years 1995-2002 questioning the accounting treatment applied by the Authority in relation to capital contributions from consumers. The tax authorities argue that the amounts received by the Authority as capital contributions should be taxed in the year received whereas the position of the EAC is that such amount should be taxed at 10% in 10 years from the year of collection in relation to capital allowances provided to EAC for the respective assets acquired. For these assessments an appeal has been filed to the Tax Council.

On 2 May 2011 EAC received a letter from the Tax Council dated 21 of April 2011 with attached Decisions of the Majority (five members of the Tax Council) and the minority (the Chairman of the Tax Council).

The decision of the minority is to cancel the decision of the Tax Authorities. The majority's decision is to cancel only the tax of the years before 1995 which were included in the year 1995 by reducing the contingent liabilities of the Authority in tax, interest and other charges of approximately € 39 million.

The majority in that decision endorses the position of the tax authorities for the remainder of the 1995 taxes and assessments for the years 1996-2002. Based on this decision, the result for the period 1995 - 2002 is €16,3 million taxes and €15,6 million interest, and for the period 2003 - 2010 is €18,1 million taxes and €4,3 million interest, with a total of €34,4 million taxes and €19,9 million interest.

Because of the pendency of the Decision of the Tax Council and the delay in dealing with the tax identification by the tax authorities, reimbursable amounts from tax authorities have accumulated. The corresponding interest receivable of approximately €9,4 million, which is not recognized, is expected to offset the interest payable. For the same reasons mentioned above, provisions have already been made in the accounts amounting to €6,1 million for taxes and €3,9 million for interest payable.

On the 1st of July 2011 an agreement with the Tax Council has been reached for the final settlement of the Authority's tax liabilities for the periods 1995 -2002 and 2003 - 2009 in accordance with the decision of the Tax Council for the payment of two equal sums of €8,37 million each. As a result of the agreement the Authority's liabilities have been decreased by €1.896.000.

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## 14. Financial instruments by category

### Assets as per balance sheet

	2012 €000	2011 €000
Non current receivables	2.242	2.028
Trade and other receivables (1)	227.603	175.838
Short term deposits	69.937	33.078
Cash and cash equivalents	12.611	7.780
<b>Total</b>	<b>312.393</b>	<b>218.724</b>

### Loans and receivables

### Liabilities as per balance sheet

	2012 €000	2011 €000
Borrowings	673.501	664.819
Trade and other payables (excluding statutory liabilities and deferred income)	146.549	173.274
<b>Total</b>	<b>820.050</b>	<b>838.093</b>

### Other financial liabilities

(1) The rest of the balance sheet item 'trade and other receivables' is prepayments.

## 15. Credit quality of financial assets

The credit quality of financial assets that are neither past due nor impaired can be assessed by reference to external credit ratings (if applicable):

Trade receivables - net	2012 €000	2011 €000
<b>Trade receivables - net</b>		
Group 1	2.470	2.858
Group 2	19.586	23.868
Group 3	80.729	78.985
	<b>102.285</b>	<b>105.711</b>
<b>Part due trade receivables - net</b>		
Group 4	20.793	20.946
Group 5	9.248	1.367
Group 6	9.001	10.147
Group 7	6.602	13.503
	<b>45.644</b>	<b>45.963</b>
<b>Other receivables</b>		
Group 8	72.500	17.229
Group 9	8.916	8.963
	<b>81.416</b>	<b>26.192</b>

### Short term bank deposits

	2012 €000	2011 €000
A2	40.063	-
Aa3	-	23.505
Caa2	20.399	9.563
Without external credit rating <sup>(1)</sup>	9.475	10
	<b>69.937</b>	<b>33.078</b>

### Cash and cash equivalents <sup>(2)</sup>

	2012 €000	2011 €000
Ba1	-	2.229
B3	52	62
Ba2	-	5.204
Caa2	12.427	152
	<b>12.479</b>	<b>7.647</b>

Group 1: New customers (less than 6 months) with no defaults in the past.

Group 2: Existing customers (more than 6 months) with no defaults in the past.

Group 3: Trade receivables billed during the next year.

Group 4: Existing customers (more than 6 months) with some defaults in the past.  
All defaults were fully recovered.

Group 5: Receivables that have been provided for.

Group 6: Receivables from related parties including amounts with defaults in the past.

Group 7: Other trade receivables including amounts with defaults in the past.

Group 8: Amount due from the Republic of Cyprus with no defaults in the past.

Group 9: Other receivables with no defaults in the past.

(1) The Authority's Management monitors credit risk arising from deposits in financial institutions without external credit ratings.

(2) The rest of the balance sheet item 'cash and cash equivalents' is cash in hand and cash and cash equivalents without external credit ratings. The cash and cash equivalents without external credit ratings amount to €169.000 (2011: €96.000).

None of the financial assets that are fully performing, has been renegotiated.



# Consolidated Financial Statements

## 16. Property, Plant and Equipment

	Freehold land	Buildings	Plant and machinery	Lines, cables and meters	Motors vehicles	Furniture, fittings and office equipment	Tools and instruments	Computer hardware and software	Work in progress	Total
	€000	€000	€000	€000	€000	€000	€000	€000	€000	€000
<b>At 1 January 2011</b>										
Cost	26.194	262.189	1.136.814	812.361	19.695	6.648	7.168	28.106	294.047	2.593.222
Accumulated depreciation	-	(79.902)	(416.901)	(258.315)	(14.163)	(4.781)	(5.594)	(24.295)	-	(803.951)
Net book amount	26.194	182.287	719.913	554.046	5.532	1.867	1.574	3.811	294.047	1.789.271
<b>Year ended 31 December 2011</b>										
Opening net book amount	26.194	182.287	719.913	554.046	5.532	1.867	1.574	3.811	294.047	1.789.271
Additions	1.197	4.799	2.966	1.383	2.024	244	278	1.044	200.783	214.718
Disposals	(3)	-	-	-	(31)	(18)	-	(10)	-	(62)
Depreciation charge	-	(9.086)	(40.602)	(22.795)	(1.620)	(432)	(436)	(2.085)	-	(77.056)
Transfers	221	3.394	15.990	64.530	-	-	-	343	(84.478)	-
Closing net book amount	27.609	181.394	698.267	597.164	5.905	1.661	1.416	3.103	410.352	1.926.871
<b>At 31 December 2011</b>										
Cost	27.609	270.382	1.155.770	878.274	21.105	6.835	7.446	29.229	410.352	2.807.002
Accumulated depreciation	-	(88.988)	(457.503)	(281.110)	(15.200)	(5.174)	(6.030)	(26.126)	-	(880.131)
Net book amount	27.609	181.394	698.267	597.164	5.905	1.661	1.416	3.103	410.352	1.926.871
<b>Year ended 31 December 2012</b>										
Opening net book amount	27.609	181.394	698.267	597.164	5.905	1.661	1.416	3.103	410.352	1.926.871
Additions	290	3.749	544	468	540	444	119	397	93.312	99.863
Disposals	-	(4)	(66)	-	-	(20)	(84)	(2)	-	(176)
Depreciation charge	-	(10.895)	(49.869)	(24.946)	(1.618)	(446)	(316)	(1.721)	-	(89.811)
Transfers	553	51.758	240.014	84.530	-	-	-	673	(377.528)	-
Closing net book amount	28.452	226.002	888.890	657.216	4.827	1.639	1.135	2.450	126.136	1.936.747
<b>At 31 December 2012</b>										
Cost	28.452	325.885	1.396.260	963.272	21.402	7.036	7.191	30.153	126.136	2.905.787
Accumulated depreciation	-	(99.883)	(507.370)	(306.056)	(16.575)	(5.397)	(6.056)	(27.703)	-	(969.040)
Net book amount	28.452	226.002	888.890	657.216	4.827	1.639	1.135	2.450	126.136	1.936.747

In the cash flow statement, proceeds from sale of property, plant and equipment comprise:

	2012 €000	2011 €000
Net book amount	176	63
Profit on sale of property, plant and equipment (Note 8)	(76)	48
Proceeds from sale of property, plant and equipment	100	111

Depreciation amounting to €89.811.000 (2011: €77.056.000) has been charged to operating costs.

During the year the Authority capitalized loan interest amounting to €2.687.000 (2011: €5.928.000) in property, plant and equipment that met the criteria. Loan interest has been capitalized with weighted average interest of 2,17% (2011: 2,97%).

### Land and equipment located in Turkish occupied area

The total fixed assets shown in the balance sheet include land and equipment located in the area occupied by the Turkish invasion force, whose cost approximates €12.978.000. The depreciation provision for the year in respect of these assets was NIL (2010: NIL) bringing the accumulated provision at 31 December 2012 to €12.440.000 (2011 : €12.440.000) and leaving a written down value of €538.000 (2011: €538.000) which represents the cost of land. The consequences of the Turkish occupation on the value of this land and equipment is unknown.

### 17. Trade and other receivables

	2012 €000	2011 €000
Trade receivables	157.454	156.609
Less: Provision for impairment of receivables	(9.025)	(4.935)
Trade receivables - net	148.429	151.674
Republic of Cyprus	96.965	17.229
Less Provision	(24.465)	-
Capital contributions receivable by installments	2.104	1.493
Advance payments to contractors	8.393	6.342
Other receivables net of provision for impairment	6.812	7.470
Prepayments	876	1.739
	239.114	185.947
<b>Less: non-current portion of receivables and prepayments</b>	<b>(2.242)</b>	<b>(2.028)</b>
	236.872	183.919
The maturity of non-current receivables and prepayments is as follows:		
Between 1 and 2 years	1.124	700
Between 2 and 5 years	1.038	1.168
Over 5 years	80	160
	2.242	2.028

# Consolidated Financial Statements

The fair values of current trade and other receivables approximate their carrying values at the balance sheet date.

At 31 December 2012, trade receivable of €96.071.000 (2011: €1.082.249.000) were fully performing.

Trade receivables that are less than three months past due are not considered impaired. As of 31 December 2012, trade receivables of €43.110.000 (2011: €42.058.000) were past due but not impaired. These relate to a number of independent customers for whom there is no recent history of default. The ageing analysis of these trade receivables is as follows:

	2012 €000	2011 €000
Up to 3 months	36.774	33.190
3 to 6 months	6.008	4.599
Over 6 months	328	4.269
	<b>43.110</b>	42.058

As of 31 December 2012, trade receivables of €18.273.000 (2011: €6.302.000) were impaired and provided for. The amount of the provision was €9.025.000 as of 31 December 2012 (2011: €4.935.000). The individually impaired receivables mainly relate to wholesalers, which are in an unexpectedly difficult economic situation. It was assessed that a portion of the receivables is expected to be recovered. The ageing of these receivables is as follows:

	2012 €000	2011 €000
Up to 3 months	1.317	-
3 to 6 months	2.395	-
Over 6 months	14.561	6.302
	<b>18.273</b>	6.302

Concentrations of credit risk with respect to trade receivables are limited due to the Authority's large number of customers who have a variety of end markets in which they sell. The Authority's historical experience in collection of trade receivables falls within the recorded allowances. Due to these factors, management believes that no additional credit risk beyond amounts provided for collection losses is inherent in the Authority's trade receivables.

Movements on the Authority's provision for impairment of trade receivables are as follows:

	2012 €000	2011 €000
At 1 January	4.935	4.091
Provision for receivables impairment	4.305	1.202
Receivables written off during the year as uncollectible	(215)	(358)
	<b>9.025</b>	4.935

The creation and release of provision for impaired receivables have been included in operating costs in the consolidated statement of comprehensive income (Note 9). Amounts charged to the allowance account are generally written off, when there is no expectation of recovering additional cash.

An amount of €24.465.000 receivable from the Republic of Cyprus has been impaired.

The other classes within trade and other receivables contain impaired assets or past due amounting to €38.000 (2011: €38.000).

The maximum exposure to credit risk at the balance sheet date is the carrying value of each class of receivable mentioned above. The Authority does not hold any collateral as security.

The carrying amounts of the Group's trade and other receivables are denominated in the following currencies:

	2012 €000	2011 €000
<b>Currency</b>		
Euro	239.045	185.878
United States dollars	14	15
Pound Sterling	50	49
Swiss Franc	5	5
	<b>239.114</b>	185.947

## 18. Inventories

	2012 €000	2011 €000
Fuel	91.602	74.898
Spares and consumables	67.849	70.905
	<b>159.451</b>	145.803

The cost of inventories recognized as expense and included in operating costs amounted to €653.303.000 (2011: €547.440.000).

All inventories are recognized at historic cost.

As described in Note 1 "Explosion at the Naval Base at Mari", damages are not identified or evaluated yet and therefore the inventory value of the Vasilikos Power Station amounting to € 20 million does not take into consideration any impairment for losses incurred by the incident at Mari. At 31 of December 2012 a provision was made, for impairment of the Vasilikos Power Station inventories, of €845.000.

# Consolidated Financial Statements

## 19. Short-term bank deposits

	2012 €000	2011 €000
Short-term bank deposits	69.937	33.078

The effective interest rate on short term bank deposits was 0,95% - 4,50% (2011: 2,20% - 4,50%) and these deposits had a maturity of 6 - 12 months (2011: 6-12 months). These deposits are used as guarantees for loans and liabilities for fuel deliveries.

## 20. Cash and cash equivalents

Cash and cash equivalents included in the consolidated statement of cash flows represent the balance sheet amounts of cash at bank and in hand and are analysed as follows:

	2012 €000	2011 €000
Cash at bank and in hand	11.902	7.379
Short-term bank deposits	709	401
	12.611	7.780

The effective interest rate on short term bank deposits was 1,90% - 3,50% (2011: 2,20% - 3,50%) and these deposits had an average maturity of 46 days (2011: 58 days).

Cash and cash equivalents and bank overdrafts include the following for the purposes of the consolidated statement of cash flows:

	2012 €000	2011 €000
Cash and cash equivalents	12.611	7.780
Bank overdrafts (Note 21)	(194.883)	(213.140)
	(182.272)	(205.360)

## 21. Borrowings

	2012 €000	2011 €000
<b>Current</b>		
Bank overdrafts (Note 20)	194.883	213.140
Bank loans	46.171	48.071
	241.054	261.211
<b>Non-current</b>		
Bank loans	432.447	403.608
Total borrowings	673.501	664.819

Maturity of non-current borrowings is as follows:

	2012 €000	2011 €000
Between 1 and 2 years	48.444	46.161
Between 2 and 5 years	125.332	127.904
Over 5 years	258.671	229.543
	432.447	403.608

The loans are payable in various currencies stipulated in the loan agreements. Loans are guaranteed as to the repayment of principal and interest by the Republic of Cyprus.

The weighted average effective interest rates at the balance sheet date were as follows:

	2012 %	2011 %
Bank overdrafts, loans & suppliers' credits	2,3	2,4

The exposure of the Authority's borrowings to interest rate changes and the contractual repricing dates at the balance sheet dates are as follows:

	2012 €000	2011 €000
<b>Floating rate</b>		
6 months or less	660.250	642.965
<b>Fixed rate on maturity</b>	13.251	21.854
	673.501	664.819

The Company has the following undrawn borrowing facilities:

	2012 €000	2011 €000
<b>Floating rate:</b>		
Expiring within one year	41.312	33.402
Expiring beyond one year	3.805	4.467
	45.117	37.869

The carrying amounts of bank overdrafts and bank loans approximates their fair value.

The carrying value of the Authority's borrowings are denominated in the following currencies:

	2012 €000	2011 €000
Euro -functional and presentation currency	672.502	661.920
Swiss Frank	781	2.273
Pounds Sterling	218	626
	673.501	664.819

# Consolidated Financial Statements

## 22. Deferred tax liabilities

Deferred tax liabilities are analysed as follows:

	2012 €000	2011 €000
Deferred tax liabilities after twelve months	33.652	27.762

Deferred taxation is calculated in full on all temporary differences under the liability method using the applicable tax rates (Note 12).

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred taxes relate to the same fiscal authority. The gross movement of the deferred taxation account is as follows:

	2012 €000	2011 €000
At 1 January	27.762	24.479
Charged to Statement of comprehensive income (Note 12) - Current year	5.890	3.283
At 31 December	33.652	27.762

The movement in deferred income tax assets and liabilities during the year is as follows:

	Accelerated Tax Depreciation €000	Deferred Income €000	Other €000	Total €000
<b>Deferred tax liability to be settled after more than twelve months</b>				
<b>At 1 January 2011</b>	69.878	(44.775)	(624)	24.479
Charge/(Credited) to the Consolidated Statement of Comprehensive Income (Note 12)	4.776	(1.403)	(90)	3.283
<b>At 31 December 2011</b>	74.654	(46.178)	(714)	27.762
Charge/(Credited) to the Consolidated Statement of Comprehensive Income (Note 12)	6.732	(646)	(196)	5.890
<b>At 31 December 2012</b>	81.386	(46.824)	(910)	33.652

## 23. Deferred income

	2012 €000	2011 €000
<b>Consumers' capital contributions:</b>		
Balance at 1 January	461.781	447.751
Additions	26.434	33.077
Transferred to the consolidated statement of comprehensive income	(19.973)	(19.047)
Balance at 31 December	468.242	461.781
Less: non current portion of deferred income	(447.544)	(441.808)
Current portion of deferred income	20.698	19.973

## 24. Trade and other payables

	2012 €000	2011 €000
Fuel oil suppliers	49.820	47.568
Other Suppliers	31.495	37.240
Deferred income - compensation from Insurance Companies	52.890 <sup>2</sup>	1.000 <sup>1</sup>
Value Added Tax payable	9.312	9.721
Pay As You Earn payable	859	1.837
Retention on capital contracts	8.287	9.987
Consumers' deposits	16.586	13.257
Payments received in advance	134	123
Interest payable	450	803
Deficiency contribution to pension fund	-	11.685
Other contribution to pension fund	316	6.889
Accrued charges	10.697	17.957
Creditors for purchase of land and substations	10.610	11.301
Amount available for interpleader proceedings	9.513 <sup>3</sup>	9.700 <sup>3</sup>
Other creditors	8.551	6.764
	209.520	185.832

The fair values of trade and other payables approximate their carrying values at the balance sheet date.

### Notes:

- Until 31 December, 2011 an amount of € 9.600.000 had been received from the insurance companies and an amount of € 8.600.000 had been spent by the Authority for the restoration of Vasilikos Power Station.
- This amount represents a compensation from the insurance company which will be spent during 2013 for the restoration of the Vasilikos Power Station.
- This amount represents a retention of amounts payable to a supplier of fuel to award beneficiaries through interpleader proceedings.

## 25. Subsidiary undertakings

	% Holding	Country of incorporation	Principal activities
Electriki Limited Investments	100	Cyprus	Dormant
EAC LNG Investments Company Ltd	100	Cyprus	Dormant
EAC Solar Thermal Power Ltd	100	Cyprus	Dormant

The results of Electriki Limited and EAC LNG Investments Company Ltd which during 2012 remained dormant were consolidated in the Group accounts of Electricity Authority of Cyprus. EAC Solar Thermal Power Ltd was incorporated during the year and had no transactions.



# Consolidated Financial Statements

## 26. Contingent liabilities

(a) At 31 December 2012 the Group had a contingent liability in respect of possible tax for various expenses, amounting to €3.081.000 (2011: €2.911.000).

(b) At 31 December 2012 the Group had contingent liabilities in respect of pending litigations amounting to €6.666.723 (2011: €7.671.688) and contingent assets of €434.921 (2011: €584.650), not including any amounts to be claimed from insurance companies relating to the Mari incident.

The Group believes that adequate defence exists against all claims and does not expect to suffer significant loss. Accordingly no provision has been made in these financial statements in respect of this matter.

(c) On 31 December 2012 the Group had the following guarantee documents:

- (i) An amount of €2.400.000 for the benefit of Senior Customs Officer regarding the authorization granted to the Authority for exemption from payment of excise duty on energy products used for electricity generation, including fuel oil (diesel).
- (ii) An amount of €1.000.000 for the benefit of the Water Development Department regarding the due performance of the contract for the supply of desalinated water.

## 27. Commitments

### Capital commitments

	2012 €000	2011 €000
Commitments in respect of contracts	63.815	162.251
Approved commitments but not contracted	78.026	101.715
Approved commitments with expenditure outstanding	141.841	263.966

50% of the above will be financed by long-term borrowings.

### Operating lease commitments - where the Authority is the lessee

The future minimum lease payments under non-cancelable operating leases are as follows:

	2012 €000	2011 €000
Not later than one year	406	7.586
Later than one year and not later than 5 years	1.033	876
Over 5 years	95	2
	1.534	8.464

## 28. Related party transactions

The Electricity Authority of Cyprus is a Public Corporate Body which was established in Cyprus under the Electricity Development Law Cap. 171 of 1952.

### (i) Sales

	2012 €000	2011 €000
Sales of electricity		
Related parties to the Organisation	35.485	32.376

The related parties consist of Governmental controlled entities (e.g. Government Offices, Ministries etc.) and all transactions were under the normal trade terms and conditions.

### (ii) Year end balances resulting from sales of electricity

	2012 €000	2011 €000
Receivable from related parties	9.001	10.147
Other receivables	96.965	17.229
	105.966	27.376

The related parties consist of Governmental controlled entities (e.g. Government Offices, Ministries etc.).

### (iii) Key management personnel compensation

The compensation of key management personnel is as follows:

	2012 €000	2011 €000
Salaries and other benefits	594	616

### (iv) Directors' remuneration

The total remuneration of the Directors (included in key management personnel compensation above) was as follows:

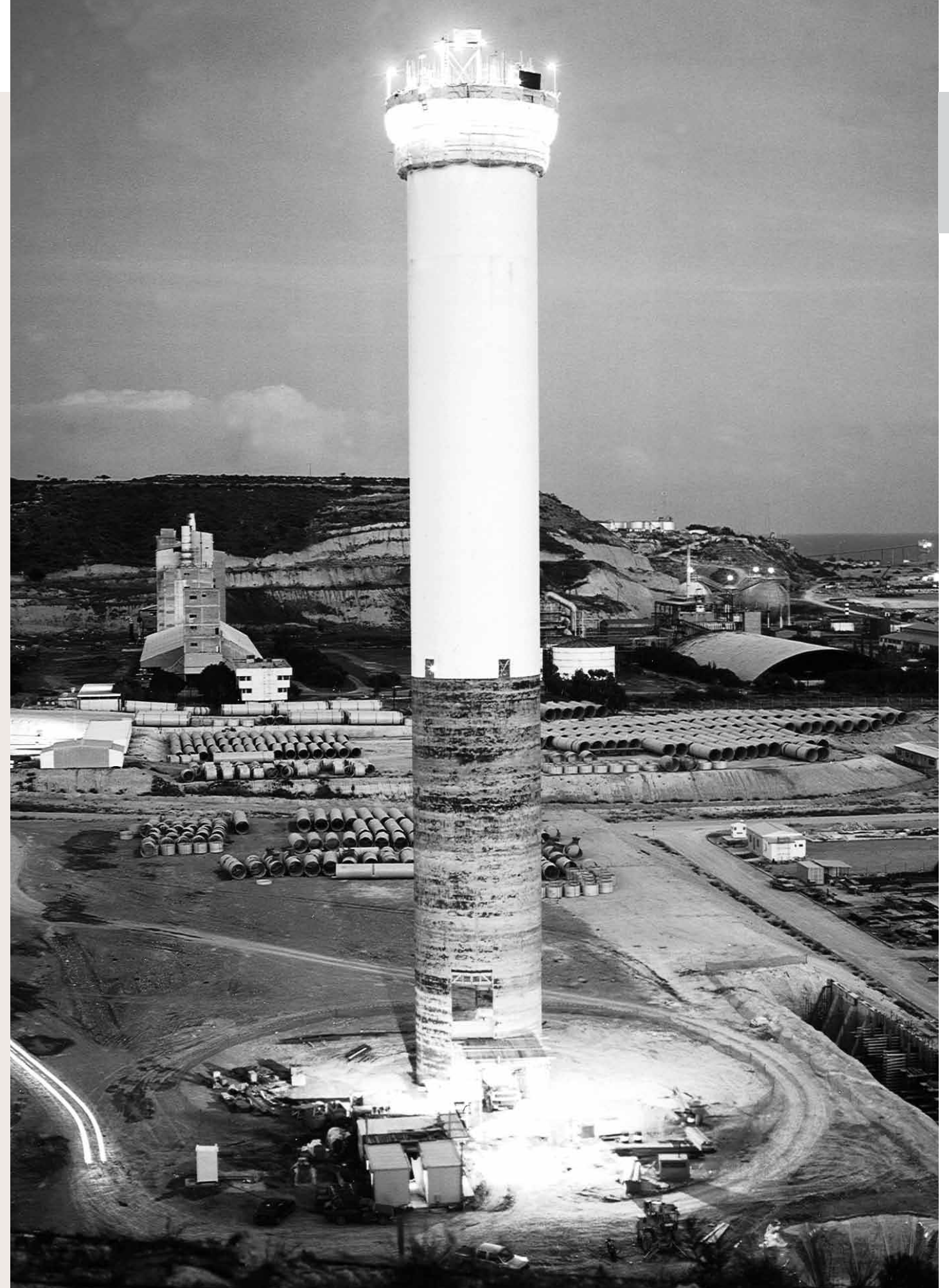
	2012 €000	2011 €000
Emoluments in their executive capacity	38	37

# Consolidated Financial Statements

## 29. Events after the balance sheet date

Uncertain economic conditions affecting the operating environment in Cyprus have been developed post balance sheet as described in Note 1.

Independent Auditor's Report on pages 89-91.



# Appendices

## APPENDIX I

### CONSUMERS, SALES AND AVERAGE PRICES

AS AT 31 DECEMBER	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>NUMBER OF CONSUMERS</b>										
Domestic	307 206	318 640	332 338	348 394	366 799	386 489	402 671	415 150	422 655	427 184
Commercial	71 589	72 941	74 916	76 272	78 294	80 913	83 160	84 800	85 325	85 198
Industrial	10 107	10 595	10 956	11 198	11 299	11 792	11 618	11 391	11 255	10 805
Agricultural	9 779	10 400	10 931	11 597	12 117	12 796	13 546	14 209	14 692	14 978
Public lighting	6 428	6 771	7 138	7 581	7 991	8 499	9 035	9 500	9 983	10 333
<b>TOTALS</b>	<b>405 109</b>	<b>419 347</b>	<b>436 279</b>	<b>455 042</b>	<b>476 500</b>	<b>500 489</b>	<b>520 030</b>	<b>535 050</b>	<b>543 910</b>	<b>548 498</b>
<b>SALES TO CONSUMERS (Thousand kWh)</b>										
Domestic	1 321 677	1 324 774	1 431 792	1 500 511	1 607 048	1 682 327	1 720 777	1 737 474	1 721 663	1 671 095
Commercial	1 478 441	1 518 582	1 587 196	1 713 921	1 783 885	1 881 173	1 918 932	1 990 994	1 854 782	1 836 756
Industrial	722 806	722 850	726 059	723 038	699 746	757 803	791 640	816 074	796 187	631 829
Agricultural	113 761	117 478	120 062	128 701	137 339	156 930	143 971	152 642	136 747	128 590
Public lighting	59 386	58 146	67 793	68 851	70 301	77 596	80 426	84 788	85 502	87 330
<b>TOTALS</b>	<b>3 696 071</b>	<b>3 741 830</b>	<b>3 932 902</b>	<b>4 135 022</b>	<b>4 298 319</b>	<b>4 555 829</b>	<b>4 655 746</b>	<b>4 781 972</b>	<b>4 594 881</b>	<b>4 355 600</b>
<b>AVERAGE SALES PER CONSUMER (kWh)</b>										
Domestic	4 302	4 158	4 308	4 307	4 381	4 353	4 273	4 185	4 073	3 912
Commercial	20 652	20 819	21 186	22 471	22 784	23 249	23 075	23 479	21 738	21 559
Industrial	71 515	68 226	66 270	64 568	61 930	64 264	68 139	71 642	70 741	58 476
Agricultural	11 633	11 296	10 984	11 098	11 334	12 264	10 628	10 743	9 308	8 585
Public lighting	9 239	8 589	9 497	9 082	8 798	9 130	8 902	8 925	8 565	8 452
<b>AVERAGE PRICE PER UNIT BILLED (cent)</b>										
Domestic	9,838	9,693	11,009	12,492	12,746	15,988	13,321	16,192	18,695	22,271
Commercial	11,003	10,388	11,748	13,009	13,328	16,982	14,196	16,905	19,377	22,645
Industrial	8,926	8,268	9,594	11,111	11,458	14,955	12,325	14,982	17,148	20,868
Agricultural	8,992	8,637	10,106	11,434	11,675	15,296	12,697	15,440	18,293	21,929
Public lighting	8,755	8,437	9,298	10,981	11,233	14,554	12,129	14,711	17,481	20,909
<b>AVERAGE PRICE</b>	<b>10,082</b>	<b>9,647</b>	<b>10,988</b>	<b>12,408</b>	<b>12,719</b>	<b>16,178</b>	<b>13,473</b>	<b>16,232</b>	<b>18,668</b>	<b>22,188</b>

## APPENDIX 2

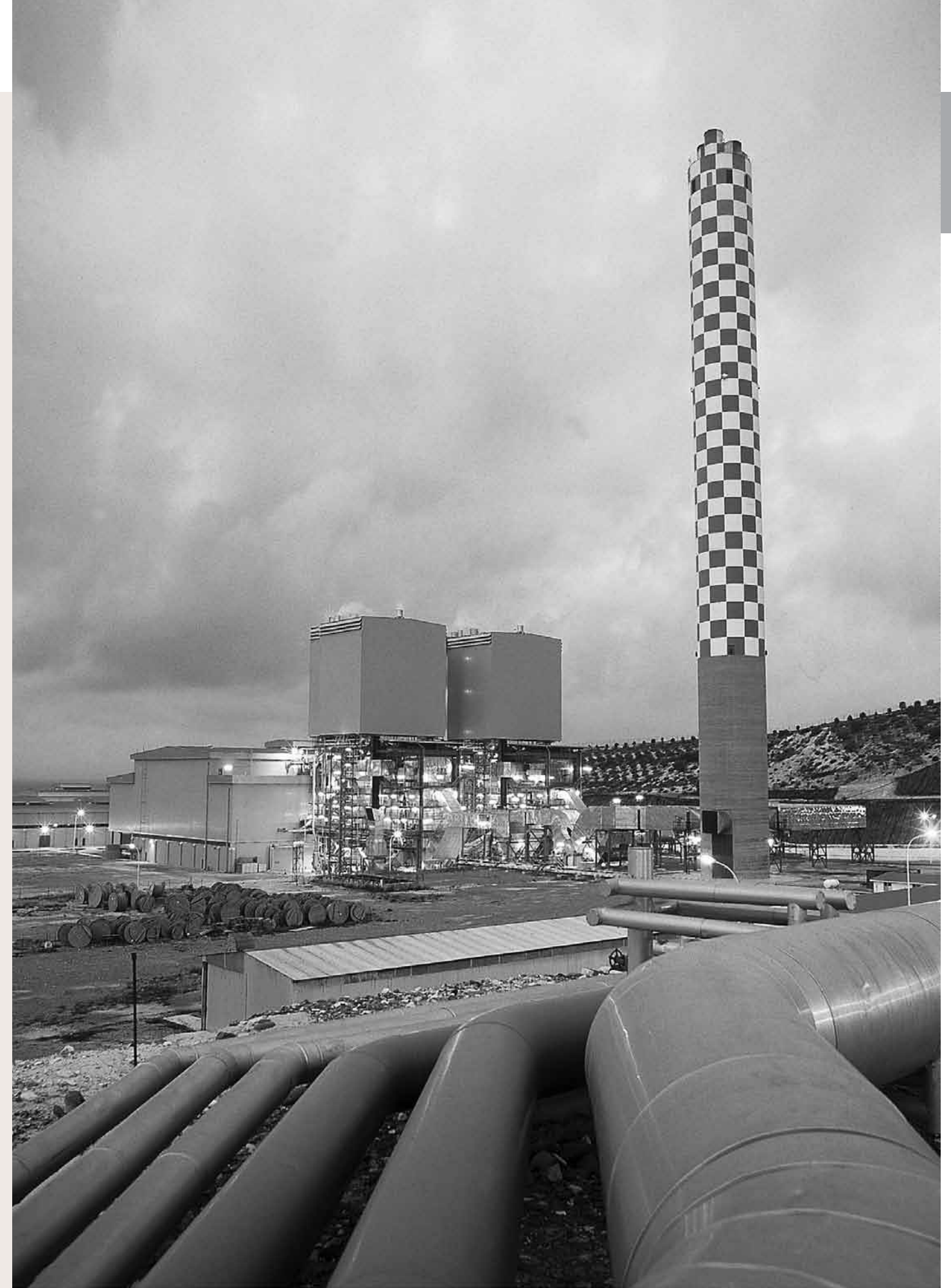
### GENERATION, TRANSMISSION & DISTRIBUTION EQUIPMENT

Description	Unit	In Commission 31.12.2011	Commissioned in 2012	Taken out of Commission in 2012	In Commission 31.12.2012
<b>GENERATION PLANT:</b>					
<b>Dhekelia Power Station</b>					
Steam Turbines	No.	6	-	-	6
Capacity	MW	360	-	-	360
Internal Combustion Engines	No.	6	-	-	6
Capacity	MW	100	-	-	100
Temporary ICE	No.	-	-	57	-
Capacity	MW	-	-	60	-
<b>Moni Power Station:</b>					
Steam Turbines	No.	6	-	2	4
Capacity	MW	180	-	60	120
Gas Turbines	No.	4	-	-	4
Capacity	MW	150	-	-	150
Temporary ICE	No.	37	95	132	-
Capacity	MW	35	120	155	-
<b>Vasilikos Power Station:</b>					
Gas Turbines	No.	1	-	-	1
Capacity	MW	38	-	-	38
Steam Turbines	No.	3	-	3	0
Capacity	MW	390	-	390	0
Combined Cycle					
Gas Turbine Units	No.	1	1	-	2
Capacity	MW	220	220	-	440
Temporary ICE	No.	79	-	79	-
Capacity	MW	71,6	-	71,6	-
<b>TRANSMISSION EQUIPMENT:</b>					
220kV Transmission Lines operated at 132kV					
Route Length	km	45,40	-	-	45,40
Circuit Length	km	90,80	-	-	90,80
132kV Transmission Lines					
Route Length	km	423,93	5	47	465,93
Circuit Length	km	728,96	5	94	817,96
132kV U/G Cables					
Route Length	km	154,27	0,454	0,454	154,27
Circuit Length	km	191,00	0,454	0,454	191,00
132kV U/G Cables-Operated at 66kV					
Route Length	km	8,12	-	-	8,12
Circuit Length	km	19,93	-	-	11,82
66kV U/G Cables					
Route Length	km	2,35	-	-	2,35
Circuit Length	km	2,42	-	-	2,42

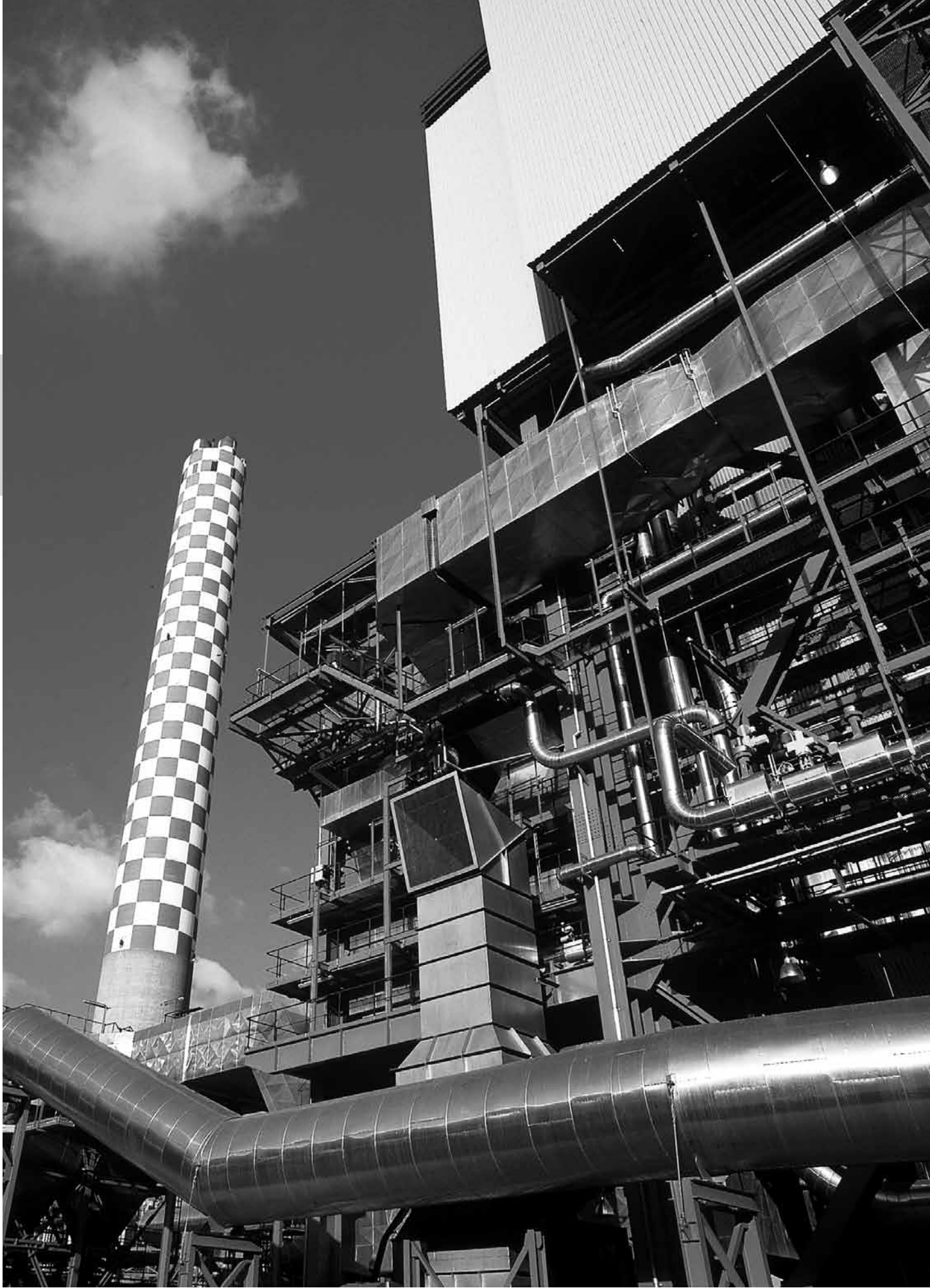


# Appendices

Description	Unit	In Commission 31.12.2011	Commissioned in 2012	Taken out of Commission in 2012	In Commission 31.12.2012
<b>132kV Transmission Lines operated at 66kV</b>					
Route Length	km	115,39	21,5	-	136,89
Circuit Length	km	201,59	43	-	244,59
<b>66kV Transmission Lines</b>					
Route Length	km	288,20	-	25,5	262,7
Circuit Length	km	288,20	-	25,5	262,7
132/66kV Interbus Transformers	No.	13	1	1	13
	MVA	648	-	-	648
132/11kV Step Down Transformers	No.	89	7	2	94
	MVA	2 879	336	63	3 152
132/6,6kV Step Down Transformers	No.	2	-	-	2
	MVA	58	-	-	58
132/3,3kV Step Down Transformers	No.	2	-	-	2
	MVA	20	-	-	20
66/11kV Step Down Transformers	No.	60	-	4	56
	MVA	618	-	30	588
66/3,3kV Step Down Transformers	No.	2	-	-	2
	MVA	5	-	-	5
15,75/132kV Step Up Transformers	No.	3	-	-	3
	MVA	495	-	-	495
11/132kV Step Up Transformers	No.	22	-	2	20
	MVA	1 384	-	80	1 304
11/66kV Step Up Transformers	No.	4	-	-	4
	MVA	150	-	-	150
Substations	No.	64	-	-	64
<b>DISTRIBUTION EQUIPMENT:</b>					
MV Overhead Lines	km	5 612,40	119,46	35,65	5 696,21
MV U/G Cables	km	3 499,49	143,31	33,82	3 608,98
LV Overhead Lines	km	9 412,52	187,71	42,04	9 558,19
LV U/G Cables	km	4 881,65	488,67	3,71	5 366,61
<b>P.M. Transformers</b>					
22 000-11 000/433/250V	No.	9 543	293	82	9 754
	kVA	890 123	45 324	24 691	910 756
<b>G.M. Transformers</b>					
22 000-11 000/433V	No.	5 775	252	4	6 023
	kVA	3 240 340	155 045	17 585	3 377 800







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