



Annual Report **2009**



Electricity  
Authority  
of Cyprus







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

		2009	2008	% Increase (Decrease)
<b>GENERATION</b>				
Total units generated	million kWh	5 133,3	4 995,8	2,8
Maximum output capacity of power stations	MW	1 388	1 118	24,2
Maximum demand met	MW	1 098	1 004	9,4
Thermal efficiency of generation	%	33,7	33,7	-
<b>SALES OF ELECTRICITY</b>				
Total sales	million kWh	4 655,7	4 555,8	2,2
Consumption in the turkish occupied area	million kWh	8,4	8,5	(1,2)
Average charge per kWh sold	€ cents	13,473	16,178	(16,7)
Consumers at 31 December	thousand	520,0	500,5	3,9
<b>FINANCE</b>				
Total income	€ thousand	663.757	771.875	(14,0)
Operating costs	€ thousand	607.721	724.301	(16,1)
Operating profit	€ thousand	56.036	47.574	17,8
Finance costs	€ thousand	10.757	19.310	(44,3)
Tax	€ thousand	(58.305)	7.933	(835,0)
Profit for the year	€ thousand	103.584	20.331	409,5
Capital expenditure	€ thousand	269.212	161.996	66,2
Average net assets employed	€ thousand	1.550.758	1.472.597	5,3
Return on average net assets employed	%	3,6	3,2	12,5
<b>EMPLOYEES</b>				
Permanent employees in service at 31 December		2 466	2 344	5,2
Sales per employee	million kWh	1,89	1,94	(2,6)
Consumers per employee		211	214	(1,4)

# 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

Filitsa Ioannou Economist of National Kapodistriako University,  
Athens, Bank Employee

P. Chadjicharalambous Mathematics University of Leipzig, Germany

Y. Valanides Managing Director, Laiko Group, Mechanical  
Engineering of National Metsovio University

Y. Ioannou Business Management - Economics - Greece

C. Enotiades Businessman - Economist

S. Shialaros Greek Literature teacher

A. Tzitzos Economist



H. Thrassou  
Chairman



G. Pistentis  
Vice Chairman



Y. Valanides  
Board Member



F. Ioannou  
Board Member



P. Hadjicharalambous  
Board Member



Y. Ioannou  
Board Member



C. Enotiades  
Board Member



S. Shialaros  
Board Member



A. Tzitzos  
Board Member



M. Stavrou  
General Manager

#### **LEGAL ADVISERS**

Ioannides Demetriou, Lefkosia

#### **AUDITORS**

Auditor General of the Republic  
PricewaterhouseCoopers, Lefkosia

#### **EXECUTIVE**

##### **GENERAL MANAGER**

Vacant  
(since 1/9/2009)

M. Stavrou  
FCCA, ACMA  
(until 31/8/2009)

##### **EXECUTIVE MANAGER FINANCE**

H. Hadjijerou  
FCA, MBA

##### **EXECUTIVE MANAGER CUSTOMER SERVICE**

G. Petoussis  
Dip. Eng. CEng, MIET

##### **EXECUTIVE MANAGER NETWORKS**

A. Avraamides  
BSc (Eng), CEng, MIET

##### **EXECUTIVE MANAGER GENERATION**

Vacant  
(since 1/12/2009)

A. Papadopoulos  
BSc (Eng), CEng, MIMechE, CDipAF  
(until 30/11/2009)

##### **EXECUTIVE MANAGER COMMON SERVICES**

C. Eliopoulos  
Dipl Eng, Dipl Eng Mgt, CEng, MIMechE

##### **EXECUTIVE MANAGER CORPORATE DEVELOPMENT**

N. Papadopoulos  
BSc (Eng), CEng, MIET, CDipAF

# Board of Directors and Management

## POWER STATIONS

### **POWER STATION MANAGER (Moni Power Station)**

S. Stavrinides  
BSc (Eng), DipMgt, MIMechE, CEng

### **POWER STATION MANAGER (Dhekelia Power Station)**

A. Polydorides  
MSc (Eng)

### **POWER STATION MANAGER (Vasilikos Power Station)**

A. Ioannou  
BA (Eng), MA, Eur Ing, CEng, MIET

## AREAS

### **AREA MANAGER (Lefkosia - Keryneia - Morfou Area)**

P. Sardos  
ACGI, BSc, DIC, MSc, CEng, MIET, MIEEE

### **AREA MANAGER (Lemesos Area)**

A. Malialis  
Dipl in Physics, MSc, CEng, MIET

### **AREA MANAGER (Ammochostos - Larnaka Area)**

Y. Siekkersavvas  
BSc (Eng)

### **AREA MANAGER (Pafos Area)**

S. Petousis  
BSc (Eng), CDipAF, MIET, CEng, MCM





**INTERNAL AUDIT MANAGER**

I. Koumeras  
FCCA, CIA

**SECRETARY / MANAGER OF LEGAL SERVICES**

Vacant

**GENERAL MANAGER'S OFFICE MANAGER**

C. Loukaides (since 1/2/2009)  
BSc (Eng), MIET, MIMechE, CEng

Vacant  
(1/1/2009 until 31/1/2009)

**HUMAN RECOURCES MANAGER**

A. Patsalis  
BSc (Eng), MIOSH

# Chairman's Message



It is now more than two years since the present Board of Directors took up its duties. We are fully aware of the problems and issues that concern not only the EAC but all consumers. Despite the many difficulties that we have had to face in recent years, our Organisation's resolute objective – to provide an uninterrupted supply of electricity throughout Cyprus – has been achieved in full. The electricity generation, transmission and distribution system in Cyprus is one of the most reliable anywhere and we at the EAC are truly proud of this.

During the year under review, the most significant projects and those on which the EAC placed particular emphasis were:

- Promoting the advent of Natural Gas in collaboration with the Ministry of Commerce, Industry & Tourism, the Cyprus Energy Regulatory Authority (CERA) and the Natural Gas Public Company Ltd (DEFA).
- Implementing its development plan.
- Installation and operation of Phase Three and progress in work on Phase Four at Vasilikos power station.
- Optimisation of the power stations at Dhekelia and Moni.
- Installation of the Internal Combustion Units (ICU 1 and ICU 2) at Dhekelia power station.
- Introduction of best practices and increased productivity.
- Providing the best possible service to our customers.
- Expansion of the EAC's activities into new sectors.

## **Financial situation**

Our Organisation's financial situation is reflected in the statistics contained in this Annual Report. Fuel costs for 2009 represented 55,8% of the EAC's total expenses. This percentage reveals the long-term dependence of the EAC and the country as a whole on oil and underlines the need for all of us to find and adopt alternative energy sources and at the same time, to develop energy awareness.

The average return on assets has fallen from 6,88% in 2002 to 3,4% in 2009. With an annual surplus of €20-€25 million in recent years, it is clear that the implementation of the next 10-year development plan at a cost of €3,1 billion is virtually unfeasible. The low return and our ambitious development plan persuaded CERA to approve a gradual small increase over the next three years totaling 4,5%, though this increase is unsatisfactory when one takes into consideration the size of the Organisation and its capital employed.

The efficiency and productivity levels of our personnel play a significant role in maintaining the Organisation's robust financial state. We believe that their knowledge and experience represent a huge competitive advantage in the fight that has already begun. In recognition of this, the EAC Board and Management aim to offer our personnel the best and safest possible working conditions so that our demands for hard work and progress may be satisfied. At the same time, the Organisation is going ahead with a plan to reduce operating expenses and more generally, to keep costs down.

## **Future Prospects**

Due to the situation that has been created by the liberalisation of the energy market and as a consequence of the global financial crisis, alarm bells have been ringing for some time. As the EAC fights its corner in today's competitive environment, we need to place particular emphasis on showing flexibility and being able to take quick decisions, areas in which the private sector currently has an advantage over us. For this reason I wish once again to stress the imperative need to change the institutional framework governing our Organisation. In the current environment, the EAC is in danger of losing a significant share of the market and consequently, of finding itself on an undesirable downward slope, since any fall in revenue will be followed by a reduction in our ability to invest and in general, this will lead to problems for the Organisation's development and operations.

I am sure that a leading role in the EAC's efforts will be played by our personnel who, thanks to their reliability and undisputed abilities, will continue to carry out their duties with great success.

## **Bringing natural gas to Cyprus and development of the Generation System**

With the advent of natural gas, the EAC's prime objective is to offer the country a new choice of fuel for the generation of electricity, one that is environmentally friendly and more competitive than diesel oil which is the main fuel used for this purpose today. Continuous negotiations and close cooperation with the Ministry of Commerce, Industry & Tourism, the Cyprus Energy Regulatory Authority (CERA) and the Natural Gas Public Company Ltd (DEFA) are key elements in achieving our objective of ending our dependence on oil and its by-products as quickly as possible. It is expected that natural gas will be available for electricity generation by the middle of 2014.

Regarding projects undertaken at Vasilikos power station, on 11 November 2009 the Final Delivery Certificate was issued for Unit No. 4 and work continued at a very satisfactory pace on Unit No. 5 which will have a capacity of 220 MW and is due to come into commercial operation at the beginning of 2012. At the same time, preliminary work began on the purchase and installation of Unit No. 6 which will also have a capacity of 220 MW so that it is ready when natural gas comes to Cyprus. With the installation of these two Units, Phase Four of Vasilikos power station will be complete.

On 1 June 2009, the 50 MW ICU 1 Internal Combustion Units were officially incorporated into the EAC's available generated load while, during the course of the year, work intensified on the installation of the 50 MW ICU 2 Internal Combustion Units which are due to operate in summer 2010.

## **Development of the Transmission and Distribution System**

During the two years in which I have had the good fortune to lead this Organisation, I have had first-hand experience of seeing how the EAC endeavours and plans to ensure that it provides an uninterrupted service throughout Cyprus. Every year the demand for electricity shows an upward trend and for this reason, the implementation of the Transmission System development plan needs to be carried out rapidly so that the EAC remains capable of responding to this demand. Unfortunately, obstacles are frequently placed in our way, either by organised groups or by communities or others, which hinder our efforts to serve consumers in every part of the island. For this reason we urgently request the assistance and support of the State so that the necessary permits are issued to the EAC enabling it to implement the projects in its Development Plan. The Authority's aim is not to inconvenience groups of citizens, associations or communities, but to provide the best possible, fastest service to all consumers.

# Chairman's Message

In July 2009, work on the establishment of the "Amathus" Substation was completed while work is currently in progress on the "Lakatamia", "New Pafos", "Trimiklini", "Alexigros", "Psevdas", "Athienou", "Stroumbi" and "Oreites" Substations, the last of which is in the area where the first wind park in Cyprus will be located. Moreover, during 2009 the "Hadjipaschalis", "Xeropotamos" and "Dhekelia" Substations were among those to undergo upgrading.

With the aim of expanding and developing the distribution system, some 7 554 studies were carried out in 2009, compared to 7 055 in 2008. The cost of construction work for the expansion and development of the distribution system amounted to €64,1 million in 2009, up from €58,5 million in 2008.

## **Customer Service**

The EAC's decision to set up a Contact Centre is one of strategic importance and it was taken in the context of our efforts to provide the best possible service to customers. The Centre will enable the EAC to provide good quality service and information to customers quickly and efficiently, to promote the image of a progressive and dynamic Organisation and in general, to respond to the expectations of the public.

In 2009, recording/analysis of the automated services that the Contact Centre will provide to EAC customers was completed. All the necessary equipment parameterisation took place and the required checks were carried out in realistic conditions. The Contact Centre will come into operation in stages and during the first quarter of 2010, its first services are due to start, beginning with Meter Reading via the freephone number 8000 6000.

The Contact Centre will also provide services that are currently the responsibility of the Islandwide Faults Reporting Centre (IFRC) which was set up in the framework of the EAC's efforts to improve its customer service.

## **Renewable Energy Sources**

In accordance with the provisions of European Directive 2001/77/EC issued during Cyprus' accession process and its compliance with the directives, legislation and regulations of the European Union, the Government has proceeded with, among other things, 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 Energy Service of the Ministry of Commerce, Industry & Tourism, with the Cyprus Energy Regulatory Authority (CERA) and the Transmission System Operator regarding joint action on the subject of RES. Interested applicants/producers are given all possible technical assistance and priority in the examination of their applications to install units for generating electricity from RES.

By the end of 2009, a total of 469 photovoltaic systems had been installed with a total capacity of 2 695 kW, compared with 321 photovoltaic systems with a capacity of 1 586 kW at the end of 2008.

### **Corporate Social Responsibility**

In the framework of its social contribution, the EAC continued its activities in a variety of sectors throughout 2009. Theatre, music, art, events and campaigns supporting education, sport, the environment and other areas linked to our deep cultural roots were just some of the areas in which the EAC was active during the year under review.

### **The human face of the EAC**

I wish to stress that the Board of Directors gives particular importance to personnel issues because we recognise the contribution of our personnel to the EAC's progress. Our aim, with the Management of the Organisation, is to ensure the best possible working conditions.

In this context, on 9 March 2009, contracts were signed with a construction company for the new Pafos Area Offices which will be built near the roundabout at the entrance to Pafos which will be a landmark for the town.

Furthermore, various studies are currently being carried out for the optimum use of personnel and the introduction of best practices to increase productivity.

### **Thanks**

To end this brief review of the most important issues with which the EAC had to deal in 2009, I feel the need to express my thanks to the Minister of Commerce, Industry & Tourism, Mr Antonis Paschalides, for his assistance and cooperation since the time we took up our duties until now.

It would be an omission on my part if, at this point, I were not to express my thanks to the former General Manager of the EAC, Mr Moysis Stavrou, who retired in 2009. I also want to wish the new General Manager of the Authority, Dr. Stelios Stylianou, every success in his work and to state that the EAC Board of Directors is sure that it will enjoy a superb collaboration with him for the good of the Organisation.

I express particular thanks to the Cyprus Energy Regulatory Authority, to the Natural Gas Public Company Ltd and to the Transmission System Operator for the full and close cooperation that we have enjoyed throughout this period. I also wish to thank the representatives of the media who are by the EAC's side and publicize its activities.

I also thank the other Members of the Board of Directors and the whole of the Authority's Management team for their cooperation and consensus of opinion on the handling of all issues facing the EAC during the year under review, and I would also like to express my special thanks to all members of our personnel for their contribution in 2009.

**Harris Thrassou**  
**Chairman**

# General Manager's Message



In 2009 the EAC once again achieved its aim of providing an uninterrupted supply of electricity. This is not something to be taken for granted; it is the result of planning and releasing the necessary funds for investment. Of course, it all comes down to the implementation of the Authority's development plan which will enable the EAC to maintain its success but this is no easy task, given the huge investment required and the present financial crisis.

Energy market conditions in Cyprus have changed in recent years and the EAC is expected to face competition with the arrival of natural gas. I believe that it goes without saying that the great efforts and consistent behaviour that have characterised the Authority during these first few years of a liberalised electricity market will continue in the future, enabling us to maintain our position as market leader. I am certain that the industriousness and experience of our personnel, together with our productivity which we need to increase even further, will spearhead the campaign that the EAC will be waging from now on. With the main objective of providing the most complete and effective service to our customers, we shall see better days. All of us – Board, Management and Personnel – need to get closer to our customers as we continue to provide electricity in a responsible and safe manner.

Rightly topping the list of infrastructure projects completed in 2009 is the delivery of the new Generation Units at Vasilikos power station. Specifically, in May 2009 the Certificate of Final Payment was issued for the 130 MW Unit No. 3 which had been officially handed over at the end of December 2008.

Moreover, on 11 November 2009, following the issuing of the Final Delivery Certificate, Unit No. 4 (a 220 MW combined cycle unit) was placed at the EAC's disposal. During 2009, installation work continued on the 220 MW combined cycle Unit No. 5 at Vasilikos power station. The Unit is part of Phase 4 at the station which is also looking into the possibility of installing Unit No. 6 which will also be a 220 MW combined cycle unit.

During 2009, work was completed at Dhekelia power station on the installation and operation of the 50 MW internal combustion units (ICU 1). The Temporary Delivery Certificate was issued by the project engineer on 1 June 2009, in accordance with the delivery timetable and the capacity of the ICUs was officially incorporated into the available generated load.

Based on the load forecast by CERA in 2008, it was evident that in summer 2010 the long-term backup system margin would reach 11%. CERA deemed this to be inadequate and it was therefore decided that a second array of internal combustion engines (ICU2) with a total capacity of 50 MW would be installed at Dhekelia power station, with operation planned to begin before summer 2010. The unit will operate on diesel fuel with the possibility of switching at a later stage to natural gas.

In July 2009 work was completed on the establishment of the Amathus 80 MVA Substation. It is due to operate in Autumn 2010 when the 132 kV "Moni-Polemida" overhead line is undergrounded. Work was also carried out on the "Lakatamia", "New Paphos", "Trimiklini", "Alexigros", "Psevdas", "Stroumbi" and "Athienou" Transmission Substations in 2009.

In the context of the EAC's social contribution, the Authority continued its support for the Cyprus Anti-Cancer Society with which it organised the "Light Up a Life" Christmas event for the 8th consecutive year. Moreover, the EAC also supported the excellent work of a number of charitable and other organisations and associations such as the Europa Donna Forum, UNICEF, the "Vagoni Agapis" association and others.

During 2009, the EAC again funded the publication of the Makarios Hospital wall calendar which is sold in all schools throughout Cyprus and all proceeds are used for children's therapeutic needs. In 2009, the EAC also provided funding for the creation of a recreation area for children receiving treatment at the Makarios Hospital.

Among the many issues with which the Management of the Organisation has to deal, the EAC's personnel is among those at the top of our list of priorities. I consider our personnel to be our most important weapon in the battles that we shall be waging from now on. I am optimistic about the future and my optimism is founded on the people of the EAC who, through their industriousness, will give the Organisation the required momentum to ensure that it continues to make steady progress. We have an obligation to pass on to future generations an EAC that is strong, flexible and customer-oriented. We are aware of the difficulties that lie ahead in the coming years but I am sure that the zeal and obliging nature of all our personnel will act as a binding contract for us to continue the fine work that the EAC has been doing for almost 60 years.

Our efforts to ensure better working conditions and security, training and the provision of incentives for all members of personnel are continuous. On 9 March 2009, contracts were signed for the new EAC Area Offices in Pafos. The design of the project – the result of an architectural competition – includes an office complex, a 132/11kV closed-type transmission substation, a footbridge, an outdoor car park and a public park. The office complex has been designed with particular emphasis on energy conservation and uses geothermal systems combined with an ice storage system for air conditioning. The outdoor area will contain an energy park utilising renewable energy sources and a special room for lectures and systems monitoring. The total cost of the project will be €16,5 million while the surrounding public areas will be landscaped at a cost to the EAC of some €300.000. According to the project timetable, the building should be ready on 8 September 2011.

To conclude this brief message, I would like express warm thanks to all my colleagues and in particular, to the Executive Managers of the Business and Management Units for their full cooperation and to promise that the efforts of the entire Management Team will always aim at finding an immediate solution to any problem that should arise for the Organisation. I also wish to thank all the EAC trade unions and every member of our personnel and I want to stress that we shall fight together for the Organisation's survival and progress. We shall overcome any obstacles in our way in order to maintain the EAC's name as the Organisation that has made the single greatest contribution to the country.

**Stelios Stylianou**  
General Manager

business  
and management  
units





# Generation Business Unit

## **GENERATION OF ELECTRIC POWER**

During the year 2009, the Electricity Authority of Cyprus continued the implementation of its operational and development program, which provides for the full utilisation, maintenance and extension of the existing Vasilikos, Dhekelia and Moni Power Stations.

## **VASILIKOS POWER STATION**

Vasilikos Power Station, with an installed capacity of 648 MW (3 x 130 MW Steam Units, 220 MW CCGT Unit and 38 MW Gas Turbine Unit) generated in 2009, 2 645 831 MWh, which corresponds to 51,54% of the total electricity generated from the Authority's Power Stations. During the same period the Station exported, 2 492 790 MWh, which corresponds to 51,36% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the Steam Units, for units generated, reached 39,12%, for the CCGT Unit 44,43% whereas the corresponding thermal coefficient of efficiency for the Gas Turbine reached 19,35%.

Moreover, the thermal coefficient of efficiency of the Steam Units, for units exported, reached 36,67%, for the CCGT Unit 43,07%, whereas the corresponding thermal coefficient of efficiency for the Gas Turbine reached 16,88%.

## **Maintenance**

During the period January-December 2009, Units No. 1 and 2 were taken out of service for a scheduled annual maintenance of the Steam Turbines and of the Steam Boilers. Planned modifications were carried out on the combustion systems whereas the new flue gas electrostatic filters were fitted on both Boilers.

The annual maintenance of the two Units included all the electrical equipment, transformers and auxiliary equipment as well as repairs of various defects.

An external Contractor carried out the annual inspection and maintenance of the single mooring and the heavy fuel oil underwater unloading pipes and a new certificate was issued.

Works for the upgrading of the Human-System Interface Hardware and Software of the control system of Units No. 1, 2 and 3 commenced.

# Generation Business Unit

## **DHEKELIA POWER STATION**

Dhekelia Power Station, with an installed capacity of 410 MW (6 x 60 MW Steam Units and 50 MW for Internal Combustion Engines (ICE 1) Plant, generated in 2009, 2 069 354 MWh which corresponds to 40,31% of the total electricity generated from the Authority's Power Stations. During the same period, Dhekelia Power Station exported, 1 968 173 MWh which corresponds to 40,55% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the Steam Units, for units generated, reached 30,69% whereas the corresponding thermal coefficient of efficiency for the ICE 1 Plant reached 41,80%.

The thermal coefficient of efficiency of the Steam Units, for units exported, reached 29,15% whereas the corresponding thermal coefficient of efficiency for the ICE 1 Plant reached 40,77%.

### **Maintenance**

During the period January-December 2009 the annual maintenance of Units No. 1, 4 and 5 was completed whereas the maintenance of Unit No. 3 began in 2009 and is expected to be completed by February 2010.

The annual maintenance of the Units included all the mechanical and electrical equipment, transformers, auxiliary equipment and repairs of various defects.

For Units No. 5 and 6, life assessment studies for the remaining life of No.3 superheaters were carried out and these showed that both superheaters need a replacement. The replacement of the two superheaters has been planned to take place in 2010.

The performance tests for the ICE 1 Plant were completed successfully and the Engines were put on commercial use on the 1 June 2009 as per Contract agreement.

The Station moorings were inspected and maintained by an external Contractor and a new certificate was issued.

The roof of No. 4 Fuel Oil Tank was replaced and the tank was inspected according to all applicable international standards.



## **MONI POWER STATION**

Moni Power Station, with an installed capacity of 330 MW (6 x 30 MW Steam Units and 4 x 37,5 MW Gas Turbine Units), generated in 2009, 418 145 MWh which corresponds to 8,15% of the total electricity generated from the EAC's Power Stations. During the same period the Station exported 392 432 MWh, which corresponds to 8,09% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the Steam Units for units generated reached 24,98% whereas the thermal coefficient of efficiency for the Gas Turbines was 22,36%.

Moreover, the thermal coefficient of efficiency of the Steam Units for units exported reached 23,36% whereas the corresponding thermal coefficient of efficiency for the Gas Turbines reached 21,92%.

### **Maintenance**

During the period January-December 2009, the annual maintenance of Steam Boilers No. 2, 3, 4 and 6 was completed. The yearly maintenance of the Boilers included visual checks and cleaning of all parts, various repairs inside the boiler, replacement of superheater tubes, which have reached their design limits, with other better quality material tubes and repairs in the air and flue gas ducts in order to avoid leakages.

In Boilers No. 2 and 5 the elements of the hot and cold side of the air pre-heaters were replaced with new ones.

During the same period the annual overhaul of Steam Turbines No. 2 and No. 3 was completed.

The annual maintenance of the above Turbines included all the electrical equipment, transformers and auxiliary equipment.

The Station moorings were inspected and maintained by an external Contractor whereas the tanker mooring buoys chains were all replaced.

A planned hot gas path inspection was carried out by an external Contractor on Gas Turbine No.4.

### **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, are in continuous operation at selected sites in the vicinity of the Power Stations. 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.

# Generation Business Unit

## STUDIES

- The Contract for the updating of the previous Development Program of the Operational Generation Unit was awarded to Lahmeyer International GmbH of Germany. For the preparation of the study the EAC is taking part with its own team of officers from various Operational Units. The study is expected to be completed by the beginning of 2010.
- Officers of the Operational Generation 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 Operational Generation Unit prepared the verification report with calculations of the carbon dioxide CO<sub>2</sub> emissions for the period January-December 2008 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.

## PURCHASES

By the end of 2009, a total of 352 purchase orders were fulfilled, out of which 232 were completed by the Operational Generation Unit.

## VASILIKOS POWER STATION DEVELOPMENT WORKS

### Second Phase of Vasilikos Power Station

- According to the initial plan the date of commercial operation of the Unit of the second phase of Vasilikos Power Station (Unit No. 3, Steam Turbine 130 MW) was the 08.06.2005.
- In July 2007 the Consultant issued the final delivery certificates for the Steam Turbines and Transformers.
- After the official delivery of the Boiler on the 18 December 2008, the Contractor completed the performance tests, which were regarded as successful since the measurements, in general, satisfied the guaranteed values. The only exception was a slight deviation from the consumption of the electrical energy. It is noted that the limit of NOx emissions was also achieved.

In May 2009 the Project Engineer issued the final delivery certificate for the Boiler and the auxiliary equipment.



### Third Phase of Vasilikos Power Station

- Phase III consists of one combined cycle Unit with a capacity of 220 MW, (Unit No. 4), which initially was expected to be put in commercial operation on 30 December 2008. During the first years of operation of the unit, it will use as fuel diesel oil until the arrival of liquefied natural gas (LNG) in Cyprus. Thereafter it will use liquefied natural gas as the main fuel.
- For this Project, the method of EPC (Engineer Procure Construct) was followed.
- The Contract for the construction of Phase III was awarded to the joint venture Hitachi Power Europe/Itochu Corporation & J&P Avax.
- For the maintenance of the two gas turbines a Contract was awarded to General Electric International Inc. The Contract provides for the maintenance of the gas turbines for a period of 9 years.
- The first fuel firing of Gas Turbine GT42 was achieved on the 25 June 2008 and the respective firing of Gas Turbine GT41 on the 1 July 2008. The performance tests were then carried out and the two gas turbines operated and generated. The turbines were available as from the 18 and 21 August respectively up until the 15 September 2008. On the 15 September, after completing 184 and 235 hours of operation respectively, they both stopped generating and returned back to the Contractor in order to complete the project and deliver the complete unit in 2009.
- The Contractor finally managed to deliver the Unit on the 11 November 2009, at which date the delivery certificate was issued. There has been a delay of 284 days from the agreed date of delivery of the Unit or 203 days according to the reviewed delivery date.

# Generation Business Unit

## Fourth Phase of Vasilikos Power Station

- Phase IV consists of two dual firing (liquefied natural gas and diesel) combined cycle Units with a capacity of 220 MW each (Units No. 5 and 6).
- For this Project the method of a completed contract (Turn Key) will be followed.
- The Consultants of the project, Lahmeyer International GmbH of Germany, have submitted to the Electricity Authority of Cyprus their final report which refers to the total review of the Generation Development Program and its formation so that it will be successfully implemented in the liberalized electricity market.

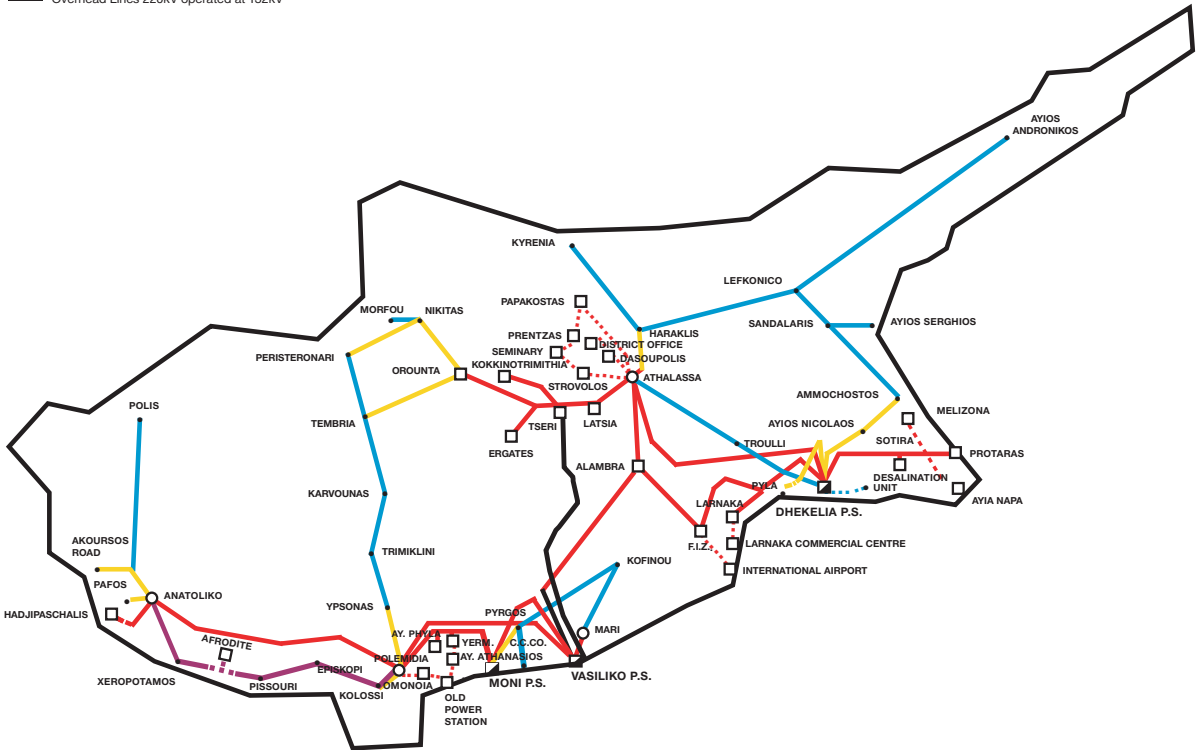
The report was submitted in November 2006 and thereafter, the Generation Business Unit, after considering the best applicable scenario as well as other parameters analyzed in the report, prepared and submitted a specific proposal to the Board of Directors which was eventually approved on the 6 December 2006. According to the approved proposal, Unit No. 5 will be regarded as a definite Unit and will be delivered for commercial operation in 2011 whereas Unit. No. 6 will be regarded as an optional Unit and in case this option is materialized then the Unit will be delivered for commercial operation either in 2011 (together with Unit No. 5), or in 2012 or in 2013.

- The EAC Board of Directors decided on the 30 June 2009 to award the Contract to the joint venture J&P Avax / Hitachi Power Europe for a total price of €225.081.500.

A separate Contract was awarded for the maintenance of the Gas Turbines for a period of six (6) years from the date of commercial delivery of the Turbines. The Contract was awarded to General Electric USA which is the manufacturer of the Gas Turbines. The Contract price is €29.961.000. The Contract covers the planned maintenance of the Gas Turbines as well as the provision of spare parts. At the same time a strategic stock of spare parts will be kept on site in order to avoid delays in case of unexpected defects.

- Even though the Project is at its initial design stages, the progress so far is considered satisfactory.
- The Contractor has submitted the first issue of the program works within 30 days from the beginning date of the Project. According to this program the Unit is expected to operate in an open cycle commercial mode on the 1st of July 2011 and in a combined cycle commercial mode on the 1st of January 2012.
- The exact operating date of Unit No. 6 will depend on the reviewed generation development program which is expected to be ready early 2010.

- ☐ Generation Stations
- Substations 132/66/11kV
- Substations 132/11kV
- Substations 66/11kV
- Overhead Lines 132kV
- - - Underground Cables 132kV
- Overhead Lines 132kV operated at 132/66kV
- - - Underground Cables 132kV operated at 132/66kV
- Overhead Lines 132kV operated at 66kV
- - - Underground Cables 132kV operated at 66kV
- Overhead Lines 66kV
- - - Underground Cables 66kV
- Overhead Lines 220kV operated at 132kV



# Generation Business Unit

## **DHEKELIA POWER STATION DEVELOPMENT WORKS**

### **Internal Combustion Engines (ICE 1) with a total capacity of 50 MW**

- The Electricity Authority of Cyprus in its effort to satisfy the expected energy demand for the summer of 2008 as well as the increase of demand for the following years, awarded to BWSC of Denmark the project for the installation of temporary units with a total installed capacity of 50 MW at Dhekelia Power Station by 1 June 2008 and the permanent installation of three (3) Internal Combustion Engines (ICE 1) with a total capacity of 50 MW by 1 June 2009. The temporary units operated successfully for the period June-September 2008 and then the Contractor removed the temporary units from the site as per contract clause and began works for the installation of the ICE 1 permanent Plant.

The certificate of temporary delivery of the ICE 1 Plant was issued on the 1 June 2009, according to the scheduled plan and the capacity of 50MW was added to the system availability. Before the issue of the temporary delivery certificate there had been an agreement between the Consultant Engineer, the Contractor and the EAC regarding the final catalogue of outstanding issues. Taking into account the fact that a significant number of these outstanding issues were solved in a satisfactory manner within 2009, it was agreed to give an extension to BWSC, until the 15 April 2010, for solving the rest outstanding issues.

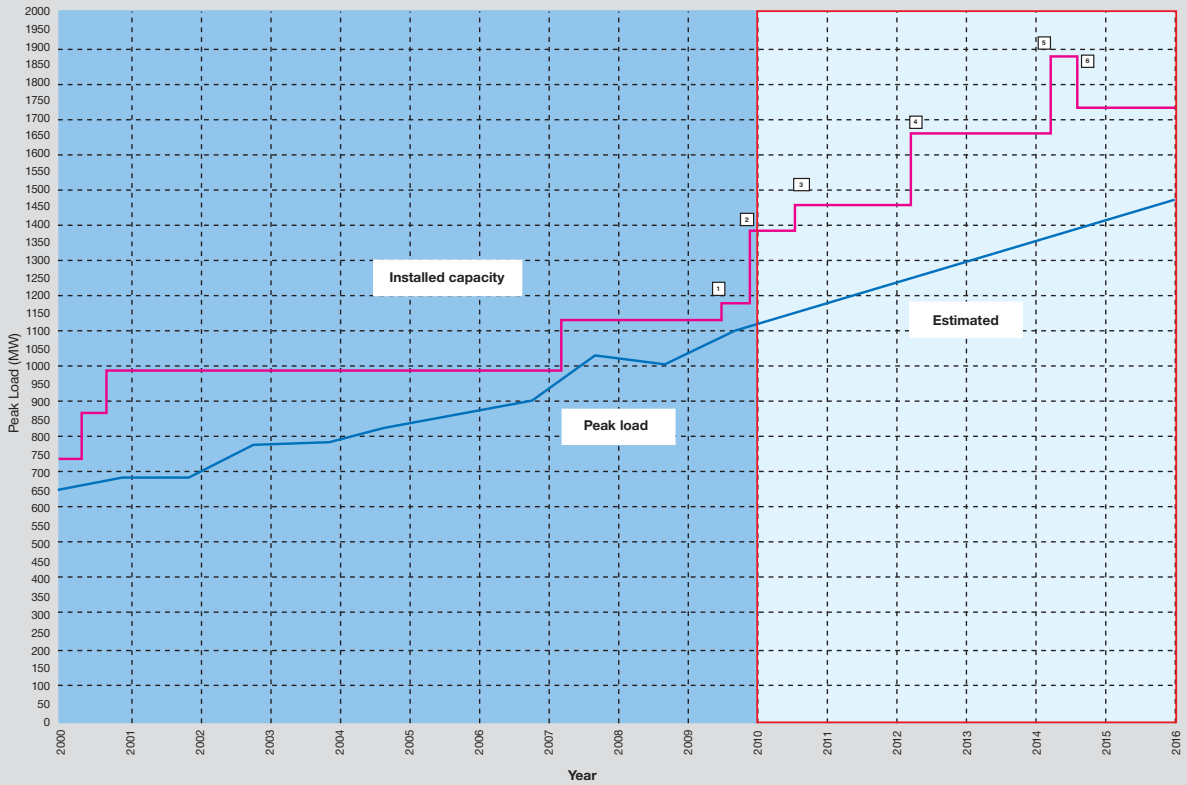
### **Internal Combustion Engines (ICE 2) with a total capacity of 50 MW**

- The electricity demand forecast for 2008 of the Cyprus Energy Regulatory Authority (CERA), indicated that the capacity reserve margin for the summer of 2010 would be of the order of 11%. This amount was below the limit of 20% and CERA's position was that it considered the value of 11% as not satisfactory and that the installed capacity in Cyprus should have been increased.

The Electricity Authority of Cyprus, taking into account the above position decided to proceed with the installation of another three Internal Combustion Engines (ICE 2) with a total capacity of 50 MW which are planned to operate before the summer of 2010. The Plant will burn heavy fuel oil with the possibility of converting it in such a way so as to burn liquefied natural gas in the future.



Figure 1



### DEVELOPMENT PLAN OF EAC

- (1) COMMISSIONING OF DIESEL POWER PLANT 50 MW (June 2009)
- (2) COMMISSIONING 1 x 220 MW (COMBINED CYCLE UNIT, VASILIKOS) - 2009 (November 2009)
- (3) COMMISSIONING OF DIESEL POWER PLANT 50 MW (June 2010)
- (4) COMMISSIONING 1 x 220 MW (COMBINED CYCLE UNIT, VASILIKOS) - 2012 (beginning)
- (5) COMMISSIONING 1 x 220 MW (COMBINED CYCLE UNIT) - 2014 (beginning)
- (6) DE-COMMISSIONING 6 x 30MW = 180MW (STEAM UNITS, MONI) - 2014 (end)

It is estimated that the steam units at Moni P/S will be taken out of service at the end of 2014.

# Generation Business Unit

## SYSTEM OPERATION

### Electricity supplied

In 2009 the total number of units generated by the EAC's three Power Stations was 5 133 330 000 kWh, compared with 4 995 838 000 kWh in 2008, representing an increase of some 2,75% over the previous year.

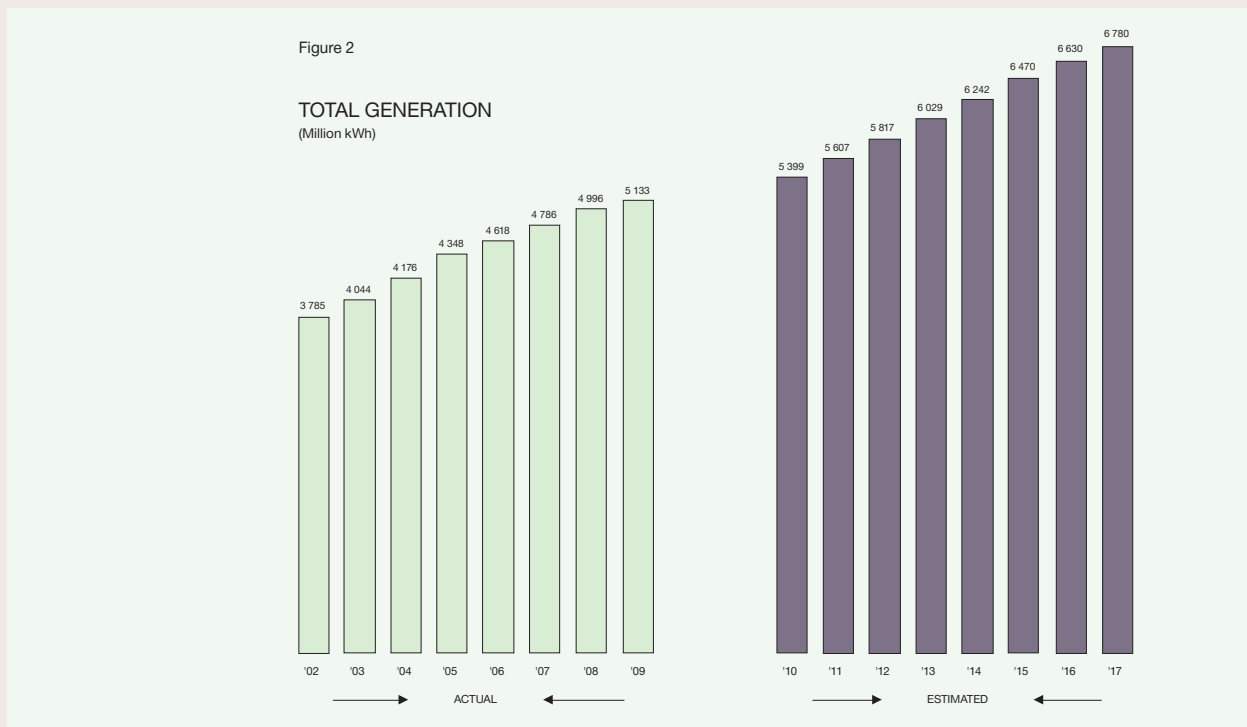


Figure 3  
Electricity Generation & Sales 2009

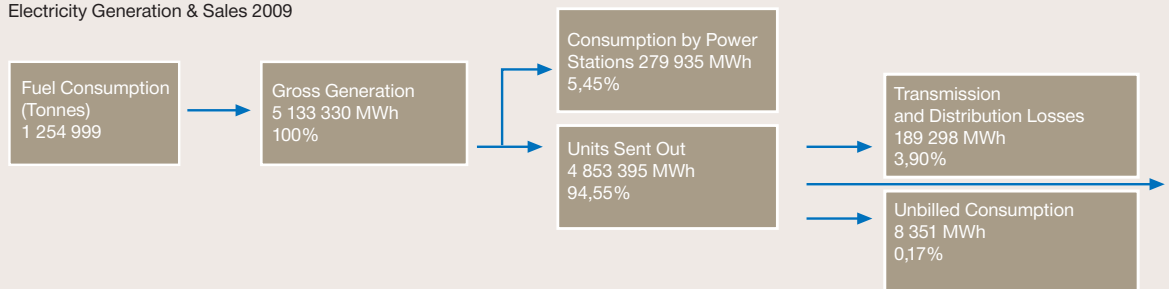


Figure 2 (page 32) shows the total number of units generated annually from 2002 to 2009. The estimated generation for the period 2010-2017 is also shown.

### Generation, Transmission and Distribution Losses

Electricity consumption at the power stations amounted to 5,5% of the total generation, compared with also 5,5% the previous year.

Figure 3 (pages 32&33) shows electricity generation and distribution of sales to the various consumer categories.

### Fuel Consumption

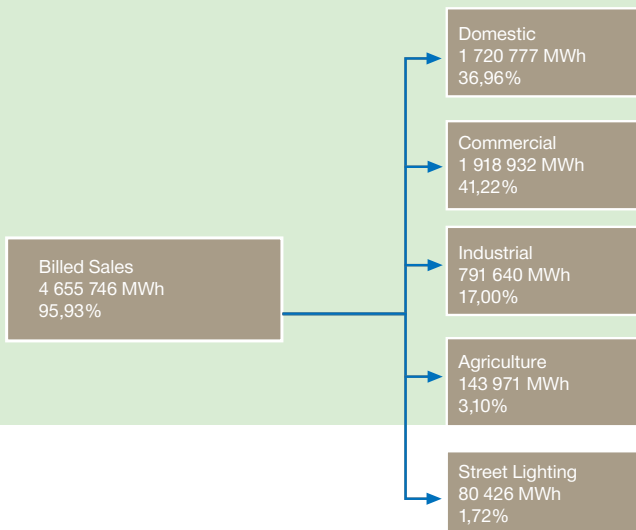
The amount of heavy fuel oil consumed by the power stations totalled 1 163 081 metric tonnes, compared to 1 218 577 metric tonnes the previous year, representing a decrease of 4,77%.

The total quantity of diesel fuel consumed by the power stations was 91 918 metric tonnes, compared to 16 244 metric tonnes consumed during 2008.

The average calorific value of the fuel oil used was 42 908 kJ/kg compared to 42 928 kJ/kg in 2008.

### Plant Efficiency

Average generating system efficiency in 2009, based on the total units generated by the EAC's three power stations, was 34,32% compared with 33,74% in 2008. The heat rate per kWh generated was 10 490 kJ/kWh compared to 10 668 kJ/kWh in 2008. The main aim was to utilise the higher efficiency units of the Vasilikos and Dhekelia Power Stations to cover the basic load to the maximum possible extent, taking maintenance and load demand into account.



# Networks Business Unit

## TRANSMISSION NETWORK

### INTRODUCTION

The transmission network is the backbone of the Authority'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.

### CONSTRUCTION PROJECTS

#### New substations

#### Completed substations

##### Amathus 132/22-11kV substation

By July 2009, installation work had been completed on the 80MVA Amathus 132/22-11kV GIS substation in Lemesos. The substation, which features two 40MVA transformers and a 22kV 21-panel switchboard, is due to operate in autumn 2010, fed by underground cables which will be installed during the undergrounding of the 132kV Moni-Polemia overhead power line.

#### New substations under development

##### Lakatamia 132/22-11kV substation

The Lakatamia 132/22-11kV GIS substation, with two 40MVA 132/23-11,5kV transformers and a 22kV medium voltage 30-panel switchboard, is nearing the final stages of commissioning. Pre-testing and energisation of the substation is due in October 2010.

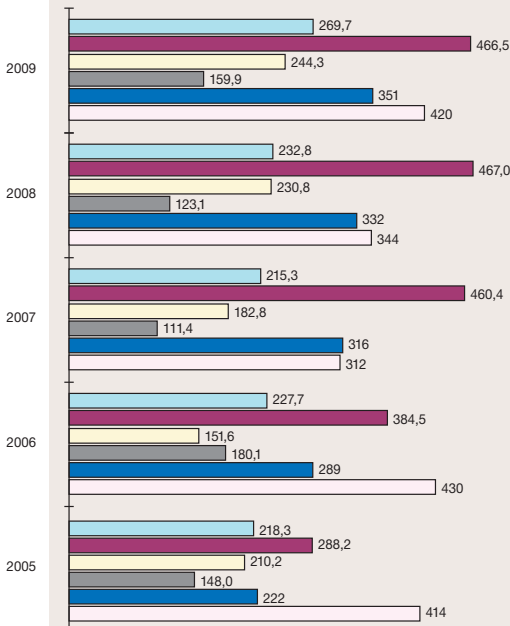
##### New Pafos 132/22-11kV substation

It is a closed-type substation incorporated into the new Pafos Area Office building complex. It features three 40MVA transformers and GIS equipment. The protection panels and fully automated monitoring system use tried and tested advanced technology. The project is due for completion in spring 2011.

##### Trimiklini 132/66/22-11kV substation

Construction work is due to be completed in July 2010. This open-type substation will feature a 45MVA 132/66kV auto-transformer, two line circuits, two 16MVA 66/23-11,5kV transformers, a capacitor divider circuit and a 22kV 14-panel switchboard. EAC personnel will install the equipment with the aim of completing the substation by autumn 2011.

Figure 4  
NEW DISTRIBUTION PROJECTS EXECUTED  
IN THE LAST FIVE YEARS



- L.V. O/H LINES (km)
- L.V. U/G CABLES (km)
- MV U/G CABLES (km)
- MV O/H LINES (km)
- G.M. TRANSFORMERS
- P.M. TRANSFORMERS

### **Alexigros and Psevdas 132/11kV substations**

The Alexigros and Psevdas 132/11kV substations are being established for connection to the Wind Park Transmission Network, the first with an installed capacity of 31,5MW in the Alexigros area and the second with an installed capacity of 20MW in the Psevdas area. For each of the projects separately, the Transmission System Operator has appointed a private company to construct both the substation and the Wind Park.

On both projects the Transmission System Operator has appointed the EAC as Project Engineer to ensure that the projects are constructed to the same standard of quality and reliability as those constructed by the EAC.

### **Oreites 132kV substation**

The Oreites open-type substation using conventional equipment is being constructed on state-owned land in the Oreites forest in the Pafos district to connect the licensed Oreites 82MW Wind Park to the Transmission System. The new substation will be connected via the existing 132kV Polemidia-Anatoliko overhead power line.

The project is at an advanced stage and is due to be completed in July 2010.

### **Stroumbi 132/22-11kV substation**

The Stroumbi 132/22-11kV substation, which is being constructed in the Stroumbi area in the Pafos district, has a capacity of 32MVA and metal enclosed switchgear for outdoor installation. The contract for the electrical equipment is being prepared and tenders for construction work will be published shortly. The new substation will be connected to the Anatoliko and Polis substations.

### **Athienou 132/22-11kV substation**

Procedures are under way for the establishment of this new open-type substation. It will contain two line circuits, two 16MVA 132/22-11kV transformers, a capacitor divider circuit and a 22kV 12-panel switchboard. To feed the substation, a new 132kV double circuit overhead power line will be erected between the Dhekelia and Free Industrial Zone substations.

### **Upgrades to existing substations**

#### **Completed upgrades**

#### **Hadjipaschalis 132/22-11kV substation**

On 27 May 2009, the upgrade to the 132/22-11kV Hadjipaschalis substation in Pafos was completed. Closed-type switchgear was installed, together with an upgraded control system and the medium voltage switchboard was replaced. A third 40MVA transformer was also installed, increasing the installed capacity of the substation from 80MVA to 120MVA.

#### **Xeropotamos 66/11kV substation**

On 20 July 2009, a fourth 10MVA 66/11kV transformer was energised at the substation.

#### **Ongoing upgrades**

#### **Dhekelia 132/11kV substation**

The substation building was delivered in November 2009 and installation of the equipment began, over an expected duration of 10 months. It consists of a high voltage 28-panel switchboard, two 40MVA 132/23-11,5kV transformers, a medium voltage 11-panel switchboard and high voltage cabling. Pre-testing and energisation of the substation are expected to take place in October 2010.

## **Episkopi, Pissouri and Xeropotamos 132/22-11kV substations**

Upgrades to the Episkopi and Pissouri substations, which are being carried out in accordance with the completed-contract method, are proceeding on schedule. On 28 July 2009, stage 2 of work on the Episkopi substation was completed with the energisation of the second 16MVA transformer circuit (T1). In November 2009, the stage 1 equipment was energised at the Pissouri substation. Full energisation of the two substations is due in autumn 2010. At the same time, work is progressing on the new 132/22-11kV Xeropotamos substation which is being constructed in a new location and will replace the existing substation.

## **Kolossi 132/22-11kV substation**

In the framework of the substation upgrade, work on stage 2 was completed in November 2009 and the 40MVA T2 transformer was energised. The upgraded open-type substation is due to come into full operation in September 2010.

## **Upgrades/Relocations of existing overhead power lines**

### **New route for the Anatoliko-Pafos overhead power line**

This new connection of approximately 7,72km has overhead and underground sections. This ongoing project is due to be completed in May 2010. The existing line will be dismantled.

### **Stroumbi-Polis 132kV overhead power line**

The contract has been awarded. The contractor is due to start work in September 2010 and to complete the project in 9 months. The 32kV double circuit line, on a new 22km route, will replace the old 66kV single circuit line.

## **Undergrounding of existing power lines**

### **Athalassa-Strovolos and Athalassa-Dasoupolis transmission lines**

In the framework of the undergrounding of the overhead sections of the Athalassa-Strovolos and Athalassa-Dasoupolis circuits, the new 7,79km Athalassa-Strovolos underground circuit was energised on 29 June 2009 and the two new 5,5km Athalassa-Dasoupolis circuits were energised on 7 November 2009.

The list of completed projects for 2009 also includes the 4,40km Dasoupolis-Strovolos circuit which is currently undergoing pre-testing. The swift dismantling of the two overhead power lines, covering a total of 8,54km, is under way.

### **Transmission lines in the Lemesos area – Undergrounding of the Moni-Yermasoyia-Ayia Phyla-Polemida 132kV transmission line**

Final plans and specifications were drawn up, a tender was issued and the contract was awarded on a turn-key basis. Work on this extremely important project is due to begin in March 2010 and will take 18 months to complete. During the first stage, around the end of 2011, the incoming and outgoing lines at the Yermasoyia and Ayia Phyla substations will be dismantled and at a second stage, around the middle of 2012, the backbone of the line will be dismantled.

### **TRANSMISSION SYSTEM DEVELOPMENT STUDIES**

**In 2009 the Studies and Pre-planning Section prepared the following studies in collaboration with the Transmission System Operator (TSO):**

#### **Lefkosia Area:**

The following studies were prepared and approved for Lefkosia and the surrounding area:

- Upgrading of the Latsia transmission substation.
- Establishment and powering of the new 2x40 MVA 132/22-11KV Dhali Industrial Area open-type GIS substation (revised study).
- Undergrounding of the section of the Athalassa-Orounta overhead power line which traverses the residential area of Lakatamia.
- Interconnection of the Tseri and Strovolos transmission substations via a third underground transmission cable.
- Interconnection of the Seminary and Strovolos transmission substations via a third underground transmission cable.

#### **The following studies are planned:**

- Powering of the new 3x40 MVA 132/22-11KV Engomi closed-type GIS transmission substation.
- Dasoupolis-District Office connection (revised).
- Installation of power transformers and a medium voltage automatic switchboard in the Tseri transmission substation.
- Karvounas-Tembria 132kV Double Circuit overhead power line.

#### **Lemesos Area:**

The following studies were prepared and approved for Lemesos and the surrounding area:

- Installation of 22/11kV power transformers in the Pyrgos transmission substation.
- Connecting the EAC's Thermal Power Station at Akrotiri to the transmission system (preliminary study).

#### **The following studies are planned:**

- Ypsonas Industrial Area nodal transmission substation.
- Lemesos Marina primary substation.
- Upgrading of Moni transmission substation from 66kV open-type to 132kV GIS closed-type.
- Establishment of a new transmission substation between Polemidia and the 3rd Lemesos Industrial Area.
- New Vasilikos-Moni overhead power line (rbus twin).
- New Vasilikos-Alambra overhead power line.

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

The following studies were prepared and approved for Ammochostos-Larnaka and the surrounding area:

- Development of the Transmission System at Vasilikos power station.
- Dismantling of part of the 132kV Dhekelia-Larnaka overhead power line.
- Pyla substation (revised study).
- Undergrounding of the section of the Dhekelia-Larnaka-Free Industrial Zone overhead power line that traverses the residential areas of Pyla and Voroklini (preliminary study).
- Upgrading of the International Airport transmission substation.
- Upgrading of the Free Industrial Zone transmission substation.
- Upgrading of the Commercial Centre transmission substation to 3x31,5 MVA.
- Replacement of 11kV equipment with 22/11kV SF6 equipment at the Protaras transmission substation.

# Networks Business Unit

The following studies are planned:

- Powering of the desalination plant at Vasilikos power station.
- Interconnection of the Pyla and Commercial Centre transmission substations via a double circuit underground transmission cable.
- Establishment of the new Psevdas transmission substation.
- Establishment of the new Alexigros transmission substation.
- Establishment of the new Vasilopotamos transmission substation.
- Establishment of the new Klavdia transmission substation.
- Vasilikos Cement Factory temporary connection.

#### **Pafos Area:**

The following studies were prepared and approved for Pafos and the surrounding area:

- Powering of the desalination plant at Kouklia (revised study).
- Partial undergrounding of the Anatoliko-Hadjipaschalis overhead power line.

The following studies are planned:

- Establishment of the new Oreites transmission substation.
- Connecting the new Ikaria substation to the New Pafos and Hadjipaschalis substations.
- Upgrading of the Akoursos transmission substation.

#### **Other studies:**

The following studies have also been completed:

- Startup of desalination turbines.
- Installation of automatic fire systems in EAC substations and other buildings.
- Installation of an air conditioning system in the District Office substation.
- Transmission System Project Costing Manual.
- Transmission System Power Transformer Management.
- Transmission System Reliability in Summer 2009.

The following studies are planned:

- Transmission System Power Factor Improvement.
- Continuous Modelling of the Transmission System and Equipment and System Analysis.
- Transmission substation load prediction for 2010-2030.
- Transmission System Reliability in Summer 2009.
- Transmission System Project Costing Manual.





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.

### **CONSTRUCTION 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, 256 approved technical specifications concerning 1 505 materials. In 2009, five new technical specifications were drawn up while 24 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. Preliminary work has also begun on drawing up a Code of Practice for the underground network.

#### **Network construction standards**

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

## **DISTRIBUTION SYSTEM DEVELOPMENT STUDIES**

In order to expand and develop the distribution system, 7 554 studies were completed in 2009 compared with 7 055 in 2008. The cost of construction work for the expansion and development of the distribution system in 2009 amounted to €64,1 million, compared with €58,5 million in 2008.

### **Other studies:**

The following studies have also been completed and approved:

- Connecting Renewable Energy Sources (RES) to the distribution system.
- The use of power transformers on the distribution system.

The following studies are planned:

- Guidelines and Code of Practice for distribution substations (Revised Manual).

## **TELECOMMUNICATIONS AND ELECTRONIC SYSTEMS**

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

### **Optical Telecommunications System**

The Authority's Optical Fibre Telecommunications System, which was installed in 2000, interconnects 21 transmission substations, power stations and EAC offices and serves the needs of the Supervisory Control and Data Acquisition and Energy Management System, Transmission Line Tele-protection, Telephony, Load Management (Ripple Control), IT and other services.

During 2009, the system's digital multiplexers were upgraded on four points while a number of new telecommunication channels were created, mainly for transmission line protection. Additionally, five faults to the system were repaired.

### **Optical Fibre Network**

The Authority has an extensive overhead and underground optical fibre network along with the length of the Transmission Network. In 2009, work was carried out on the Lemosos Area's overhead network to connect the Episkopi transmission substation while 2km of underground cables were laid and eight network faults were repaired.

Furthermore, during 2009 additional optical fibre circuits were made available to the EAC'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.

SCADA/EMS implementation was extended in 2009 to control an additional transmission substation while control equipment was upgraded in another five substations. Moreover, 46 SCADA/EMS faults were repaired together with 23 faults in auxiliary equipment (battery power adaptors/chargers, telephone systems, etc.)

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. In 2009, signal strengthening work was carried out and repairs were made to 14 faults in the system.

The system is due to be expanded and upgraded during 2010-2012.

# Networks Business Unit

## **Security Systems**

The first stage was completed of the installation of systems to monitor (a) unauthorised access and (b) the protection via cameras of EAC stores, offices and customer service centres. The Section also provided general technical support for the Authority's security systems and advisory services to those responsible for Area Office and Power Station security matters.

## **Fire Detection**

Implementation of a fire detection and immediate telephone response system was completed in the Ammochostos-Larnaka Area Offices.

## **Telephone Network and Systems**

Internal networking of the Authority's telephone systems was completed. Furthermore, the telephone network and systems were connected to the Call Centre.

## **Call Centre**

Work continued to complete the installation, programming and monitoring of the EAC's new Call Centre. Two new four-digit numbers (1801 and 1802) were obtained for the Call Centre, continuing the series from 1800 which is used by customers to report faults.

## **Wireless Communication**

Evaluation took place of Tender 214/2008 for the purchase and maintenance of radio telephones for the Authority's needs islandwide. All the mobile radio telephones have been programmed and delivered and work has begun on installing the phone bases in vehicles and substations. Also, a relay station was installed at Vasilikos power station.

## **CIVIL AND BUILDING WORKS SECTION**

The Civil and Building Works Section deals with the EAC's construction projects.

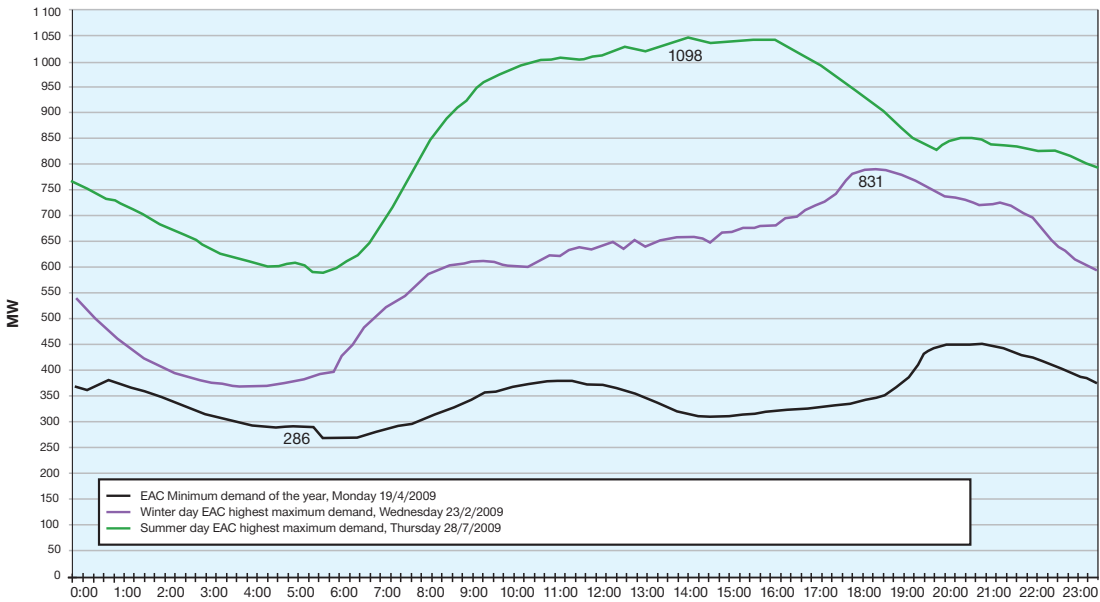
### **Power Stations**

Maintenance and civil engineering work continued at the EAC's power stations on the basis of a three-year contract.

In July 2009, following the award of the relevant tender, final plans were drawn up and construction work began on Phase IV of Vasilikos Power Station.

During 2009, construction work began on the installation of Internal Combustion Engine No. 1 at Dhekelia Power Station while final plans were drawn up and construction work began on the installation of Internal Combustion Engine No. 2 at Dhekelia.

Figure 5



Note: As shown in T.S.O. 2009 Annual Report

### Transmission/Distribution systems projects

The Section provided technical support for the planning and supervision of construction work for EAC transmission and distribution systems projects.

In 2009 work began or continued on the new Dhekelia, Lakatamia, New Pafos and Xeropotamos 132kV transmission substations and on the 66kV Trimiklini transmission substation. Furthermore, work continued on upgrading the Kolossi, Pissouri and Episkopi substations from 66kV to 132kV.

### Stores and Technical Staff Offices

Construction work continued on the new Lemesos Area stores. The project, which began in April 2008, is due to be completed in 2011.

### Area Offices

In March 2009, building work got under way on the new Pafos Area Offices which are due for completion in September 2011.

Architectural design and other related work for the construction of the Authority's new Ammochostos-Larnaka Area Offices continued. In 2010 the relevant tender is due to be published/awarded and work will begin.

# Customer Service Business Unit

## CONSUMERS

At the end of 2009, the total number of consumers in the government-controlled areas of Cyprus stood at 520 030, a net increase of 19 541 or 3,9%.

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 increased to 4 655,8 GWh, compared to 4 555,8 GWh the previous year, representing an increase of 2,2%.

- 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 2007, 2008 and 2009 are shown in Fig. 6 (page 47). Sales and revenue for 2009 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 99 127 MWh, representing a reduction of 2 349 MWh or 2,3% compared to 2008. This reduction is attributed mainly to the mild weather. The average per kWh charge fell from 9,73 cent in 2008 to 8,67 cent in 2009 while the number of consumers increased by 834.

Consumers opting for the off-peak tariff totalled 20 844, of whom 20 460 (98,1%) were domestic consumers with an average consumption of 4 725 kWh compared to 5 046 kWh in 2008.

## TARIFFS

- The EAC Tariffs Group continued to work with its external consultants on the introduction of new marginal cost tariffs in the context of Cyprus' liberalised electricity market. In collaboration with its consultants, the Group prepared an initial proposal for the introduction of new tariffs which was submitted to the Cyprus Energy Regulatory Authority (CERA) for negotiation on 30 November 2006.

The study was finally approved by CERA regarding a total increase of 6,1%, to be implemented in three equal annual increases to the current tariffs from 1.1.2010 with full implementation from 1.1.2012 rather than 1.1.2007 as proposed in the study. This translates into a loss of revenue over the 5-year period 2007-2011 of around €120 million.

The EAC is involved in ongoing negotiations with CERA for the preparation of new tariffs. The new tariffs are based on revised Load and Power Flow forecasts, revised Transmission System Development Cost forecasts and Distribution System Development Cost forecasts, in accordance with the EAC's Development Plan.

Also, during the first half of 2009, the Tariffs Group examined various ways of resolving problems faced by commercial and industrial customers.

Upon completion of the required studies, it submitted proposals to CERA which approved, among others, new alternative seasonal monthly tariffs, due to come into force on 1 June 2009, which would be established in parallel with the existing tariffs.

Approval was also given to the abolition of Amendment 58/2004, which, among other things, provided for the temporary settlement of monthly paid bills. According to this Regulation, from 1 March 2003 and for every subsequent 12-month period until the end of Stage 2 of the existing tariffs, if the EAC's total revenue from a customer's tariff was greater than the expected revenue from the customer's old tariff, based on the Amended Electricity Development Regulations of 2000, the additional revenue would be reimbursed to the customer as credit. This process was implemented for the last time in 2009.

In addition to approving the new alternative monthly tariffs, CERA also gave the green light to the EAC's proposal to change the load limit for each monthly tariff, regarding existing and the new, alternative tariffs.

- 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 correct energy use and conservation.
- In the framework of the special domestic tariff (code 08) for large and needy families, by the end of December 2009 some 23 247 customers were benefiting from this. The total benefit to customers in 2009 and consequently, the reduction in revenue to the EAC as a result of this special tariff, was approximately €4.545. 836 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 fell from 16,178 cents in 2008 to 13,472 cents in 2009, a reduction of 16,7%, as a result of lower fuel costs and the automatic fuel cost adjustment.

#### **LOAD RESEARCH AND CONTROL**

Since 2000, in the context of its efforts to upgrade its Load Research, the EAC has been using a software package by which meter data is retrieved automatically. This program enables direct monitoring of customer loads, the automatic retrieval of data and the timely preparation of Load Research reports.

During 2009 the EAC continued to implement this Load Research method for all its corporate customers who are supplied at high and medium voltage. The data obtained was analysed, processed and subsequently used in the drawing up of the relevant load research reports. The conclusions of these studies are used for new tariff structuring and for load forecasting and management.

# Customer Service Business Unit

## **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 department to a considerable degree.

The entire system will become 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 able to settle their bills online via the websites of the commercial banks.

## **EAC CONTACT CENTRE**

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

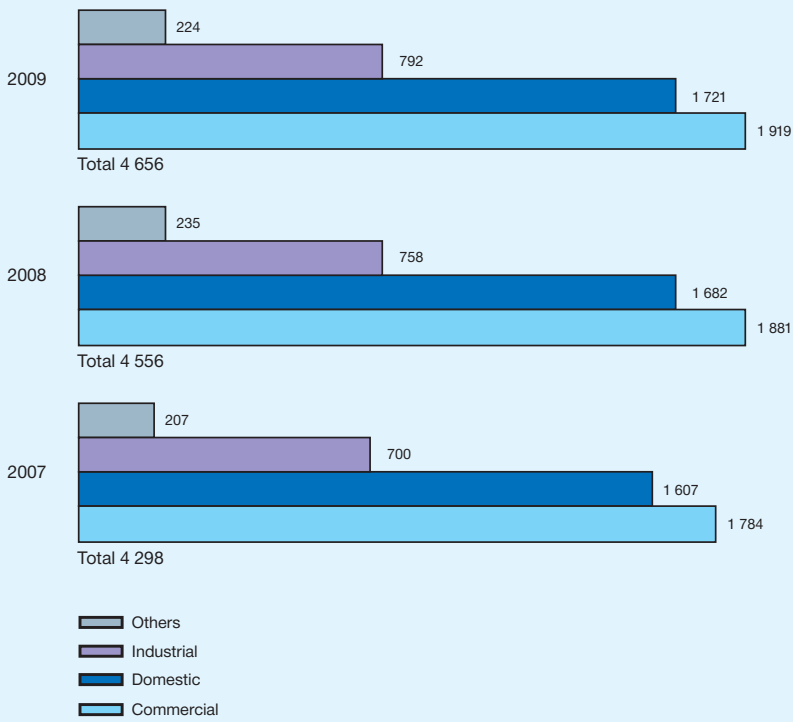
The Contact Centre will enable the EAC to provide good quality service and information to consumers/customers quickly and efficiently, to promote the image of a progressive and dynamic organisation and in general, to respond to the expectations of consumers/customers.

In 2008 the 2nd floor of the old Head Office building was renovated and special Contact Centre furnishings and equipment were purchased and installed there. In 2009 recording/analysis of the automated services that the Contact Centre will provide to EAC customers was completed. All the necessary equipment parameterisation took place and the required checks were carried out in realistic conditions. The Contact Centre will come into operation in stages and during the first quarter of 2010, its first services are due to start, beginning with Meter Reading via the freephone number 8000 6000.



Figure 6

SALES OF ELECTRICITY  
(millions kWh)



The Contact Centre will also provide services that are currently the responsibility of the Islandwide Faults Reporting Centre (IFRC) which was set up in the framework of the EAC's efforts to improve its customer service. The IFRC which is currently manned by twelve Customer Service Officers, is successfully providing service to all the government-controlled areas of Cyprus.

Customer calls to the islandwide four-digit telephone number 1800 are routed to the IFRC, where the reported faults are registered electronically before being sent on to the Area emergency/faults crews for corrective action and the restoration of power.

# Customer Service Business Unit

## **RENEWABLE ENERGY SOURCES**

In accordance with the provisions of European Directive 2001/77/EC issued during Cyprus' accession process and its compliance with the directives, legislation and regulations of the European Union, the Government has proceeded with, among other things, 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 Energy Service of the Ministry of Commerce, Industry & Tourism, with the Cyprus Energy Regulatory Authority (CERA) and the Transmission System Operator regarding joint action on the subject of RES. Interested applicants/producers 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, a 15-year purchase agreement is signed between the producer and the EAC (a 20-year agreement according to the proposed new scheme). 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 and having signed the Subsidy Agreement with the Special Fund Management Committee.

By the end of 2009, a total of 469 photovoltaic systems had been installed and were producing up to 20 kW (compared to 321 photovoltaic systems at the end of 2008, i.e. an increase of 46,1%), with a total installed voltage of 2 694,79 kW (1 586,37 kW at the end of 2008, i.e. an increase of 69,9%) and a total production of 2 908 511 kWh (compared to 1 636 867 kWh in 2008, i.e. an increase of 77,7%). It should also be noted that by the end of 2009, eight Generation Units using biomass/biogas were in operation with a total installed capacity of 3 555 kW and total production of 19 849 639 kWh. 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. During the second half of 2009, agreements were signed with three wind power producers with a total capacity of 133,50 MW. Towards the end of 2010, the Oreites wind park in Pafos will be connected and will have a total capacity of 82 MW once fully operational.

Table 1

## NUMBER OF CONSUMERS

CONSUMER CATEGORY	AS AT 31.12.2009	AS AT 31.12.2008	INCREASE %
Domestic	402 671	386 489	4,2
Commercial	83 160	80 913	2,8
Industrial	11 618	11 792	(1,5)
Agricultural	13 546	12 796	5,9
Street Lighting	9 035	8 499	6,3
<b>TOTAL</b>	<b>520 030</b>	<b>500 489</b>	<b>3,9</b>

Table 2

## BILLED SALES OF ELECTRICITY (MWh)

CONSUMER CATEGORY	2009	2008	INCREASE %
Domestic	1 720 777	1 682 327	2,3
Commercial	1 918 932	1 881 173	2,0
Industrial	791 640	757 803	4,5
Agricultural	143 971	156 930	(8,3)
Street Lighting	80 246	77 596	3,4
<b>TOTAL</b>	<b>4 655 746</b>	<b>4 555 829</b>	<b>2,2</b>

**TECHNICAL ISSUES**

During 2009 the department of the Customer Service Business Unit responsible for Technical Issues dealt with issues pertaining to:

- The metering system
- Street lighting
- Energy conservation
- Wiring regulations for electrical installations
- Electricity generation via Renewable Energy Sources
- EAC revenue protection from electricity theft
- Monitoring of the quality of electricity supply

Specifically, during the year under review, the Meter and Relay Testing Centre (MRTC) received 15 988 new meters. A total of 21 262 new meters were checked and calibrated, 3 668 second-hand meters were repaired and recalibrated and 1 489 Ripple Control Receivers were programmed and tested.

During 2009, the EAC Area office inspection department carried out 28 472 inspections of electrical installations throughout Cyprus.

# Customer Service Business Unit

Additionally, specifications were drawn up, Calls for Tenders were issued and the subsequent tenders were assessed for the purchase of materials and equipment used in the Meter and Relay Testing Centre (MRTC) and Area Offices relevant to the metering system, street lighting and electrical installation inspection.

Regarding the monitoring of the quality of supply to customer premises, the Exploitation Department installs special power disruption analysers and, wherever it is considered necessary, corrective measures are taken.

## **EAC REVENUE PROTECTION**

In 2009, personnel dealing with EAC revenue protection from electricity theft checked 4 143 meters on the premises of high-risk customers. Of these, 832 were found to be intact, while 3 027 had been tampered with, though they showed no sign of electricity theft. In 284 instances, meters were found to have been tampered with and there were signs of electricity theft. In relation to these, a total of €1.992.985 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 2009. The total value of unrecorded consumption has been estimated at €4,95 million and up to now, payment of approximately €2,7 has been arranged. The EAC has taken legal action against those involved in order to recover the outstanding amount. It should be noted that, in addition to the Masouras case, the EAC has also secured payment of €335.065 relating to other cases of electricity theft.

## **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 took the strategic decision to seek accreditation of its workshop in the Meter and Relay Testing Centre (MRTC). Certification work is now at an advanced stage and it is expected that procedures for obtaining the required Quality Certification/Accreditation will be completed during 2010.

Accreditation of the workshop will be in accordance with ISO/IEC17025.

The relevant Accreditation certification will essentially give the Centre a written guarantee that monitoring and testing procedures at the MRTC comply with the required specifications. The Accreditation Certificate will recognise the technical capability of the MRTC to carry out the relevant testing and calibration work on meters and the results of these tests will be accepted anywhere.



# Customer Service Business Unit

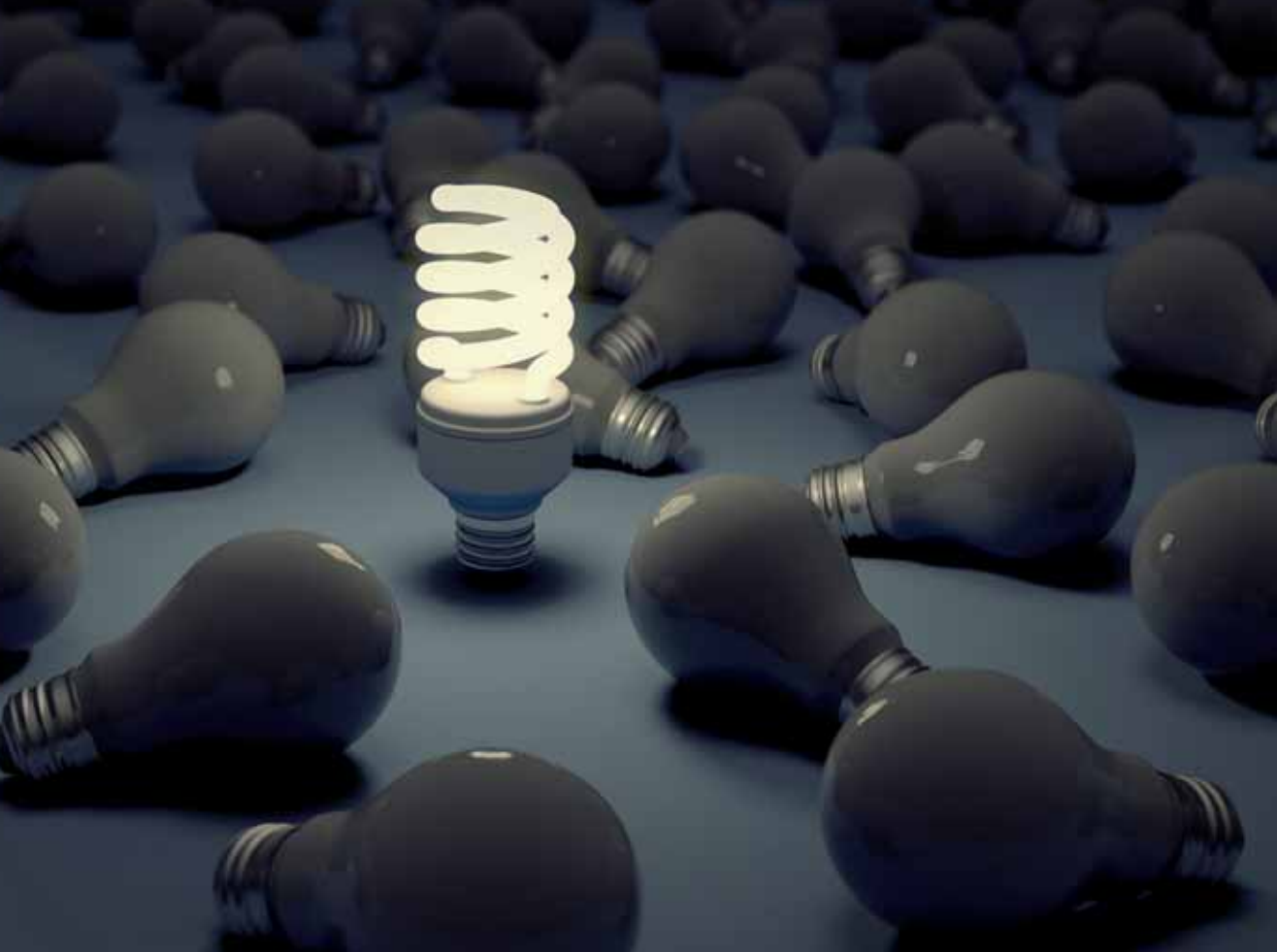
## **PUBLIC RELATIONS**

- The continuously growing demands of its customers and rapid developments in technology oblige the EAC to plan public relations campaigns aimed at letting customers know about all issues pertaining to energy and the Authority's work.

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

In this context, the EAC continued to provide advisory services to all its customers on matters of interest to them in 2009. The general terms governing the provision of electricity, EAC policy on electrification, tariffs and general information are among the topics that are always of interest. As happens every year, during 2009 lectures were given to organised groups and to EAC customers on issues concerning the conservation and safe use of electricity, new tariffs and electromagnetic fields.

- Since 2009, the revamped EAC website has provided information about planned interruptions to the electricity supply and faults in the system.
- In the framework of improving relations among personnel, the Organisation publishes the quarterly magazine "EAC News" and a four-page leaflet entitled "Light on the Facts" via which, in 2009, the Quality Assurance Section kept EAC personnel informed about quality issues and, in particular, the Integrated Management System implementation process. EAC News is distributed not only to EAC personnel, but also to various other groups, individuals and services outside the Organisation. During 2009, issues 96-99 were published.
- In the context of its broader social contribution, in 2009 the EAC continued to support the Cyprus Anti-Cancer Society with which it organised the "Light Up a Life" Christmas event for the 8th consecutive year. It also supported the excellent work of many charitable and other organisations and associations such as the Europa Donna Forum. Moreover, representatives of UNICEF and the 'Vagoni Agapis' association visited the EAC's Head Offices.
- In 2009, the EAC provided funding to the Makarios Hospital Primary School and Nursery for the creation of a recreation area for the children receiving treatment there. Moreover, for some years now it has undertaken the design and printing of the Makarios Hospital wall calendar which is sold in all schools throughout Cyprus and all proceeds are used for children's therapeutic needs.



- In collaboration with the Fire Service, the EAC ran a public awareness campaign concerning the safe use of electricity and offering accident prevention advice.
- In the framework of its becoming a signatory to the European Road Safety Charter, the EAC ran two campaigns aimed at reducing the number of road accidents and organised events highlighting pedestrian and cyclist safety, the consequences of drink-driving and speeding and the need to wear seat belts. The Organisation also held safe driving seminars aimed at various sections of the public.
- In collaboration with the Cyprus Energy Agency and the Cyprus Photographic Society, the EAC held a photography competition on the subject “Energy under the Lens”. All submissions were later exhibited at the EAC’s Head Offices. The photographs depicted Renewable Energy Sources (RES) applications or systems, types of RES, energy-saving projects, etc.

# Customer Service Business Unit

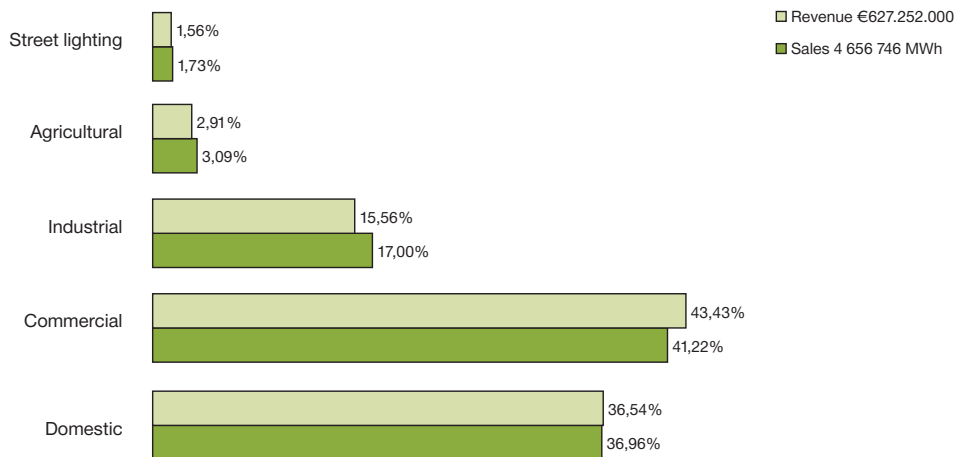
- In sport, in addition to the fact that the EAC was once again the main sponsor of the national men's basketball team, it was also a Bronze Sponsor of the Cypriot teams and athletes taking part in the 2009 Games of the Small States of Europe, organised for the second time by the Cyprus Olympic Committee.
- The EAC participated in various conferences, seminars and specialist exhibitions and fairs, enabling the public to obtain first-hand information on all aspects of its activities and its development projects. It is worth noting the EAC's participation in the 34th Cyprus International Fair and in the 5th Savenergy Exhibition, co-organised with the Employers & Industrialists Federation, at which people had an opportunity to learn about the EAC's services and to ask questions. At the same time, the EAC had a chance to assess and evaluate any complaints and problems facing its customers and to take remedial action to resolve them.
- Every year the Public Relations Department undertakes the presentation of the EAC's Annual Report. Representatives of the commerce and industry sector as well as Government Ministers, Members of Parliament, officials of other semi-government organisations, government departments and professional associations were invited to the presentation of the 2008 Annual Report at which a full audiovisual account of the Organisation's financial results and its Development Plan was given.





Figure 7

### ELECTRICITY SALES & REVENUE BY CONSUMER CLASS



# Common Services Business Unit

## **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 2009, 44 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 2009, the Authority published 783 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 2009, the Section dealt with 286 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 80 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.

#### **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 2009 the main tasks accomplished by the IT Department were as follows:

- The procedure for the pricing of materials, which are used for costing the construction schemes, was automated and successfully implemented in SAP R/3.
- The automatic issuing of materials demanded by the Foremen was successfully designed and implemented in SAP R/3.

# Common Services Business Unit

- The system for the inventory of EAC land & buildings was successfully automated and implemented using the SAP Fixed Assets module.
- The compensation of the EAC pensioners and the contractual employees was successfully implemented with the SAP Payroll/HR module.
- The basic H/W & S/W infrastructure of GIS was successfully designed and implemented resulting to its utilization by all EAC District Offices.
- The design of the Distribution Grid (underground) Database was successfully completed. The design of the Databases of the Overheads Grid, Transmission Grid and Telecommunications Grid have made further progress.
- For a more effective administration of the Drawings and for a better organization of the personnel at the EAC Area Drawing Offices, the associated tasks and procedures were successfully reengineered. A workflow solution was successfully implemented (March 2010) supporting the full electronic functioning of the Drawing Offices.
- The email system of Microsoft Exchange 2003 was successfully upgraded to Microsoft Exchange 2007 and e-mail services were provided almost for all EAC employees.
- The provision for access to the EAC intranet email, through Internet, was successfully implemented.
- The Desktop Virtualisation via the platform of VMware View 4/vSphere 4 was successfully implemented. Old Personal Computers (PCs) were successfully replaced with thin clients, while further needs for new PCs were also satisfied.
- The Microsoft Configuration Manager 2007 was successfully implemented for the use by the IT Help Desk. It provides for the remote support of users (subject to user's approval), the automated installation/upgrading of s/w through a central server and the administration of equipment (h/w and s/w).
- The specifications for the Internet Perimeter Security Infrastructure were successfully prepared and the Tender was granted to the successful Tenderer.
- The Technical Infrastructure for the Contact Centre has been completed.
- The Disaster Recovery plan for the Customer Care & Billing (CC&B) system was successfully completed and implemented.



- The automation of the placement of new bank orders into the CC&B system for the payment of electricity bills was successfully completed.
- The parameterization and the pilot implementation of the MV-90 system for the automatic meter reading of Big Consumers (tariffs 63,73,83) and the issuing of bills by the CC&B system, was successfully completed.
- A Tender for the purchase of two big laser printers for printing high volumes of reports (electricity bills, dunning letters, pay slips etc.) was issued. The Tender was granted to the successful Tenderer and the two printers were successfully put in production.

#### **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 2009:

- 33 Community contracts were awarded, the total value of which (€314.770.460) exceeded the minimum stipulated in Law 11(l)/2006 and which were covered by the provisions of the same Law 11 (l)/2006.
- 314 non-Community contracts were awarded, the total value of which (€49.354.337) did not exceed the minimum stipulated in Law 11(l)/2006 for the undertaking of works, the provision of services and the supply of materials and equipment.
- Four contracts were awarded with a total value of €519.665.227 for the supply of heavy fuel oil and gasoil.

# Human Resources Management

## HUMAN RESOURCES MANAGEMENT

### The Authority's staff

The number of employees in post and their distribution by category is shown in the table below.

	2009	2008
Professional	297	291
Clerical	392	387
Technical	1 777	1 666
<b>TOTAL</b>	<b>2 466</b>	<b>2 344</b>

Three employees who have been missing since the Turkish Invasion of 1974 are included in the above figures. The employees in active service at the end of the year were, therefore 2 463.

### The Authority's pensioners

The total number of pensioners at the end of the year who received pension was 1 018 (including 6 missing persons since the Turkish invasion of 1974) compared to 1 015 at the end of the previous year. In addition 257 pensions were paid to widows and orphans of deceased pensioners/employees compared to 247 at the end of the previous year.

### Increase of the Retirement Age Limit from the 60th to the 63rd year of age

As from 25th of July 2007 the usual for retirement age limit for EAC employees has been extended from the age of 60 to the age of 63 as follows:

- For those employees that become 60 years old on or before the 30th of June 2008, the usual for retirement age is the age of 62.
- For those employees that will become 60 years old on or after the 1.7.2008, the usual for retirement age is the age of 63.

### Manpower indicators and Productivity

Variations in productivity are shown in Figure 8 (page 62) which indicates the relationship between the Authority's manpower, the total units billed and the number of consumers during the ten year period 2000-2009.

Absenteeism due to sickness and/or industrial accidents was 3,5% or 12,9 days per EAC employee compared to 3,7% or 13,1 days per employee at the end of the previous year.



### **Industrial Relations**

Negotiations for finalizing the collective Agreement between EAC and the Employee Unions for the Period 1.1.2007-31.12.2009 were concluded by January and an agreement was signed.

Further meetings between the Human Resources Management and the Unions resulted in the signing of another collective Agreement concerning the conditions of employment of contract employees. It is worth mentioning that the Labour Relations Department, of the Ministry of Labour and Social Insurance, confirmed that the signed agreement complies with the provisions of the relevant law.

Focusing on the settlement of various personnel problems, the Human Resources Management and the Unions met several times during the year and examined, to name a few, issues concerning the renewal of schemes of service, the settlement of industrial disputes, EAC's organizational structure, the Power Stations HR planning, employee transfers and employee training, the staffing and the conditions of employment for EAC's new Contact Center and various other HR issues.

# Human Resources Management

## HUMAN RECOURSES DEVELOPMENT

### Education and Training

During 2009, 2 330 members of the staff attended 181 in-house courses and seminars, organised by the Authority's Training School, which covered a wide range of topics. We had 343 more participations from employees in various open educational programmes and training courses, organized by local educational institutions and organisations, whilst 73 members of the professional staff attended training courses or participated in conferences and seminars abroad. In total 2 746 employees attended training courses at an overall cost €173,09 per participation. The in-house training courses were subsidised by the HRDA with the amount of €112.582,62.



Figure 8

#### MANPOWER INDICATORS

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



Within its corporate social responsibility initiative EAC offered six-month industrial training to 17 University and Higher Technical Educational Institutions students, 23 final-year students of the Higher Technical Institute (HTI) and summer vacation training to 15 University and HTI students. Moreover EAC participated in the programme of the International Association for the Exchange of Students for Technical Experience (IAESTE) offering technical experience to four international students.

### **Promotions**

During 2009 the procedure for promoting 59 employees was completed.

### **Recruitment/Retirements/Termination of Employment**

During the year, staff vacancies for several posts were announced and 123 new employees were recruited to fill various vacant posts and 26 current employees were recruited to new posts. Furthermore the employment status of 48 contract employees was settled as a result of a trade union agreement that was signed between the trade unions and EAC. It should be noted that during the year 12 employees retired, 22 employees took advantage of the early retirement scheme, two employees chose early retirement, five employees terminated their services, one employee passed away, three employees retired for health reasons and three employees were forced to terminate their services.

### **Scholarships**

During the year, EAC offered 93 scholarships to children of employees attending University courses abroad, 50 scholarships to children of employees attending courses in Cyprus and one scholarship to a child of employee attending a master degree.

## **SAFETY, HEALTH AND WELFARE**

### **Medical Care**

During the year the EAC contributed €6.443.625,44 (€5.878.253,31 in 2008) to EAC Employees Medical Fund, as well as €301.260,00 (€222.258,04 in 2008) to the Special Medical Fund set up to cover expenses incurred in the treatment of serious cases, in Cyprus and abroad. The beneficiaries of the Fund, as at 31 December 2009 were 9 153 (2 374 employee-members, 1 006 pensioners, 243 widows and 5 530 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 €420.000. 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 2009 were 2 283.

### **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 31 employees, who retired during 2009 and had completed more than 20 years of service.
- The EAC's Gold Plated Plaques were awarded to 10 employees, who had completed during 2009, 40 years of service and silver metals were awarded to 42 employees who had completed 30 years of service.

# Human Resources Management

## **Occupational Health and Safety**

### **Health and Safety Management**

The Electricity Authority of Cyprus in cooperation with “Management Force” consultants carried forward the development of a project named the “Health and Safety Management System”. The purpose is to draw up a complete management system and lay the foundations for the continuous development and improvement on occupational health and safety matters within the Organization.

### **Health and Safety in the working environment**

During the year, EAC’s safety officers performed on site safety audits and gave consultation on health and safety matters to the personnel.

The Human Resources Management continued improving standards on personal equipment. The Safety Committees, in compliance with the law, held regular meetings during the year and gave to EAC’s Management advice for solving various problems concerning health and safety issues.

### **Accidents**

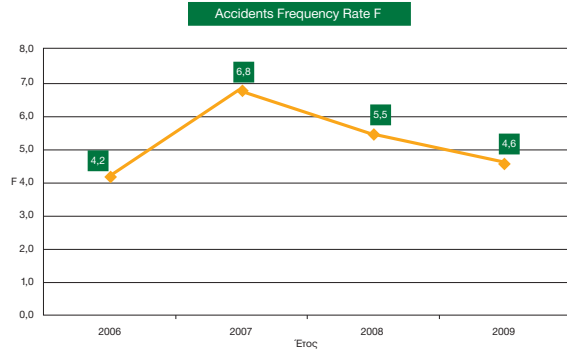
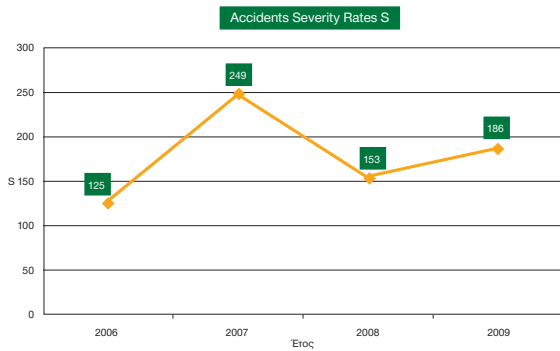
During the past year a total number of 23 occupational accidents occurred, three of which were road accidents. All the accidents have been investigated and evaluated by the Central Safety Committee.

The graphs below show the variation of the two indexes, Frequency Index (F) and Severity Index (S), for the period 2006 to 2009. The Frequency index shows the number of accidents in relation to the total worked hours in the Organization and the Severity Index shows the days lost in relation to the worked hours in the Organization.

The Frequency Index (F) for EAC in relation to the previous year has been reduced from 5,5 to 4,6. The Severity Index (S), however, has been raised from 153 to 186.

### **Safety Week and Fire drill exercises**

The EAC’s Safety Week was organized in the last week of January 2009. During the Safety Week various events took place, including lectures on safety and health matters, fire drills and evacuation exercises in cooperation with the Fire Department.



### Safety Awards

The safety award in memory of Archbishop Makarios III for the year of 2008 was given to the Ammochostos-Larnaka District Area. The safety award in memory of Georgios Kontopoulos was given to the Vasilikos power station.

### Education and Training

Linesmen completed their special training on the newly purchased equipment, suitable for working safely on heights and a relevant refreshment course commenced.

# Corporate Development Management Unit

## **STRATEGIC PLANNING MANAGEMENT**

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 adopted a systematic process for Strategy development, Policy formulation and Annual Business Planning, using 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.

During the year of 2009, the implementation of the Critical Strategic Initiatives, that were identified and coded with the use of the above process, continued.

## **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 2009 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.

During the year, EAC has completed the revision of the fees of optical fibers according to the agreement of 2003 with the two strategic partners. The EAC came to an agreement with one of the strategic partners and is in negotiations with the second.

In the context of its development into new activities EAC signed an agreement with the company MTN, to license land in the Vasilikos power station, for the installation of an antenna for mobile telephony.

### **Desalination**

In February 2009, the Board of Directors of the Electricity Authority of Cyprus decided to award, the contract for the Desalination Unit in Vasilikos, to the company which submitted the lowest assessed tender, as follows:

1. Supply up to 20 000m<sup>3</sup> desalinated water per day, for a period of 69 weeks from a temporary desalination unit.
2. The installation and operation of a permanent desalination unit of capacity 50 000m<sup>3</sup> per day.



In March 2009, EAC and the Water Development Department (WDD) signed an agreement, for the sale by EAC to WDD of desalinated water up to 20 000m<sup>3</sup> for 69 weeks from the temporary unit and the sale of desalinated water of 50 000m<sup>3</sup>/day from the permanent unit for 20 years.

It is noted that, with the commencement of operations of the Permanent Desalination Plant, the temporary unit will terminate its operation and the contractor will dismantle and remove it from the site.

Immediately after the signature of the agreement between EAC and WDD, EAC informed the successful tenderer that they accepted its offer, provided that there will not be a hierarchical recourse to the Tender Review Authority by the second tenderer.

But since a hierarchical recourse was filed at the Tender Review Authority (TRA), the signing of an agreement with the successful tenderer was postponed until the conclusion of the case. The decision of the TRA vindicated EAC and therefore, EAC called immediately the successful tenderer for signing an agreement.

Meanwhile the WDD requested to amend the Agreement EAC/WDD and to annul the part which concerns the temporary desalination unit, since the needs of drinking water are covered by the construction and operation of the Permanent Desalination Plant in Vasilikos.

# Corporate Development Management Unit

Therefore, it was agreed with the successful tenderer:

- Not to install the temporary Desalination Unit, as requested by the WDD.
- To increase the production of the Permanent Desalination Plant from 50 000m<sup>3</sup> to 60 000m<sup>3</sup> per day.

## **Renewable Energy Sources (RES)**

Various proposals for joint ventures are being studied for the generation of electricity from 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 already techno-economic and environmental studies are being carried out.

The terms of a possible cooperation for the installation of a Photovoltaic Park in the parking space of the new airport in Larnaka are being examined.

Consultations are taking place with a consortium of farmers from Aradippou for EAC's participation in a company which will own and operate a plant for the treatment of livestock waste and generate electrical energy from Biogas.

In addition the involvement of EAC as a partner in wind energy projects is being examined. An Expression of Interest will be issued for selecting potential partners.

Finally, a proposal for an installation of a power station using industrial waste as a fuel is being studied.

## **RESEARCH AND DEVELOPMENT UNIT**

During 2009, EAC has continued its active participation in 6 research projects, CACHET, EU-DEEP, DISTRES, GROW-DERS, WEC and IntelliSYS. WEC and IntelliSYS are funded by the Seventh Framework Program of Research and Development of the EU, while CACHET, EU-DEEP, DISTRES and GROW-DERS are funded by the Sixth Framework Program.

A brief description of the above six research projects is given below:

- CACHET Research Project: "Carbon Dioxide Capture and Hydrogen Production from Gaseous Fuels". The main objective of this project is the development of an economic CO<sub>2</sub> capture technology in an electricity generation plant based on steam reforming. The envisaged CO<sub>2</sub> capture plant will co-exist with a hydrogen generation plant which will produce a stream of pure hydrogen for storage or for fuel cell applications. EAC will provide cost-benefit analysis for the retrofit of the future combined cycle power plants of EAC for syngas firing and CO<sub>2</sub> capture. Also, EAC will examine the feasibility of building such CO<sub>2</sub> capture technology in Cyprus.

- EU-DEEP Research Project: “The birth of a European Distributed Energy Partnership that will help the large-scale implementation of distributed energy resources in Europe”. The main objective of this project is the determination of the technical and economic factors for the introduction of distributed generation into European electricity sector. A market research will be carried out and the barriers opposing the competitiveness of distributed generation will be identified. Finally the project aims to the development of a partnership of the various participating utilities for the future penetration of distributed generation technologies in the member states of European Union. EAC provides data concerning the development of mathematical models for the study of the behavior of different types of customers and the realization of a cost-benefit analysis for the various distributed generation technologies.

- DISTRES Research Project: “Promotion and consolidation of all RTD activities for renewable distributed generation technologies in the Mediterranean region”. The main objective of this project is to exchange and disseminate good practice developed in the field of renewable energy sources distributed generation (RES-DG) technologies by isolated research activities and to perform studies and/or analyses for the Mediterranean region needs. EAC is the Coordinator of this project.

- GROW-DERS Research Project: “Grid reliability and operability with distributed generation using transportable storage”. The main objective of this project is to use transportable and flexible electrical power storage systems on an experimental basis and assess their operation. The results of this innovative project will demonstrate the effectiveness of the feasibility of using such storage systems in the European electricity distribution grids of the future.

- WEC Research Project: “Pilot demonstration of eleven 7MW-Class WEC at Estinnes in Belgium”. The main objective of this project is to design, develop, construct and operate a large scale pilot wind park made up of 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.

- 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 organized two important events, a workshop and a conference, in order to disseminate the results of research and development activities, which are given below:

- “Solar thermal and photovoltaic electricity market in EU and Mediterranean countries”, Workshop organized in Beirut on 19 June of 2009.

# Corporate Development Management Unit

- “Conference on the promotion of Distributed Renewable Energy Sources in the Mediterranean region”, European Conference organized in Lefkosia between 11 and 12 December of 2009.

Finally, the Research and Development unit of EAC carried out several techno-economic analyses for the installation of parabolic trough solar thermal technology, steam turbines in concentrated solar power plant with desalinated water cogeneration and comparison of the cost of electricity from conventional power generation technologies and from renewable energy sources 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**

During 2009, the Department dealt mainly with the following:

### **Implementation of an Integrated Management System**

Following relevant decisions by EAC, the project for implementation of an Integrated Management System, incorporating the ISO9001, ISO14001 and OHSAS18001 standards throughout the organization has continued. The Environmental Management system has been documented and the system has been delivered to the Power Stations for implementation. The documentation process for the procedures and related documents regarding the Purchasing Department and the Human Resource Department has progressed. The documentation of the Environmental Management Program and the main processes required by the ISO14001 standard for each of the four Areas have been prepared as a first draft.

### **Internal Audits**

During the course of the year, preliminary internal audits were conducted in the Human Resource Department. The results of the audits were presented to the Process owners for the corrective and preventive actions to be decided.

### **External Audits**

During November a pre-audit of the EAC Quality System implemented by the Purchasing and Human Resource Departments, was conducted by the Cyprus Certification Company. The observations made by the auditors were presented to the top Management and relevant corrective and preventive actions were decided.

### **CERA Indicators**

The results of the system measuring the CERA related performance indicators are sent on an annual basis both to CERA and the EAC top management.





#### **Support for other projects**

Support has been given to various other projects including the new Call Centre and the new Billing and Customer Care system.

#### **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 process works and what actions need to be taken for every process. In addition, the new system makes performance indicator comparisons between Areas more accurate as it ensures that the indicators range (start-finish) is the same for all Areas.

#### **Intranet Portal**

The first phase of the construction of the intranet portal has been completed. All EAC personnel have access to the portal, through which all documents of the Integrated Management System can be accessed.

# Finance Management Unit

## FINANCIAL STATEMENTS

The financial statements of the EAC for the year 2009 together with the supporting statements are set out in pages 84 to 115. The principal financial statistics for the ten-year period 2000-2009 are summarised on page 76.

## 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 €627.253.000 showing a decrease of €108.962.000 or 14,8%. The total operating costs were €607.721.000 showing a decrease of €116.580.000 or 16,1%. After accounting for finance costs amounting to €10.757.000 there was a profit before tax of €45.279.000 compared to a profit of €28.264.000 in the previous year. After the deduction of current tax amounting to €1.349.000 and addition of deferred tax amounting to €59.654.000, the net profit was €103.584.000 (2008:€20.331.000).

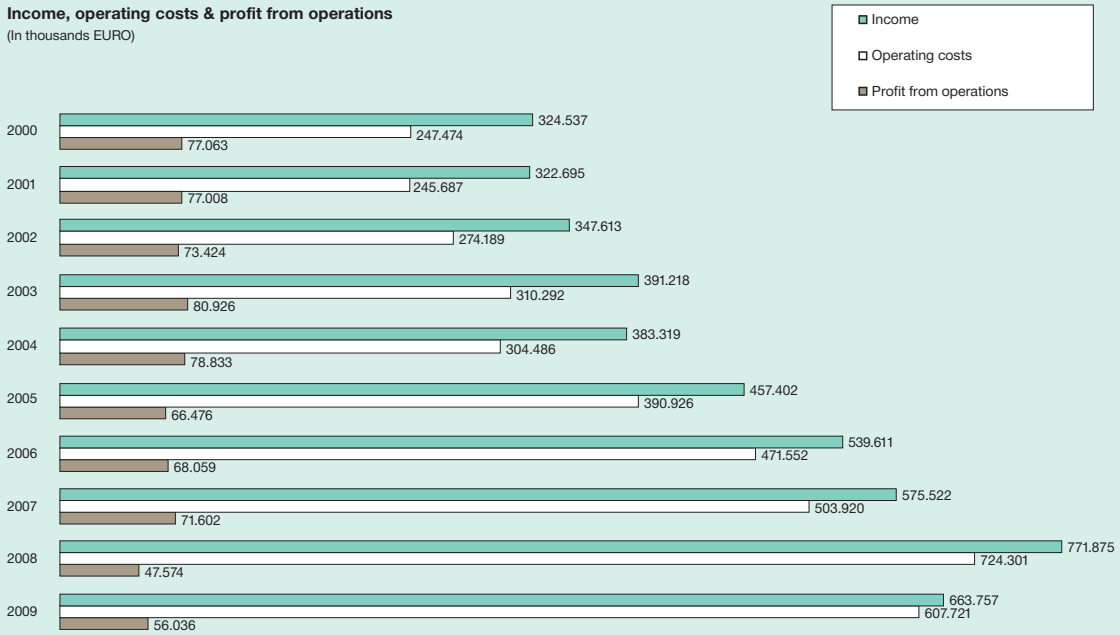
**Table 3**

**Consolidated income statement for the year ended 31 December 2009 and changes from previous year**

	€000	
	2009	Increase/ (Decrease)
<b>INCOME</b>		
Sales of electricity	627.253	(108.962)
Consumers' capital contributions	16.655	1.266
Other operating income	18.472	838
Finance income	1.377	(1.260)
	663.757	(108.118)
<b>OPERATING COSTS</b>	607.721	(116.580)
Operating profit	56.036	8.462
Finance costs	(10.757)	(8.553)
Profit before tax	45.279	17.015
Tax – current	(1.349)	430
Deferred tax	59.654	(66.668)
Profit for the year	103.584	83.253
Units sold (million kWh)	4 655,7	99,9

Figure 9

**Income, operating costs & profit from operations**  
(In thousands EURO)



**ANALYSIS OF OPERATING COSTS**

Table 4 (page 74) 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 decreased by 27,7% to €274,83 per metric tonne. The consumption increased by 1,1 % to 1.255 thousand metric tonnes. As a result of the above the fuel oil bill decreased by €126.546.000 to €344.915.000.

Greenhouse gas emission rights of €8.204.000 represents provision for the excess of the actual greenhouse gas emissions over the allowances granted, valued at the market price ruling at the balance sheet date less the difference of the provision for the year 2008 over the purchased cost amounting to €3.030.000.

COSMOS fees were €12.626.000 (increase of €567.000 or 4,7%).

The total salaries, related costs and deficiency contribution to pension schemes amounted to €132.073.000 out of which €4.111.000 was capitalised in fixed assets and work in progress. The amounts capitalised relate to expenditure for development projects executed by the Authority's employees during the year. An amount of €127.962.000 or 96,9% was charged to the income statement. The increase of €8.104.000 or 6,5% to the total salaries and related costs charge is due mainly to the increase in the number of employees and increase in the cost of living allowance.

The deficiency contribution to pension schemes was €10.621.000 (2008: €13.351.000). This contribution was the result of the latest actuarial valuation carried out as of 31 December 2008.

Materials services and other expenditure were €45.518.000 (decrease of €4.866.000 or 9,7%).

The depreciation charge was €71.526.000 (increase of €11.823.000 or 19,8%).

# Finance Management Unit

**Table 4**

**Analysis of Operating costs**

	2009		Increase (Decrease) over 2008		
	€000	%	Cent per kWh sold	€000	%
Fuel oil	344.915	56,8	7,408	(126.546)	(26,8)
Greenhouse gas emission rights	5.174	0,9	0,111	(7.250)	(58,4)
COSMOS fees	12.626	2,1	0,271	567	4,7
Salaries and related costs	117.341	19,3	2,520	12.422	11,8
Deficiency contribution to pension schemes	10.621	1,7	0,228	(2.730)	(20,5)
Materials, services and other expenditure	45.518	7,5	0,978	(4.866)	(9,7)
Depreciation	71.526	11,7	1,536	11.823	19,8
<b>TOTAL</b>	<b>607.721</b>	<b>100,0</b>	<b>13,052</b>	<b>(116.580)</b>	<b>(16,1)</b>

**CAPITAL REQUIREMENTS AND SOURCES OF FINANCE**

Capital expenditure during the year amounted to €269.212.000 compared with €161.996.000 in 2008 (increase of €107.216.000).

The amount paid for taxation during the year amounted to €2.366.000 (2008:€6.958.000).

Loan repayments amounted to €30.800.000 (2008: €30.484.000).

Out of the total financing requirements of €302.378.000 internal sources and consumers contributions provided €194.066.000 and the balance of €108.312.000 was covered by bank overdrafts. Table 5 below shows the financing requirements during the year and the sources of finance.

**Table 5**

**Financing Requirements and Sources of Finance**

	2009		2008	
	€000	%	€000	%
<b>FINANCING REQUIREMENTS</b>				
Tax	2.366	0,8	6.958	3,5
Capital expenditure	269.212	89,0	161.996	81,2
Loan repayments	30.800	10,2	30.484	15,3
	302.378	100,0	199.438	100,0
<b>SOURCES OF FINANCE</b>				
Profit before tax	45.279	15,0	28.264	14,2
Depreciation less consumers' contributions	54.871	18,2	44.314	22,2
Proceeds from disposal of fixed assets	1.638	0,5	110	0,1
Unrealised foreign exchange loss	198	0,1	209	0,1
Consumers' contributions	41.149	13,6	43.048	21,6
Working Capital changes	50.931	16,8	(16.507)	(8,3)
	194.066	64,2	99.438	49,9
Loans	108.312	35,8	100.000	50,1
	302.378	100,0	199.438	100,0

**FINANCIAL POSITION AT END OF YEAR**

The historical cost of the assets employed at 31 December 2009 was €2.313.435.000 and total provision for depreciation was €729.935.000. As a result the written down value of the assets employed was 68,4% of the original cost. The total net assets at 31 December 2009 were €1.567.350.000. Finance derived from loans (€300.750.000 or 19,2 %) other long term liabilities (€444.652.000 or 28,4 %) and the balance (€821.948.000 or 52,4%) from own sources.

H. THRASSOU  
CHAIRMAN

N. PAPADOPOULOS  
ACTING GENERAL MANAGER

Expenditure  
(Euro Thousand)  
As percentage  
of total revenue

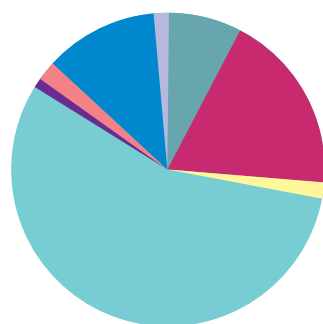


Figure 10

- Materials, services & other expenditure  
€45.518 (7,36%)
- Salaries & related expences  
€117.341 (18,97%)
- Deficiency contribution  
to pension schemes €10.621 (1,72%)
- Fuel oil €344.915 (55,77%)
- Greenhouse gas emission rights  
€5.174 (0,84%)
- COSMOS fees €12.626 (2,04%)
- Depreciation €71.526 (11,56%)
- Finance cost €10.757 (1,74%)

# Finance Management Unit

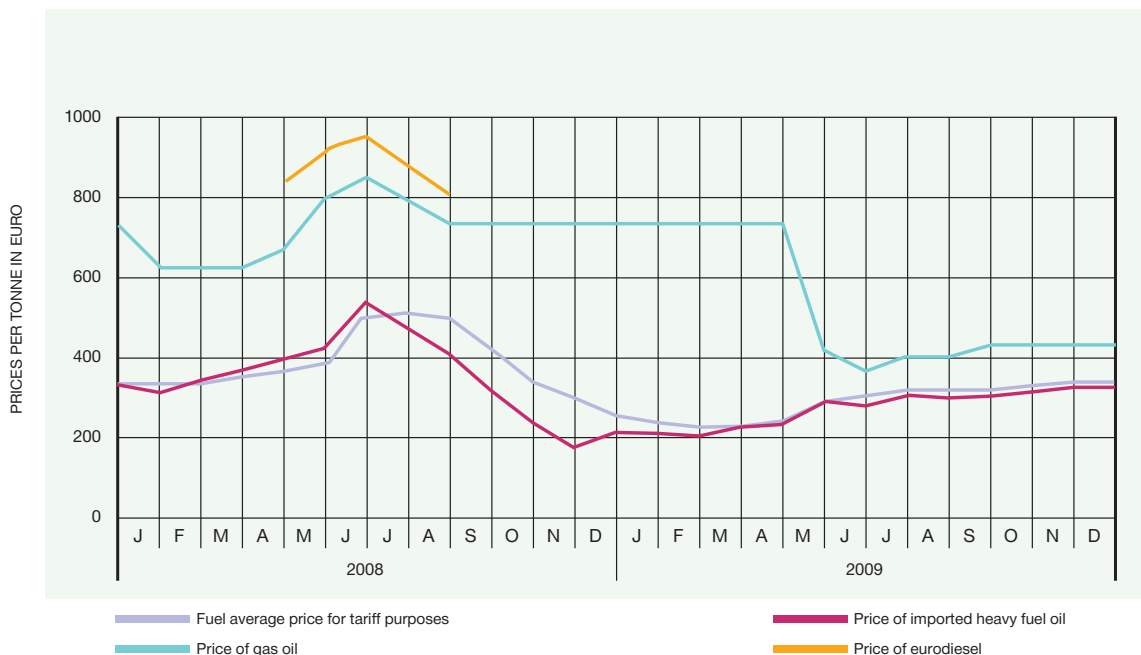
**Table 6**  
**Principal Financial Statistics 2000-2009**  
**During the Financial Year to 31 December**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Units sold (million kWh)	3 011	3 125	3 423	3 696	3 742	3 933	4 135	4 298	4 556	4 656
Consumption in the turkish occupied area (million kWh)	6	6	6	7	8	7	7	8	9	8
Total units (million kWh)	3 017	3 131	3 429	3 703	3 750	3 940	4 142	4 306	4 565	4 664
<b>Installed capacity (MW)</b>	988	988	988	988	988	988	988	1 118	1 168	1 388
<b>INCOME (€ THOUSAND)</b>										
Sales of electricity	312.163	307.318	330.814	373.464	361.041	432.177	513.105	546.737	736.215	627.253
Consumers capital contributions	7.846	8.712	9.553	10.286	11.138	12.064	13.085	14.241	15.389	16.655
Other operating income	1.343	1.280	1.090	866	2.421	6.185	8.622	11.929	17.634	18.472
Finance income	3.185	5.385	6.156	6.602	8.719	6.976	4.799	2.615	2.637	1.377
Total Income	324.537	322.695	347.613	391.218	383.319	457.402	539.611	575.522	771.875	663.757
<b>OPERATING COSTS (€ THOUSAND)</b>										
Operating costs	216.367	208.286	234.285	264.560	258.352	337.314	416.805	445.721	664.598	536.195
Depreciation	31.107	37.401	39.904	45.732	46.134	53.612	54.747	58.199	59.703	71.526
Total operating costs	247.474	245.687	274.189	310.292	304.486	390.926	471.552	503.920	724.301	607.721
Operating profit	77.063	77.008	73.424	80.926	78.833	66.476	68.059	71.602	47.574	56.036
Finance costs	(11.446)	(11.702)	(9.437)	(14.585)	(12.363)	(8.551)	(13.182)	(14.779)	(19.310)	(10.757)
Profit before tax and exceptional item	65.617	65.306	63.987	66.341	66.470	57.925	54.877	56.823	28.264	45.279
Exceptional item	-	-	(34.172)	(42.715)	(25.629)	(1.184)	-	-	-	-
Profit before tax	65.617	65.306	29.815	23.626	40.841	56.741	54.877	56.823	28.264	45.279
Tax	(13.561)	(18.070)	(8.475)	(7.953)	(16.235)	(16.671)	(16.251)	(16.802)	(7.933)	58.305
Profit for the year	52.056	47.236	21.340	15.673	24.606	40.070	38.626	40.021	20.331	103.584
<b>RATIOS TO TOTAL INCOME</b>										
Profit from operations (%)	23,7	23,9	21,1	20,7	20,6	14,5	12,6	12,4	6,2	8,4
Profit before tax (%)	20,2	20,2	8,6	6,0	10,7	12,4	10,2	9,9	3,7	6,8

**CONSOLIDATED BALANCE SHEET AT 31 DECEMBER**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>ASSETS (€ THOUSAND)</b>										
<b>Non Current assets</b>										
Property, plant and equipment	825.400	862.521	897.590	977.057	1.082.047	1.124.526	1.185.076	1.285.124	1.387.312	1.583.500
Trade and other receivables	7.311	7.227	5.925	5.081	4.685	3.812	2.860	1.898	1.800	1.845
	832.711	869.748	903.515	982.138	1.086.732	1.128.338	1.187.936	1.287.022	1.389.112	1.585.345
<b>Current assets</b>	214.286	231.239	358.830	377.181	288.349	302.096	293.755	280.641	325.719	259.762
<b>Total assets</b>	1.046.997	1.100.987	1.262.345	1.359.319	1.375.081	1.430.434	1.481.691	1.567.663	1.714.831	1.845.107
<b>RESERVES AND LIABILITIES (€ THOUSAND)</b>										
<b>Reserves</b>										
Revenue reserve	480.536	527.770	549.110	564.783	589.389	629.459	642.456	682.478	702.809	806.393
Government grant	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555
	496.091	543.325	564.665	580.383	604.944	645.014	658.011	698.033	718.364	821.948
<b>Non – current liabilities</b>										
Borrowings	165.191	164.356	228.235	295.950	290.874	276.462	243.396	265.372	334.773	300.750
Deferred tax liabilities	56.830	63.056	69.791	73.996	73.075	79.231	84.036	91.042	98.056	38.402
Deferred Income	215.022	233.890	248.507	266.254	285.679	307.533	332.807	356.580	382.973	406.250
	437.043	461.302	546.533	636.200	649.628	663.226	660.239	712.994	815.802	745.402
<b>Current Liabilities</b>	113.863	96.360	151.147	142.781	120.509	122.194	163.441	156.636	180.665	277.757
<b>Total Liabilities</b>	550.906	557.662	697.680	778.981	770.137	785.420	823.680	869.630	996.467	1.023.159
<b>Total reserves and liabilities</b>	1.046.997	1.100.987	1.262.345	1.359.319	1.375.081	1.430.434	1.481.691	1.567.663	1.714.831	1.845.107

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 2009

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## **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 subsidiary Elektriki Ltd (together the "Group") for the year ended 31 December 2009.

## **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, current situation and the results of the activities of the Authority**

3. 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 foreseeable future.

## **Principal risks and uncertainties**

4. The principal risks and uncertainties faced by the Authority are disclosed in notes 3 and 25 of the financial statements.

## **Future developments of the Authority**

5. 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 foreseeable future.

## **Results**

6. The results of the Group for the year are presented on page 84. The net profit for the year is transferred to reserves.

## **Board of Directors**

7. The members of the Board of Directors at 31 December 2009 and at the date of this report are presented on page 12. Mr. Yiannos Valanides who was a member as at 1 January 2009 resigned on 10 February 2010 and Mr. Andreas Oratis was appointed on 23 February 2010 in his place.
8. There were no significant changes in the assignment of responsibilities and remuneration of the Board of Directors.



**Events after the balance sheet date**

9. As discussed in Note 28 of the consolidated financial statements, there were no material events which occurred after the end of the financial year.

**Branches**

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

**Independent Auditors**

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

**By order of the Board of Directors**

**Harris Thrassou**  
Chairman

11 May 2010

# Independent Auditors' Report To the Members of Electricity Authority of Cyprus

## **Report on the consolidated Financial Statements**

We have audited the consolidated financial statements of Electricity Authority of Cyprus (the "Authority") and its 100% subsidiary Elektriki Limited (together "the Group"), which comprise the consolidated balance sheet as at 31 December 2009, 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 notes.

## **Board of Directors' Responsibility for the Financial Statements**

The Authority's 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 2003-2008 and the requirements of the Cyprus Companies Law, Cap. 113. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

## **Auditors' 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 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 audit opinion.

## **Opinion**

In our opinion, the consolidated financial statements give a true and fair view of the financial position of the Group as of 31 December 2009 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 2003-2008 and the requirements of the Cyprus Companies Law, Cap. 113.

## **Report on Other Legal Requirements**

Pursuant to the requirements of the Companies Law, Cap. 113, 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.
- 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 Companies Law, Cap. 113, in the manner so required.
- 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 Electricity Authority of Cyprus, 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 2003-2008 and the provisions of Section 156 of the Cyprus companies Law Cap. 113. 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.

PricewaterhouseCoopers Limited  
Chartered Accountants

Nicosia, 26 May 2010

## **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 7 to 37 of the Electricity Authority of Cyprus for the year ended 31 December 2009, 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, 31 May 2010

# Consolidated Financial Statements 31 December 2009

## Consolidated statement of comprehensive income for the year ended 31 December 2009

	Notes	2009 €000	2008 €000
Sales	6	627.253	736.215
Other operating income - net	7	36.364	35.655
Other gains - net	8	140	5
Operating costs	9	(607.721)	(724.301)
<b>Operating profit</b>		<b>56.036</b>	<b>47.574</b>
Finance costs	11	(10.757)	(19.310)
<b>Profit before tax</b>		<b>45.279</b>	<b>28.264</b>
Tax - current	12	(1.349)	(919)
Deferred tax	12	59.654	(7.014)
Tax		58.305	(7.933)
<b>Profit for the year</b>		<b>103.584</b>	<b>20.331</b>
<b>Other comprehensive income for the year</b>		<b>-</b>	<b>-</b>
<b>Total comprehensive income for the year</b>		<b>103.584</b>	<b>20.331</b>

The notes on pages 88 to 115 are an integral part of these financial statements.

Consolidated balance sheet  
as at 31 December 2009

	Notes	2009 €000	2008 €000
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	15	1.583.500	1.387.312
Trade and other receivables	16	1.845	1.800
		1.585.345	1.389.112
<b>Current assets</b>			
Inventories	17	113.783	125.755
Trade and other receivables	16	120.454	121.279
Current tax refundable		15.065	14.049
Short-term deposits	18	188	1.226
Cash and cash equivalents	19	10.272	63.410
		259.762	325.719
<b>Total assets</b>		1.845.107	1.714.831
<b>Reserves and liabilities</b>			
<b>Reserves</b>			
		821.948	718.364
<b>Non-current liabilities</b>			
Borrowings	20	300.750	334.773
Deferred tax liabilities	21	38.402	98.056
Deferred Income	22	406.250	382.973
		745.402	815.802
<b>Current liabilities</b>			
Trade and other payables	23	117.458	133.316
Borrowings	20	142.427	30.694
Deferred Income	22	17.872	16.655
		277.757	180.665
<b>Total liabilities</b>		1.023.159	996.467
<b>Total reserves and liabilities</b>		1.845.107	1.714.831

On 11 May 2010 the Board of Directors of the Electricity Authority of Cyprus authorised these financial statements for issue.

H. THRASSOU	N. PAPADOPOULOS	H. HADJIYEROU
Chairman	Acting General Manager	Executive Manager Finance

The notes on pages 88 to 115 are an integral part of these financial statements.

# Consolidated Financial Statements 31 December 2009

## Consolidated statement of changes in equity for the year ended 31 December 2009

	Capital Reserve (1) €000	Revenue Reserve €000	Total €000
<b>Balance at 1 January 2008</b>	15.555	682.478	<b>698.033</b>
<b>Comprehensive Income</b>			
Profit for the year	-	20.331	<b>20.331</b>
<b>Balance at 31 December 2008 / 1 January 2009</b>	15.555	702.809	<b>718.364</b>
<b>Comprehensive income</b>			
Profit for the year	-	103.584	<b>103.584</b>
<b>Balance at 31 December 2009</b>	15.555	806.393	<b>821.948</b>

(1) The Capital Reserve represents a government grant.

(2) 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 15% 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 for the account of the Government of Cyprus and is enforceable from 1 January 2009.

The notes on pages 88 to 115 are an integral part of these financial statements.



**Consolidated cash flow statement  
for the year ended 31 December 2009**

	Notes	2009 €000	2008 €000
<b>Cash flows from operating activities</b>			
Profit before tax		45.279	28.264
Adjustments for:			
Depreciation of property, plant and equipment	15	71.526	59.703
Amortisation of deferred income	22	(16.655)	(15.389)
Profit on sale of property, plant and equipment	8	(140)	(5)
Interest expense	11	9.825	16.711
Unrealised exchange loss		198	209
Interest income		(1.377)	(2.637)
		108.656	86.856
Changes in working capital:			
Inventories		11.972	(10.805)
Trade and other receivables		506	(12.514)
Trade and other payables		(15.347)	22.787
<b>Cash flows from investing activities</b>		105.787	86.324
Tax paid		(2.366)	(6.958)
<b>Net Cash from Operating activities</b>		103.421	79.366
<b>Cash flows from investing activities</b>			
Short-term deposits		1.038	2.664
Purchase of property, plant and equipment	15	(269.212)	(161.996)
Proceeds from sale of property, plant and equipment		1.638	110
Additions to consumers' capital contributions	22	41.149	43.048
Interest received		1.652	2.331
<b>Net cash used in investing activities</b>		(223.735)	(113.843)
<b>Cash flows from financing activities</b>			
Proceeds from long term borrowings		-	100.000
Repayments of long term borrowings		(30.800)	(30.484)
Interest paid		(10.336)	(17.059)
<b>Net cash (used in)/from financing activities</b>		(41.136)	52.457
<b>Net (decrease)/increase in cash and cash equivalents</b>		(161.450)	17.980
<b>Cash and cash equivalents and bank overdrafts at beginning of year</b>		63.410	45.430
<b>(Bank overdrafts)/cash and cash equivalents at end of year</b>	19	(98.040)	63.410

The notes on pages 88 to 115 are an integral part of these financial statements.

# Consolidated Financial Statements 31 December 2009

## **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.

### **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 financial statements unless otherwise stated.

#### **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 of Cyprus and the Laws regulating the Electricity Market of 2003-2008. At the date of approval of these financial statements all International Financial Reporting Standards issued by the International Accounting Standard Board (IASB) and effective as at 1 January 2009 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.

In addition, the following interpretations have been endorsed, however their effective dates are not the same, although an entity may choose to early adopt them:

- (i) IFRIC 12 “Service Concession Arrangements”;
- (ii) IFRIC 15 “Agreements for the construction of real estate”; and
- (iii) IFRIC 16 “Hedges of a Net Investment in a Foreign Operation”.

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 Financial Statements are disclosed in Note 4.

#### **Adoption of new and revised IFRS**

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 2009. This adoption did not have a material effect on the accounting policies of the Authority, with the exception of the following:

IAS 1 (revised) “Presentation of financial statements”, as a result of the adoption of which, the Authority presents in the statement of changes in equity all owner changes in equity, whereas all nonowner changes in equity are presented in the statement of comprehensive income. Comparative information has been represented so that it is also in conformity with the revised standard. The change in the accounting policy impacts only presentation aspects.

IAS 23 (revised) “Borrowing costs”, as a result of which the Authority capitalises borrowing costs directly attributable to the acquisition, construction or production of qualifying assets as part of the cost of that asset. The Authority previously recognised all borrowing costs as an expense immediately. This change in accounting policy has been made in accordance with the transitional provisions of IAS 23 (revised) and therefore comparative figures have not been restated. The change in the accounting policy did not impact the financial statements significantly.

At the date of approval of these financial statements the following accounting standards were issued by the International Accounting Standards Board but were not yet effective:

- (i) Adopted by the European Union

#### **New standards**

- IFRS 3 (Revised) “Business Combinations” (effective for annual periods beginning on or after 1 July 2009).
- IAS 27 (Revised) “Consolidated and Separate Financial Statements” (effective for annual periods beginning on or after 1 July 2009).
- IFRS 1 (Revised) “First Time Adoption of International Financial Reporting Standards” (effective for annual periods beginning on or after 1 July 2009).

# Consolidated Financial Statements 31 December 2009

## Amendments

- Annual improvements to IFRS (2008) re IFRS 5 “Noncurrent Assets Held for Sale and Discontinued Operations” (effective for annual periods beginning on or after 1 July 2009).
- Amendment to IAS 39 “Financial Instruments: Recognition and Measurement” on “Eligible Hedged Items” (effective for annual periods beginning on or after 1 July 2009).
- Amendment to IFRIC 9 and IAS 39 regarding embedded derivatives (effective for annual periods beginning on or after 30 June 2009). Amendments to IAS 32 “Financial Instruments: Presentation: Classifications of Rights Issues” (effective for annual periods beginning on or after 1 February 2010).
- Annual Improvements on IFRS's 2009 (effective for annual periods beginning on or after 1 July 2009 to 1 January 2010).
- Amendments to IFRS 2 “Group Cash-settled Sharebased Payment Transactions” (effective for annual periods beginning on or after 1 January 2010).

## New IFRICs

- International Financial Reporting Interpretation Committee (IFRIC) 12 “Service Concession Arrangements” (effective for annual periods beginning on or after 1 January 2008, EU: 30 March 2009).
- IFRIC 15 “Agreements for the Construction of Real Estate” (effective for annual periods beginning on or after 1 January 2009, EU: 31 December 2009).
- IFRIC 16 “Hedges of a Net Investment in a Foreign Operation” (effective for annual periods beginning on or after 1 October 2008, EU: 30 June 2009).
- IFRIC 17 “Distributions of Non cash Assets to Owners” (effective for annual periods beginning on or after 1 July 2009).
- IFRIC 18 “Transfers of Assets from Customers” (effective for annual periods beginning on or after 1 July 2009).

(ii) Not adopted by the European Union

## New standards

- IAS 24 (Revised) “Related Party Disclosures” (effective for annual periods beginning on or after 1 January 2011). This will result in less disclosure for related party transactions and only information that will enable users of the financial statements to understand the effect of related party transactions will be included, as it is a government related entity.
- IFRS 9 “Financial Instruments” (effective for annual periods beginning on or after 1 January 2013).

## Amendments

- Amendment to IFRIC 14 Prepayments of a Minimum Funding Requirement (effective for annual periods beginning on or after 1 January 2011).
- Amendments to IFRS 1 “Additional Exemptions for First-time Adopters” (effective for annual periods beginning on or after 1 January 2010).
- Amendment to IFRS 1 “Limited Exemption from Comparative IFRS 7 Disclosures for First Time Adopters” (effective for annual periods beginning on or after 1 July 2010).

## New IFRICs

- IFRIC 19 “Extinguishing Financial Liabilities with Equity Instruments” (effective for annual periods beginning on or after 1 July 2010).

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.

## 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, equity instruments issued and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date, irrespective of the extent of any minority interest. 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

Revenues earned by the Authority are recognized on the following bases:

### (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 recognised on a time proportion basis, taking into account the principal outstanding and the effective rate over the period to maturity when it is determined that such income will accrue to the Authority.

# Consolidated Financial Statements 31 December 2009

## **(c) Consumers' capital contributions**

Consumers' contributions towards capital expenditure are treated as deferred income and are gradually released to the income statement over the average estimated economic lives of the related assets (33 1/3 years). This period is regarded as a reasonable approximation of the estimated period of the customer relationship. Subsidies granted by the Authority against such capital contributions are deducted from the amounts receivable and charged to the consolidated income statement in the year in which they are granted.

## **(d) COSMOS**

Cosmos income represents income from COSMOS (Cyprus Organisation for Storage and Management of Oil Stocks) for the preservation of fuel stocks and is recognised in the accounting period in which the services are rendered, by reference to completion of the specific transaction assessed on the basis of the actual service provided as a proportion of the total services to be provided, as well as the amount charged to consumers for the recovery of the difference with the COSMOS expense. The income is recognised within other operating income. The same amount is included in the operating expenses of generation which represents the Authority's subscription to COSMOS.

## **Foreign currency translation**

### **(a) Functional and presentation currency**

Items included in the Authority's financial statements are measured using the currency of the primary economic environment in which the entity operates ("the functional currency"). The 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. 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 the consolidated income statement.

## **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 liability and the retirement benefit costs relating to the defined benefit plan are assessed using the projected unit credit method. The accumulated 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 income statement over

the remaining working lives of the employees participating in the relevant plans, in accordance with an actuary valuation performed at least every three years.

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. Because 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 income statement in the year to which they relate.

#### **Current and Deferred tax**

The tax expense for the period comprises current and deferred tax. Tax is recognised in the consolidated income statement.

Current tax liabilities and assets for the current and prior periods are measured at the amount expected to be paid to or recovered from the taxation authorities using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Deferred 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 tax asset is realised or the deferred tax liability is settled.

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

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. For projects carried out by outside 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 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.

# Consolidated Financial Statements 31 December 2009

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. During the year 2009 the useful life of motor vehicles were adjusted from 5 to 7 years.

Expenditure for repairs and maintenance of property, plant and equipment is charged to the income statement 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.

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 the income statement.

#### **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 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 CO<sub>2</sub> emission allowances are initially recognised at nominal value (nil value) when the Authority is able to exercise control. Purchased CO<sub>2</sub> 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 income statement.

The intangible asset is surrendered 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.

## **Financial assets**

### **(i) Classification**

The Authority classifies its financial assets. 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**

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

## **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 the income statement 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 but 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.

# Consolidated Financial Statements 31 December 2009

## **Trade receivables**

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 asset's carrying amount and the present value of estimated future cash flows, discounted at the original 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 the consolidated income statement 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 the consolidated income statement.

## **Provisions**

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is more likely that an outflow of resources will be required to settle the obligation, and the amount has been reliably estimated.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pretax 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 hand, short term deposits held at call with banks with average maturity upto 36 days and bank overdrafts. Short term deposits with maturity of 12 months is included in short-term bank deposits. In the balance sheet bank overdrafts are shown within borrowings in current liabilities.

## **Borrowings**

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 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 the income statement over the period of the borrowings using the effective interest method.

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 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 2003-2008.

## **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 Managers. The treasury department identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units.

# Consolidated Financial Statements 31 December 2009

- **Market Risk**

**(a) Currency risk**

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognised assets and 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 debited to the consolidated income statement amounts to €932.000 (2008: €2.599.000) which relates to financing activities (Note 11).

**(b) 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 is exposed to interest rate risk in relation to its long-term borrowings. Borrowings entered into at variable rates expose the Authority to fair value interest rate risk.

At 31 December 2009, if interest rates on Eurodenominated borrowings had been 0,1% (2008: 0,1%) higher/lower with all other variables held constant, post-tax profit for the year would have been €399.439 (2008: €310.063) 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 when a failure by counterparties to discharge their obligations could reduce the amount of future cash inflows from financial assets on hand at the balance sheet date. The Authority has no significant concentrations of credit risk. The Authority monitors on a continuous basis the ageing profile of its receivables. Short term deposits and cash at bank are held with high credit quality financial institutions and the Authority has policies to limit the amount of credit exposure to any financial institution. The credit rating of the Authority's financial assets is presented at Note 14.

**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.

	Less than one year €000	Between one and two years €000	Between two to five years €000	Over five years €000
<b>At 31 December 2008</b>				
Borrowings	30.694	34.090	120.888	179.795
Trade and other payables	133.316	-	-	-
	<b>164.010</b>	<b>34.090</b>	<b>120.888</b>	<b>179.795</b>
<b>At 31 December 2009</b>				
Borrowings	142.427	44.518	110.784	145.448
Trade and other payables	117.458	-	-	-
	<b>259.885</b>	<b>44.518</b>	<b>110.784</b>	<b>145.448</b>

**(ii) Capital risk management**

	<b>2009</b> <b>€000</b>	2008 €000
Total borrowings (Note 20)	<b>443.177</b>	365.467
Less: Short term deposits (Note 18)	<b>(188)</b>	(1.226)
Cash and cash equivalents (Note 19)	<b>(10.272)</b>	(63.410)
Net debt	<b>432.717</b>	300.831
Total equity	<b>1.246.070</b>	1.117.992
<b>Total Capital as defined by Management</b>	<b>1.678.787</b>	1.418.823
<b>Gearing ratio</b>	<b>26%</b>	21%

The increase in the gearing ratio during 2009 resulted primarily from borrowings taken during the year for financing the working capital needs of the Authority and capital expenditure.

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 noncurrent 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 2009, the Authority's strategy, which was unchanged from 2008, was to maintain the gearing ratio within 15% to 30%.

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### **(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 assumptions**

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**

Deferred income is recognised through the Authority's consolidated income statement over a period of 33 1/3 years, which represents the estimated useful economic life of the Authority's distribution network which is regarded as a reasonable approximation of the estimated duration of the customer relationship between the Authority and its customers.

#### **(ii) Tax**

Significant judgement is required in determining the provision for income taxes. For certain transactions and calculations the ultimate tax determination is uncertain. The Authority recognises liabilities for anticipated tax 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 income tax and deferred tax provisions in the period in which such determination is made. The Authority discloses the contingent liability in note 25.

## 5. Segmental reporting

The Authority prepared separate accounts for expenditure and assets and liabilities for the activities of generation, transmission, distribution, supply and others.

The total revenue expenditure of the Authority per activity is shown below:

	2009 €000	2008 €000
Generation	449.193	573.276
Transmission	35.533	33.402
Distribution	109.657	105.605
Supply	12.939	11.815
Other Activities	399	203
	<b>607.721</b>	<b>724.301</b>

No separate income statement for each activity have been prepared due to the fact that up to date there are no approved tariffs for the separate activities by the Cyprus Energy Regulatory Authority.

The total assets/liabilities of each activity of the Authority for the year 2009 and 2008 are analysed below:

	Generation 2009 €000	Transmission 2009 €000	Distribution 2009 €000	Supply 2009 €000	Other Activities 2009 €000	Unallocated amounts 2009 €000	Total 2009 €000
Non current assets	639.154	271.000	670.496	4.005	690	-	1.585.345
Current assets	74.759	9.848	36.806	101.548	1.122	35.679	259.762
Total assets	713.913	280.848	707.302	105.553	1.812	35.679	1.845.107
Current liabilities	42.929	13.767	44.443	25.546	411	150.661	277.757
Non Current liabilities	-	20.358	385.892	-	-	339.152	745.402
Reserves	-	-	-	-	-	821.948	821.948
Allocated Capital	670.984	246.723	276.967	80.007	1.401	(1.276.082)	-
	<b>713.913</b>	<b>280.848</b>	<b>707.302</b>	<b>105.553</b>	<b>1.812</b>	<b>35.679</b>	<b>1.845.107</b>

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	Generation	Transmission	Distribution	Supply	Other Activities	Unallocated amounts	Total
	2008 €000	2008 €000	2008 €000	2008 €000	2008 €000	2008 €000	2008 €000
Non current assets	504.902	248.693	630.478	4.535	504	-	1.389.112
Current assets	87.570	5.617	43.287	103.630	780	84.835	325.719
Total assets	592.472	254.310	673.765	108.165	1.284	84.835	1.714.831
Current liabilities	42.210	8.158	42.849	49.510	1	37.937	180.665
Non current liabilities	-	19.206	363.767	-	-	432.829	815.802
Reserves	-	-	-	-	-	718.364	718.364
Allocated Capital	550.262	226.946	267.149	58.655	1.283	(1.104.295)	-
	<b>592.472</b>	<b>254.310</b>	<b>673.765</b>	<b>108.165</b>	<b>1.284</b>	<b>84.835</b>	<b>1.714.831</b>

Segmental reporting is prepared in accordance with the requirements of the laws regulating the Electricity Market of 2003 - 2008.

No analysis per geographical segment has been prepared due to the fact that all group activities are carried out in Cyprus.

## 6. Sales of electricity

Sales of electricity do 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 €1.032.000 (2008: €1.354.000).



## 7. Other operating income - net

	2009 €000	2008 €000
Income from damages to property of the Authority	269	194
Net income from maintenance of public lighting and sale of materials	383	379
Income from fees for telecommunication usage of optical fibres	1.688	1.347
Consumers' capital contributions	16.655	15.389
Storage and other fees relating to the Cyprus Organisation for Storage and Management of Oil Stocks (COSMOS)	12.626	12.059
Sundry income	3.366	3.650
Interest income:		
Bank balances	1.245	2.524
Other	132	113
	<b>36.364</b>	<b>35.655</b>

## 8. Other gains - net

	2009 €000	2008 €000
Property, plant and equipment:		
Profit on sale	140	5

## 9. Analysis of operating costs by nature

	2009 €000	2008 €000
Fuel Oil	344.915	471.461
Greenhouse Gas Emission Rights	5.174	12.424
Cyprus Organisation for Storage and Management of Oil stocks (COSMOS) fees	12.626	12.059
Salaries and related costs (Note 10)	127.962	118.270
Depreciation (Note 15)	71.526	59.703
Repairs and maintenance	15.651	11.360
Other expenses	29.867	39.024
	<b>607.721</b>	<b>724.301</b>

## 10. Staff costs

	2009 €000	2008 €000
Wages and salaries	85.288	79.637
Social insurance and other costs	8.550	7.822
Social Cohesion Fund	1.689	1.568
Pension costs - defined benefit retirement plan	32.740	31.411
Other defined contribution plans	3.806	3.531
	<b>132.073</b>	<b>123.969</b>

The staff costs were allocated as follows:

Income statement (Note 9)	127.962	118.270
Capitalized in fixed assets and work in progress	4.111	5.699
	<b>132.073</b>	<b>123.969</b>

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## Defined Benefit Plan

The latest actuarial valuation was carried out as at 31 December 2009. The assets used for the purposes of the actuarial valuation were as extracted from the draft accounts of the Pension Fund for the year 2009 and therefore the actuarial valuation is presented as draft.

Because the IAS permits the use of earlier recognition of the cumulative actuarial losses and of an amount larger than the excess amount it has been decided 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 2009 are in accordance with the draft actuarial valuation as at 31 December 2009 for the defined benefit plan.

	2009 €000	2008 €000
Defined benefit obligation	609.784	564.325
Fair value of plan assets	(548.865)	(518.371)
Net obligation	60.919	45.954
Unrecognised actuarial losses	(56.078)	(43.861)
Net liability in balance sheet	4.841	2.093

The amounts recognized in the consolidated income statement of the Group for the year ended at 31 December 2009 are in accordance with the draft actuarial valuation as at 31 December 2009 for the defined benefit plan.

	2009 €000	2008 €000
Current service cost	17.786	17.638
Interest on obligation	32.288	29.017
Expected return on plan assets	(26.084)	(25.339)
Net actuarial losses recognised in year	8.772	10.137
Total, included in 'staff costs'	32.762	31.453

## Movements in balance sheet provision

Net liability at start of year	2.093	2.185
Expense recognised in the consolidated income statement	32.762	31.453
Employer contributions	(30.014)	(31.545)
<b>Net liability at end of year</b>	<b>4.841</b>	<b>2.093</b>

	2009 €000	2008 €000
<b>Change in benefit obligation during the year</b>		
Benefit Obligation at start of year	564.325	553.720
Current service cost	17.786	17.638
Members contributions	514	454
Interest cost	32.288	29.017
Benefits paid	(23.894)	(20.124)
Actuarial loss/(gain) of obligation	(18.765)	(16.380)
<b>Benefit obligation at end of year</b>	<b>609.784</b>	<b>564.325</b>

	2009 €000	2008 €000
<b>Change in plan assets during the year</b>		
Fair value of plan assets at start of year	518.371	500.849
Expected return on plan assets	26.084	25.339
Employer contributions	30.014	31.545
Employee contributions	514	454
Benefits paid	(23.894)	(20.124)
Actuarial loss on plan assets	(2.224)	19.962
<b>Fair value of plan assets at end of year</b>	<b>548.865</b>	<b>518.371</b>

The principal actuarial assumptions used for the actuarial valuation were:

	2009 %	2008 %
Discount rate	5,00	5,75
Average expected return on plan assets	5,00	5,00
Average rate of salary increases	3,0% plus scale	3,5% plus scale
Pension increases	3,00	3,50
Price Inflation	2,00	2,00
Mortality	85% of PA (90)	85% of PA (90)

#### 11. Finance costs

	2009 €000	2008 €000
Interest expense:		
Bank borrowings	(9.496)	(16.798)
Overdue taxation	-	(7)
Other	(329)	94
	(9.825)	(16.711)
Net foreign exchange transaction losses	(932)	(2.599)
	(10.757)	(19.310)

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## 12. Tax

	2009 €000	2008 €000
Current tax:		
Corporation tax	1.241	678
Defence contribution	108	241
Total current tax	1.349	919
Deferred tax (Note 21) Origination and reversal of temporary differences	(59.654)	7.014

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the applicable tax rates as follows:

	2009 €000	2008 €000
Profit before tax	45.279	28.264
Tax at the applicable corporation and defence tax rates	4.529	8.065
Tax effect of expenses not deductible for tax purposes	199	412
Tax effect of allowances and income not assessable to tax	(1)	(275)
Tax for prior years	-	(269)
Deferred tax from change of tax rate	(63.032)	-
Tax charge	(58.305)	7.933

The Authority is subject to corporation tax on taxable profits at the rate of 10% (25% for 2008). The Subsidiary Elektriki Limited is subject to corporation tax on taxable profits at the rate of 10% (2008: 10%). The Authority is also subject to special contribution for defence at the rate of 3% on taxable profits of year 2008. Under certain conditions interest may be subject to defence contribution at the rate of 10%. In such cases 100% (50% for 2008) of the same interest will be exempt from corporation tax thus having an effective tax rate burden of approximately 10% (22,5% for 2008).

## 13. Financial instruments by category

### Assets as per balance sheet

	Loans and receivables	
	2009 €000	2008 €000
Noncurrent receivables	1.845	1.800
Trade and other receivables <sup>(1)</sup>	109.844	107.569
Short term deposits	188	1.226
Cash and cash equivalents	10.272	63.410
<b>Total</b>	<b>122.149</b>	<b>174.005</b>

Liabilities as per balance sheet	Other financial liabilities	
	2009	2008
	€000	€000
Borrowings	443.177	365.467
Trade and other payables (excluding statutory liabilities)	111.629	103.118
<b>Total</b>	<b>554.806</b>	<b>468.585</b>

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

#### 14. 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 receivable - net	2009	2008
	€000	€000
Group 1 <sup>(2)</sup>	98.499	96.608

Short term bank deposits	2009	2008
	€000	€000
A1	70	271
A2	44	-
Aa 3	-	248
Non Assessed	74	707
	<b>188</b>	<b>1.226</b>

#### Cash and cash equivalents <sup>(1)</sup>

A1	1.092	3.908
A2	5.595	7.429
A3	-	18.896
Aa2	-	336
Aa3	132	16.441
Baa2	2.116	11.518
	<b>8.935</b>	<b>58.528</b>

(1) The rest of the balance sheet item 'cash and cash equivalents' is cash in hand and cash and cash equivalents without assessment. The cash and cash equivalents without assessment amount to €1.310.000 (2008: €4.838.000).

(2) Group 1: Active accounts. Trade receivables which were not active accounts amount to €3.842.000 for 2009 (2008: €3.370.000). None of the financial assets that are neither past due nor impaired have been negotiated.

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## 15. Property Plant and Equipment

	Freehold land	Buildings	Plant & machinery	Lines, cables & meters	Motors vehicles	Furniture, fittings and office equipment	Tools and instruments	Hardware and software	Work in progress	Total
	€000	€000	€000	€000	€000	€000	€000	€000	€000	€000
<b>At 1 January 2008</b>										
Cost	20.607	212.897	787.086	659.139	16.558	5.678	6.256	17.857	160.191	1.886.269
Accumulated depreciation	-	(55.754)	(310.820)	(198.971)	(13.349)	(3.530)	(4.164)	(14.557)	-	(601.145)
Net book amount	20.607	157.143	476.266	460.168	3.209	2.148	2.092	3.300	160.191	1.285.124
<b>Year ended 31 December 2008</b>										
Opening net book amount	20.607	157.143	476.266	460.168	3.209	2.148	2.092	3.300	160.191	1.285.124
Additions	1.166	3.164	541	1.317	2.040	299	177	2.491	150.801	161.996
Disposals	(27)	(1)	-	-	(67)	(10)	-	-	-	(105)
Depreciation charge	-	(7.413)	(28.123)	(18.591)	(1.574)	(418)	(469)	(3.115)	-	(59.703)
Transfers	1	3.468	24.723	52.813	-	-	-	3.004	(84.009)	-
Closing net book amount	21.747	156.361	473.407	495.707	3.608	2.019	1.800	5.680	226.983	1.387.312
<b>At 31 December 2008</b>										
Cost	21.747	219.528	812.350	713.269	16.955	5.953	6.433	23.142	226.983	2.046.360
Accumulated depreciation	-	(63.167)	(338.943)	(217.562)	(13.347)	(3.934)	(4.633)	(17.462)	-	(659.048)
Net book amount	21.747	156.361	473.407	495.707	3.608	2.019	1.800	5.680	226.983	1.387.312
<b>Year ended 31 December 2009</b>										
Opening net book amount	21.747	156.361	473.407	495.707	3.608	2.019	1.800	5.680	226.983	1.387.312
Additions	2.928	6.047	20.526	793	2.542	400	653	2.397	232.926	269.212
Disposals	-	(709)	(22)	(767)	-	-	-	-	-	(1.498)
Depreciation charge	-	(8.070)	(37.999)	(19.692)	(1.074)	(424)	(488)	(3.779)	-	(71.526)
Transfers	39	15.571	212.087	44.566	-	-	-	489	(272.752)	-
Closing net book amount	24.714	169.200	667.999	520.607	5.076	1.995	1.965	4.787	187.157	1.583.500
<b>At 31 December 2009</b>										
Cost	24.714	240.329	1,044.880	757.839	19.169	6.352	7.086	25.909	187.157	2.313.435
Accumulated depreciation	-	(71.129)	(376.881)	(237.232)	(14.093)	(4.357)	(5.121)	(21.122)	-	(729.935)
Net book amount	24.714	169.200	667.999	520.607	5.076	1.995	1.965	4.787	187.157	1.583.500

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

	2009 €000	2008 €000
Net book amount	1.498	105
Profit on sale of property, plant and equipment	140	5
Proceeds from sale of property, plant and equipment	1.638	110

#### 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 (2008: NIL) bringing the accumulated provision at 31 December 2009 to €12.440.000 (2008: €12.440.000) and leaving a written down value of €538.000 (2008: €538.000) which represents the cost of land. The consequences of the Turkish occupation on the value of this land and equipment is unknown.

#### 16. Trade and other receivables

	2009 €000	2008 €000
Trade receivables	104.549	102.195
Less: Provision for impairment of receivables	(2.208)	(2.217)
Trade receivables - net	102.341	99.978
Capital contributions receivable by installments	1.437	1.124
Advance payments to contractors	8.662	12.933
Other receivables net of provision for impairment	7.911	8.267
Prepayments	1.948	777
	122.299	123.079
Less: non-current portion of receivables and prepayments	(1.845)	(1.800)
	120.454	121.279
The maturity of non-current receivables and prepayments is as follows:		
Between 1 and 2 years	559	530
Between 2 and 5 years	1.069	1.053
Over 5 years	217	217
	1.845	1.800

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

At 31 December 2009, trade receivable amounting to €98.499.000 (2008: €96.608.000) were fully performing.

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.

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Movements on the Authority's provision for impairment of trade receivables are as follows:	2009 €000	2008 €000
At 1 January	2.217	1.517
Provision for receivables impairment	168	700
Receivables written off during the year as uncollectible	(177)	-
At 31 December	2.208	2.217

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

The other classes within trade and other receivables contain impaired assets amounting to €40.978.

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 value of the Group's trade and other receivables per currency is:	2009 €000	2008 €000
Currency		
Euro	122.000	123.036
United States dollars	36	-
Pound Sterling	79	43
Swiss Franc	184	-
	122.299	123.079

<b>17. Inventories</b>	2009 €000	2008 €000
Fuel	44.025	54.143
Spares and consumables	69.758	71.612
	113.783	125.755

The cost of inventories recognized as expense and included in "operating costs" amounted to €351.532.000 (2008: €478.478.000).

<b>18. Short-term bank deposits</b>	2009 €000	2008 €000
Short-term bank deposits	188	1.226

The effective interest rate on short term bank deposits was 2,20% - 4,90% (2008: 3,35% - 5,00%) and these deposits had a maturity of 12 months (2008: 12 months).



## 19. Cash and cash equivalents

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

	2009 €000	2008 €000
Cash at bank and in hand	8.399	32.485
Short-term deposits	1.873	30.925
	<b>10.272</b>	63.410

The effective interest rate on short term bank deposits was 2,00% - 4,90% (2008: 3,00% - 7,05%) and these deposits had an average maturity of 36 days (2008: 83 days).

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

	2009 €000	2008 €000
Cash and cash equivalents	10.272	63.410
Bank overdrafts (Note 20)	(108.312)	-
	<b>(98.040)</b>	63.410

## 20. Borrowings

	2009 €000	2008 €000
<b>- Current</b>		
Bank overdrafts (Note 19)	108.312	-
Bank loans	29.660	26.239
Suppliers' credits	4.455	4.455
	<b>142.427</b>	30.694
<b>- Non-current</b>		
Bank loans	298.492	328.060
Suppliers' credits	2.258	6.713
	<b>300.750</b>	334.773
<b>Total borrowings</b>	<b>443.177</b>	365.467

The maturity of non-current borrowings is as follows:

	2009 €000	2008 €000
Between 1 and 2 years	44.518	34.090
Between 2 and 5 years	110.784	120.888
Over 5 years	145.448	179.795
	<b>300.750</b>	334.773

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 Government of Cyprus.

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

	2009 %	2008 %
Bank overdrafts, loans & suppliers' credits	2,0	3,7

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

	2009 €000	2008 €000
Floating rate 6 months or less	399.439	310.063
Fixed rate on maturity	43.738	55.404
	<b>443.177</b>	365.467

The Company has the following undrawn borrowing facilities:

	2009 €000	2008 €000
<b>Floating rate:</b>		
Expiring within one year	5.688	19.000
Expiring beyond one year	11.000	6.063
	<b>16.688</b>	25.063

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

The carrying value of borrowings per currency is as follows:

	2009 €000	2008 €000
Euro - functional and presentation currency	437.702	358.694
Swiss Frank	4.158	5.227
Pounds Sterling	1.317	1.546
	<b>443.177</b>	365.467

## 21. Deferred tax liabilities

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:

	2009 €000	2008 €000
At 1 January	98.056	91.042
Charged to Income Statement (Note 12)		
- Current year	3.378	7.014
- Previous years	(63.032)	-
At 31 December	<b>38.402</b>	98.056

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
Deferred tax liability to be settled after more than twelve months				
At 1 January 2008	157.215	(61.708)	(4.465)	91.042
Charge/(Credited) to the Income Statement	12.285	(4.811)	(460)	7.014
At 31 December 2008	169.500	(66.519)	(4.925)	98.056
(Credited)/Charge to the Income Statement	(104.013)	41.022	3.337	(59.654)
At 31 December 2009	65.487	(25.497)	(1.588)	38.402

## 22. Deferred income

	2009 €000	2008 €000
<b>Consumers' capital contributions:</b>		
Balance at 1 January	399.628	371.969
Additions	41.149	43.048
Transferred to Consolidated Income Statement	(16.655)	(15.389)
Balance at 31 December	424.122	399.628
Less: non current portion of deferred income	(406.250)	(382.973)
	17.872	16.655

## 22. Trade and other payables

	2009 €000	2008 €000
Fuel oil suppliers	10.464	14.184
Other Suppliers	39.947	28.859
Value Added Tax payable	4.718	29.220
Pay As You Earn payable	1.111	978
Retention on capital contracts	5.689	9.239
Consumers' deposits	10.000	9.255
Payments received in advance	114	125
Interest payable	525	1.182
Deficiency contribution to pension fund	6.582	-
Other contribution to pension fund	4.841	2.185
Accrued charges	14.487	13.221
Greenhouse gas emission rights	4.893	12.424
Creditors for purchase of land and substations	11.368	9.820
Other creditors	2.719	2.624
	117.458	133.316

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

# Consolidated Financial Statements 31 December 2009

## 24. Subsidiary undertaking

	% Holding	Country of incorporation	Principal activities
Electriki Limited	100	Cyprus	Dormant

The accounts of Electriki Limited were consolidated in the Group accounts of Electricity Authority of Cyprus. The company remained dormant during 2009.

## 25. Contingent liabilities

(a) The Tax Authorities have issued final assessments for the tax years 1995 - 2002. All the liabilities have been agreed and accounted for in these financial statements except for the ones relating to consumers' capital contributions. The Tax Authorities have questioned the accounting treatment applied by the Authority in relation to consumers' capital contributions. The Tax Authorities are of the opinion that the amounts received by the Authority as capital contributions should be taxed in the year of receipt. In such a case there will be additional current tax, interest and other charges of €90.069.000. The Authority has filed a recourse at the Tax Tribunal in respect of the additional tax, interest and other charges. During the year the Authority attended the hearing of the Tax Tribunal and the final decision of the Tribunal is still pending. The Authority, based on independent professional advice, believes that the current accounting and tax treatment of capital contributions is correct. As a result no provision has been made in these financial statements.

(b) At 31 December 2009 the Group had a contingent liability in respect of possible tax for various expenses, amounting to €2.566.000.

(c) At 31 December 2009 the Group had contingent liabilities in respect of pending litigation amounting to €7.096.975 (2008: €6.372.770).

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.

## 26. Commitments

### - Capital commitments

	2009 €000	2008 €000
Commitments in respect of contracts	342.472	264.333
Approved but not contracted	124.517	367.001
Approved expenditure outstanding	466.989	631.334

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

### - Operating lease commitments

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

	2009 €000	2008 €000
Not later than one year	514	655
Later than one year and not later than 5 years	552	706
Over 5 years	44	105
	1.110	1.466

### 27. 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	2009 €000	2008 €000
Sales of electricity related parties	19.515	23.095

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

### (ii) Key management personnel compensation

The compensation of key management personnel is as follows:

	2009 €000	2008 €000
Salaries and other benefits	667	659

### (iii) Directors' remuneration

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

	2009 €000	2008 €000
Emoluments in their executive capacity	30	18

### 28. Events after the balance sheet date

There were no material post balance sheet events, which have a bearing on the understanding of the financial statements.

Independent Auditor's report pages 82 to 83.

# Appendices

## Appendix I CONSUMERS, SALES AND AVERAGE PRICES

AS AT 31 DECEMBER	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>NUMBER OF CONSUMERS</b>										
Domestic	284 486	291 476	298 277	307 206	318 640	332 338	348 394	366 799	386 489	402 671
Commercial	69 512	70 250	70 867	71 589	72 941	74 916	76 272	78 294	80 913	83 160
Industrial	9 662	9 712	9 829	10 107	10 595	10 956	11 198	11 299	11 792	11 618
Agricultural	7 414	8 294	9 084	9 779	10 400	10 931	11 597	12 117	12 796	13 546
Public lighting	5 421	5 720	6 099	6 428	6 771	7 138	7 581	7 991	8 499	9 035
<b>TOTALS</b>	<b>376 495</b>	<b>385 452</b>	<b>394 156</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>SALES TO CONSUMERS (Thousand kWh)</b>										
Domestic	1 054 942	1 041 826	1 170 386	1 321 677	1 324 774	1 431 792	1 500 511	1 607 048	1 682 327	1 720 777
Commercial	1 214 937	1 290 171	1 387 729	1 478 441	1 518 582	1 587 196	1 713 921	1 783 885	1 881 173	1 918 932
Industrial	593 824	647 632	708 232	722 806	722 850	726 059	723 038	699 746	757 803	791 640
Agricultural	94 888	92 567	101 515	113 761	117 478	120 062	128 701	137 339	156 930	143 971
Public lighting	52 640	52 557	54 670	59 386	58 146	67 793	68 851	70 301	77 596	80 426
<b>TOTALS</b>	<b>3 011 231</b>	<b>3 124 753</b>	<b>3 422 532</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>AVERAGE SALES PER CONSUMER (kWh)</b>										
Domestic	3 708	3 574	3 924	4 302	4 158	4 308	4 307	4 381	4 353	4 273
Commercial	17 478	18 365	19 582	20 652	20 819	21 186	22 471	22 784	23 249	23 075
Industrial	61 460	66 684	72 055	71 515	68 226	66 270	64 568	61 930	64 264	68 139
Agricultural	12 798	11 161	11 175	11 633	11 296	10 984	11 098	11 334	12 264	10 628
Public lighting	9 710	9 188	8 964	9 239	8 589	9 497	9 082	8 798	9 130	8 902
<b>AVERAGE PRICE PER UNIT BILLED (cents)</b>										
Domestic	9,770	9,626	9,276	9,838	9,693	11,009	12,492	12,746	15,988	13,321
Commercial	11,480	10,812	10,636	11,003	10,388	11,748	13,009	13,328	16,982	14,196
Industrial	9,211	8,709	8,507	8,926	8,268	9,594	11,111	11,458	14,955	12,325
Agricultural	9,238	8,830	8,774	8,992	8,637	10,106	11,434	11,675	15,296	12,697
Public lighting	9,018	8,781	8,500	8,755	8,437	9,298	10,981	11,233	14,554	12,129
<b>AVERAGE PRICE</b>	<b>10,320</b>	<b>9,888</b>	<b>9,642</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>

## Appendix 2

## GENERATION, TRANSMISSION &amp; DISTRIBUTION EQUIPMENT

Description	Unit	In Commission 31.12.2008	Commission in 2009	Taken out of commission 2009	In commission 31.12.2009
<b>GENERATION PLANT:</b>					
Dhekelia Power Station					
Steam Turbines	No.	6	-	-	6
Capacity	MW	360	-	-	360
Internal Combustion Engines					
Capacity	MW	-	3	-	3
Moni Power Station:					
Steam Turbines	No.	6	-	-	6
Capacity	MW	180	-	-	180
Gas Turbines					
Capacity	MW	4	-	-	4
Vasilikos Power Station:					
Gas Turbines	No.	1	-	-	1
Capacity	MW	38	-	-	38
Steam Turbines					
Capacity	MW	3	-	-	3
Combined Cycle Gas Turbines					
Capacity	MW	-	3	-	3
Capacity					
		-	226	-	226
<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	409,62	-	8,54	401,08
Circuit Length	km	764,20	-	17,09	747,11
132kV Underground Cables					
Route Length	km	66,04	23,26	7,87	81,43
Circuit Length	km	94,11	23,26	11,65	105,72
132kV U/G Cables-Operated at 66kV					
Route Length	km	8,33	-	-	8,33
Circuit Length	km	8,33	3,71	-	12,04
66kV Underground Cables					
Route Length	km	1,68	-	-	1,68
Circuit Length	km	1,68	-	-	1,68
132kV Transmission Lines operated at 66kV					
Route Length	km	169,96	-	-	169,96
Circuit Length	km	269,43	-	-	269,43
66kV Transmission Lines					
Route Length	km	291,77	0,03	1,92	289,88
Circuit Length	km	291,77	0,03	1,92	289,88

Description	Unit	In commission 31.12.2008	Commissioned in 2009	Taken out of commission in 2009	In commission 31.12.2009
132/66kV Interbus Transformers	No. MVA	13 648	- -	- -	13 648
132/11kV Step Down Transformers	No. MVA	75 2 367	3 72	- -	78 2 439
132/6,6kV Step Down Transformers	No. MVA	2 58	- -	- -	2 58
132/3,3kV Step Down Transformers	No. MVA	2 20	- -	- -	2 20
66/11kV Step Down Transformers	No. MVA	68 710,5	1 10	2 30	67 690,5
66/3,3kV Step Down Transformers	No. MVA	2 5	- -	- -	2 5
15,75/132kV Step Up Transformers	No. MVA	3 495	- -	- -	3 495
11/132kV Step Up Transformers	No. MVA	13 741	4 385	- -	17 1 126
11/66kV Step Up Transformers	No. MVA	4 150	- -	- -	4 150
Substations	No.	57	-	-	57
<b>DISTRIBUTION EQUIPMENT:</b>					
MV Overhead Lines	km	5 230,21	159,86	34,84	5 355,23
MV Underground Cables	km	2 860,75	244,29	16,90	3 088,14
LV Overhead Lines	km	8 744,13	269,68	35,41	8 978,40
LV Underground Cables	km	3 486,49	466,49	0,35	3 952,63
P.M. Transformers					
22 000-11 000/433/250V	No.	8 645	420	93	8 972
	kVA	791 462	76 068	35 445	832 085
G.M. Transformers					
22 000-11 000/433V	No.	4 844	351	3	5 192
	kVA	2 667 335	282 685	52 685	2 897 335



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