



Electricity  
Authority  
of Cyprus



Annual  
Report  
**20  
17**



Annual  
Report  
**20  
17**

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, Public Corporate corporation established under the Electricity Development Law Cap.171 of 1952 in order to exercise and perform functions relating to the generation, transmission, distribution 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 Energy, 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

		2017	2016	% Increase (Decrease)
<b>GENERATION</b>				
Total units generated	million kWh	4 559,1	4 455,3	2,3
Maximum output capacity of power stations	MW	1 478,0	1 478,0	-
Maximum demand met	MW	1 027,0	968,0	6,1
Thermal efficiency of generation	%	37,0	36,3	1,9
<b>SALES OF ELECTRICITY</b>				
Sales	million kWh	4 495,6	4 358,5	3,1
Consumption in the turkish occupied area	million kWh	3,7	2,9	27,6
Average charge per kWh sold	€ cents	13,717	11,957	14,7
Consumers at 31 December	thousand	568,5	565,6	0,5
<b>FINANCIAL ACTIVITY</b>				
Total income	€ thousand	676.482	580.288	16,6
Operating costs	€ thousand	614.182	491.183	25,0
Other losses net	€ thousand	78	5.415	(98,6)
Operating profit	€ thousand	62.222	83.690	(25,7)
Finance costs	€ thousand	2.661	6.585	(59,6)
Tax	€ thousand	8.871	11.321	(21,6)
Net profit for the year	€ thousand	50.690	65.784	(22,9)
Remeasurement of Pension Plan Obligation	€ thousand	49.755	(108.337)	(145,9)
Capital expenditure	€ thousand	45.434	36.923	23,1
Average net assets employed	€ thousand	1.920.369	1.964.622	(2,3)
Return on average net assets employed	%	3,2	4,3	(25,6)
<b>EMPLOYEES</b>				
Employees in service at 31 December		2 023	2 035	(0,6)
Sales per employee	million kWh	2,22	2,14	3,7
Consumers per employee		281	278	1,1

# Board of Directors and Management



**Andreas Marangos**  
Chairman



**Michalis Hadjipantela**  
Vice Chairman



**Agni Shialarou**  
Member



**Elena Tsolakis**  
Member



**Charalambos Artemis**  
Member



**Christina Zikkou**  
Member



**Yiannis Constantinides**  
Member



**Konstantinos Kosti**  
Member



**Michael Komodromos**  
Member



**Panayiotis Olympios**  
General Manager

## BOARD OF DIRECTORS

From 1.1.2017 until 31.12.2017

### CHAIRMAN

**Andreas Marangos**  
Lawyer

### VICE CHAIRMAN

**Michalis Hadjipantela**  
Certified Accountant

### MEMBERS

**Agni Shialarou**  
Lawyer

**Elena Tsolakis**  
Architect

**Charalambos Artemis**  
Lawyer

**Christina Zikkou**  
Lawyer

**Yiannis Constantinides**  
Certified Accountant

**Konstantinos Kosti**  
Mechanical Engineer

**Michael Komodromos**  
Professor - Electrical Engineering

## MANAGEMENT

**General Manager**  
Vacant Post

### Deputy General Manager

**Adamos Kontos**  
(from 1.1.2017)  
*BSc (Eng), MEng, PhD, MBA, MIEEE*

### Executive Manager Networks

**Adamos Kontos**  
*BSc (Eng), MEng, PhD, MBA, MIEEE*

### Anastasis Gregoriou

(acting from 2.1.2017)  
*BSc (Eng), MBA, CEng, MIET*

### Executive Manager Generation and Supply

**Alexis Michael**  
*BSc (Eng), PhD, CEng, MIET*

### Executive Manager Finance

**Vacant Post**  
(until 6.6.2017)

### Maria Charalambous

(from 7.6.2017)  
*BA Economics, MBA, FCA*

### LEGAL ADVISERS

**Ioannides Demetriou LLC**  
Lefkosia

### AUDITORS

**Auditor General of the Republic**  
PricewaterhouseCoopers Ltd, Lefkosia

### Distribution System Owner Manager

**Adonis Yiasemides**  
*Dipl Eng, MBA, MIET*

### Distribution System Operator Manager

**Anastasis Gregoriou**  
*BSc (Eng), MBA, CEng, MIET*

### Petros Mina

(acting from 2.1.2017)  
*BSc Electrical Engineering, MBA, MIEE*

### Transmission System Owner Manager

**Costas Gavrielides**  
*BSc (Eng), MEng, MBA, CIPR Diploma, MIET, MCIPR*

### Power Generation Manager

**George Skarparis**  
*BSc (Eng), MBA, MBA (Oil Gas & Energy Management)  
CEng, MIET, MIMechE*

### Supply Manager

**Marios Skordellis**  
*BSc (Eng), MSc, MBA, CEng, MIET*



## Chairman's Message

EAC, through a course of over 65 years, plays a very important role both in the society and in the economy of our country. In the energy sector, which is one of the most vigorously growing sectors internationally, major changes have been recorded. In Cyprus, we are at the threshold of a significant change, a major challenge caused by the expansion of the electricity market on 1st July 2019.

With this in sight, EAC intensifies its preparations for which there are demands and expectations. Each Core Regulated Activity organises its Units independently, to respond effectively to the new needs of the Market. The EAC is open to competition because it is an incentive to develop infrastructure, service quality, and offer innovative services to the consumer. In a nutshell, competition makes us better.

To enable conventional production to play a future role in supporting the introduction of Renewable Energy Sources and the compliance of Generation Units with the strictest environmental limits, we have decided begin the use of Natural Gas (NG) for electricity generation, before 2020. In this context, the Natural Gas Public Company (DEFA) will proceed with the help of consultants to be recruited, to prepare the specifications for the long-term supply and the adequate quantities of Liquefied Natural Gas and to find a strategic investor for the construction and subsequent operation of the necessary infrastructure. The EAC will hire consultants for its own contribution to these two processes and at the same time implements the necessary steps for the conversion of the existing generation units to burn on NG.

EAC is ready to contribute to the NG infrastructure with percentage of participation in the submission of a proposal for the BOOT process, and with the corresponding percentage of ownership after the end of the process. In addition, EAC is taking action to install Photovoltaics, as part of the support project for electricity power generation from Renewable Energy Sources.

The evolution of EAC's electricity mix is expected to be determined upon completion of the study on the Generation Development Program. The study examines various system deployment scenarios, based on the parameters that affect it and is expected to establish EAC's investment in generation capacity, both in conventional generation units as well as in Renewable Energy units.

EAC's network, and especially the distribution network, is constantly evolving on the basis of new emerging market needs. These mainly concern:

- Reliable integration of RES as scattered generation. The Government's goal is that 16% of the electricity needs is generated from RES by 2020.
- Energy management with the active involvement of the consumer himself, transformed into a producer-consumer. The broader objective of the European Union is the gradual transformation of buildings of "virtually zero energy consumption".
- The infiltration of electricity in transport. The goal of the European Union is that 10% of transport, which is now carried out entirely with the use of conventional fuels, will be based on electricity by 2020.
- The installation of electricity storage systems to address the problem of unpredictable and discontinued power supply from RES.

- Electrification in order to achieve its goal
  - o of low carbon emission by 2050. That is, to reduce electricity generation from conventional coal fuels to a minimum.

To achieve all the above, it is essential for the distribution network to continuously evolve into a "smart" network, in order to provide all the necessary infrastructure and services to all electricity market stakeholders. In simple terms, "intelligence" in networks means to integrate efficient telecommunication and computer systems in their operation. A basic component is smart metering. In this way and in real time, all information leading in an effective and efficient management of energy needs as a whole, will be collected, processed and made available to the interested parties.

Specifically, regarding smart metering, we are in contact with the relevant state authorities so that we can take the necessary policy and implementation decisions in 2018.

EAC, as a Public Law Organisation belonging to all Cypriot citizens, takes every necessary step to act under its governing Law, strictly following the good governance rules. Our goal is to upgrade our customer services and assistance. At the same time, it is very important to be a financially active enterprise with the power to finance its development program and to modernise its infrastructure and facilities, while ensuring environmental protection.

The continuous and significant changes in the energy sector, force the EAC to constantly adapt to new realities and adopt technologies that enhance its infrastructure and further strengthen its high level of reliability. The benefits go beyond narrow business confines and belong to Cyprus itself.

Recognising the importance of sustainable energy development, EAC monitors the cutting-edge technologies and actively participates in various European research and innovation programmes.

The Board of Directors has a great responsibility to face up to the challenges and contribute substantially to the development of EAC and reinsert itself in the new energy map of Cyprus. EAC's high-level human resources, with their specialised know-how and innovation skills, are the Organisation's greatest "working capital" on the road that lies ahead. I wish to express my gratitude to the President of the Republic of Cyprus, Mr. Nicos Anastasiades for the honour he has bestowed upon me and for the trust he has shown me. I would also like to thank the Minister of Energy, Commerce, Industry & Tourism, Mr. Yiorgos Lakkotrypīs for his personal cooperation and for that of all the officials of his Ministry.

I express my thanks to the Government, the House of Representatives, the Auditor General of the Republic, the Cyprus Energy Regulatory Authority, the Cyprus Transmission System Operator, to all those government bodies and local government authorities with which EAC has collaborated, as well as the representatives of the Media for their promotion of the work of EAC.

Finally, I particularly wish to thank all my colleagues on the Board of Directors, the General Manager of EAC, Mr. Panayiotis Olympios and the members of the Organisation's Management, Union leaders and all the personnel for their productive and creative cooperation.

Andreas Marangos  
Chairman of the Board of Directors



## General Manager's Message

The EAC, as a Vertically Integrated Public Law Corporation, operating in accordance with the Regulatory Decisions of CERA, has completed its mission for yet another year. The Generation, Transmission, Distribution and Supply of Electricity has continued uninterrupted throughout Cyprus. EAC has responded to the needs the Cypriots with path of responsibility and reliability, by providing power non-stop and it supported the massive effort of the people to revive the economy of Cyprus, contributing effectively to the country's upturn.

The EAC personnel, using their technical know-how and exhibiting professionalism and dedication to the objectives set by the Organisation, have managed to stand next to the consumers and to provide them with efficient service. I therefore congratulate our staff members and I ask them to continue working with the same zeal to reach our goals. This will enable us all to face up to the great challenges ahead together.

Amongst the aforesaid challenges, is the 3rd audit of the Accounting and Operational Unbundling by CERA, the opening of the Electricity Market in Jun 2019, the arrival of Natural Gas and the necessary readjustments of EAC's Generation facilities, the anti-pollution works carried out at the Vasilikos Power Station, the installation of Unit 6 at the Vasilikos Power Station and the development and maintenance works in the sectors of Transmission and Distribution. The future course of our Organisation depends greatly on how we face these challenges.

For the EAC's advancement and modernisation purposes, a series of projects was implemented in 2017, the most important of which are:

- The installation of an anti-pollution system for the reduction of nitrogen oxide emissions from the Internal Combustion Units (ICU) 1 at Dhekelia Power Station.
- Commencement of works for the reconstruction of a desulphurisation unit at the Generation Unit No. 3 at Vasilikos Power Station.
- Commencement of works to convert Steam Units 1, 2 and 3 for the combustion of Natural Gas at Vasilikos Power Station.
- The construction of the "Main Gate" Primary Substation in Akrotiri has been completed, as well as the upgrade of the Kolossi Substation, with the introduction of 22 kV voltage.
- The installation of 75MVA power intakes has been completed at the "Alambra" and "Costas Petrou" Transmission Substations.
- Commencement of works for the construction of the Overhead Line of Transmission of "Vasilikos - Mari - Kofinou" and for the Overhead Line/Underground Cable "Vasilikos - Moni, as well as for the construction of "Moni GIS" Transmission Substation. These projects reinforce the core of the Transmission System.
- In the context of the work of the Distribution System Owner Unit, 158km of Medium Voltage and Low Voltage overhead power lines, 226km of Medium Voltage and Low Voltage underground cables and 156 overhead transformers were installed, while 53 ground Distribution Substations were established.
- Operation and maintenance of the electric car charging system, known as e-charge, with the purpose to promote the use of electric vehicles in Cyprus. At the moment, the system includes 18 charging points nationwide.

- Management of the penetration of Photovoltaic Systems that will contribute to Sustainable Green Development and the achievement of the national goal of 2020.
- Development and detailed design for the implementation of the complete software SCADA/DMS (Distribution Management System) for the integrated dynamic management of the Distribution Network by the EAC as the Distribution System Operator. This project is now in the tender process.

I should also point out that the activity of the Distribution System Operator on the GeoDiaS GIS Network Data Management System, has been published in the 2017 World Atlas for innovations by the American Global Mogul, ESRI.

The system forms the infrastructure through which the thorough management of Network Planning, Energisation, Operation and Connections takes place.

Looking forward into the future, the work of the Non-Regulated Services Management is of great significance, with the contribution of the Vasiliko Desalination Plant to lessen the water problem in our country. It should be noted that a study is being carried out to increase the production of potable desalinated water and the possible installation of a new water production plant for irrigation purposes. In 2017, the Non-Regulated Services Management, in the context of using RES, promoted the plans for the creation of more photovoltaic parks. In cooperation with the Ministry of Education, a preliminary study was prepared for the installation of photovoltaic systems in all schools in Cyprus. The final decision from the competent Minister is pending.

The inextricable relationship of the EAC with the Cypriot society calls for the firm and effective action and contribution of the Organisation within the framework of the Corporate Social Responsibility program. In 2017 the EAC supported, behind the scenes, a large number of associations and Organisations dealing in the relief of human suffering, as well as many others who are active in the fields of Culture, Sports and the Environment.

The "Give Light to a Life" event has become an institution and is contributing to the financial support of the Cyprus Anti-Cancer Society.

A special chapter in EAC's social report concerns our regular visits to the schools of Rizokarpaso. In December 2017, EAC's delegation, headed by the Chairman of the Board of Directors Mr. Andreas Marangos, offered gifts and practical assistance to the schools and the School Trustees of Rizokarpaso. These visits have taken place for 14 consecutive years and are a pilgrimage in memory and hope for our occupied lands.

On behalf of the EAC's management and personnel, I would like to express my thanks to the Chairman of the Board of Directors Mr. Andreas Marangos, the Vice-Chairman Mr. Michalis Hadjipandela, as well as the remaining members of the Board, for their tireless efforts to maintain the EAC a pioneer and on the cutting edge of developments. I would also like to thank the Executive Manager Networks Dr Adamos Kontos for taking on the role of Acting General Manager for over a year.

During its long-term course and looking into the future, EAC has to constantly reaffirm its role as the leader in the Cypriot energy scene.

Panayiotis Olympos  
General Manager

# public governance

The Electricity Authority of Cyprus was established and operates in accordance with the provisions of the Electricity Development Law, Cap. 171, which inter alia provides for the way in which it is governed.

In addition to the above, the Board of Directors of the EAC, has adopted a Corporate Governance Code and a Code of Conduct, in the context of implementing CERA's Regulatory Decision 04/2014 on Operational Unbundling, dated 3 March 2015.

The Corporate Governance Code is a comprehensive text that consolidates and incorporates the principles of corporate governance, in accordance with the international best practices, such as those implemented by the administration and management of EAC.

It includes, inter alia, the legal framework governing EAC's operation, recording the manner of operation of the Board, of the Joint Special Sub-committees (JSS), the other committees of the Board, the role of the General Manager, Executive Directors and Directors of Core Regulated Activities.

It also includes the Internal Rule of Operation of the Joint Special Sub-committees (JSS), in which the powers granted or not by the Board of Directors are recorded.

The Code of Conduct provides a framework of principles and rules that govern the day-to-day operations of the EAC, the behaviour of its employees and their relationship with third parties. The Code applies to all EAC personnel including members of the Board of Directors and all Managers.

In accordance with the principles of the Code of Public Governance:

- The Board ensures that the Organisation's purpose and the expected results for the citizens and users of the services provided is clear and makes sure that users receive high quality services.
- The Board of Directors ensures that taxpayers and users receive services of corresponding value for the fee they pay.
- The responsibilities of the Board of Directors are clearly specified and the responsibilities and duties of the Directors are clearly specified and the Board ensures that they are fulfilled.
- Relations between Directors and the public must be clearly regulated.
- The Board specifies the Organisation's values, principles and standards and ensures that they are implemented. In addition, the Board sets strategic objectives, ensures sufficient financial resources and human resources and examines the performance of the management.
- The behavior of each Director is an example to emulate effective governance and the Board takes decisions in a detailed, diligent and transparent manner. There is also a clear distinction between the administration and management of the Organisation.
- The Board of Directors has access to high-level information, advice and support and ensures that an effective risk management system is in place.
- Directors have the skills, know-how and experience they need to perform their duties adequately.
- Persons involved in the governance possess skills and abilities that undergo regular honing and their performance is assessed both separately and as a whole.
- Balance must be achieved between continuity and renewal in the composition of the Board of Directors.
- Regarding accountability, the Board of Directors makes a distinction between official and unofficial relations and adopts an active and planned approach to dialogue with the public and its accountability towards the public.
- The Board undertakes an active and planned approach to its responsibility towards the Organisation's personnel and cooperates effectively with institutional bodies. In addition, the Board is responsible for the consequences of its actions and omissions, including civil or other liability of the Directors.

## operational unbundling of EAC activities

Following the issuance of the Regulatory Decisions of the Cyprus Energy Regulatory Authority (CERA) with numbers 02/2014, 03/2014 and 04/2014 for the EAC Accounting and Operational Unbundling, EAC has continued to implement measures for its compliance in full cooperation with the CERA throughout 2017.

Through the compliance procedure, EAC has been restructured into four independent Core Regulated Activities (CRA) Generation, Supply, Transmission (Transmission System Owner), Distribution (Distribution System Owner and Distribution System Manager) and into Non-Regulated Activities, which between them operate independently.

According to the Regulatory Decision 04/2014, the other EAC Units operate as “Other Activities” by providing services to the CRAs.

The Corporate Governance and Operational Independence of the Core Regulated Activities are ensured:

- with the preparation of a Budget, Strategic, Business and Action Plan, by each CRA independently,
- with the implementation of the Corporate Governance Code and the Code of Conduct, as well as
- with the correct costing of man-hours of all services provided to and between Core Regulated Activities, Non-Regulated Activities and Common Services, in order to avoid cross-subsidization and distortion of competition.

Furthermore, an independent Management for the Distribution System Operator (DSO) has been created, within which the ring-fenced “Department of Meter Registration and Metering Records” operates to provide services to all Suppliers without discrimination.

By implementing the above measures, EAC seeks to achieve exclusion of cross-subsidization and protection of competition, to avoid “discrimination” and non-discriminatory behaviour towards consumers, users of the system and electricity market stakeholders.

As of 1st December 2016, a date which was set by CERA as the day of the implementation of Operational Unbundling to mark the beginning of the regulatory control period, EAC officially applies Operational Unbundling. The implementation of Operational Unbundling is a continuous and dynamic process in which improvements are based on recommendations by EAC Compliance Officers and the findings of internal and external auditors.

According to the RD 04/2014 EAC, has prepared a Schedule of Compliance for each Activity which is monitored by the Compliance Officers who have been appointed for this purpose. In 2017, compliance reports were prepared and submitted to the CERA.

# generation and supply business unit

## GENERATION MANAGEMENT

During the year 2017, the Electricity Authority of Cyprus continued the implementation of its operations which provided for the full utilisation and maintenance of the existing Vasilikos, Dhekelia and Moni Power Stations.

### VASILIKOS POWER STATION

Vasilikos Power Station, with an installed capacity of 868 MW (3 x 130 MW Steam Units, 2 x 220 MW CCGT Units and 38 MW Gas Turbine Unit), generated in 2017, 2 858 288 MWh, which corresponds to 62,69% of the total electricity generated from the Authority's Power Stations. During the same period the Station exported 2 719 812 MWh which corresponds to 62,77% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency for units generated, of the Steam Units 1, 2 and 3, reached 38,06%, for the CCGT Unit No. 4 reached 46,74%, while for the CCGT Unit No. 5 reached 48,02%, while the Gas Turbine reached 23,61%.

Moreover, the thermal coefficient of efficiency for units exported, of the Steam Units 1, 2 and 3, reached 35,44%, for the CCGT Unit No. 4 reached 45,86%, while for the CCGT Unit No. 5 reached 46,34%, while for the Gas Turbine reached 23,61%.

### DHEKELIA POWER STATION

Dhekelia Power Station, with an installed capacity of 460 MW (6 x 60 MW Steam Units and 100 MW for Internal Combustion Engines (ICE1 & ICE2 Plants), generated in 2017, 1 663 539 MWh which corresponds to 36,49% of the total electricity generated from the Authority's Power Stations. During the same period the Station exported 1 576 873 MWh which corresponds to 36,39% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the Steam Units, for units generated, reached 29,38% whereas the corresponding thermal

coefficient of efficiency for the Internal Combustion Plants reached 41,36%.

Moreover, the thermal coefficient of efficiency of the Steam Units, for units exported, reached 27,72% whereas the corresponding thermal coefficient of efficiency for the Internal Combustion Plants reached 40,11%.

### MONI POWER STATION

The installed capacity of Moni Power Station is 150 MW (4 x 37,5 MW Gas Turbine Units). It is noted that since 14/10/2013 all steam units have been withdrawn from the installed capacity of the Station and therefore the installed capacity of the thermal units has been reduced to 0 MW.

Moni Power Station generated in 2017, 37 270 MWh which corresponds to 0,82% of the total electricity generated from the Authority's Power Stations. During the same period, the Power Station exported 36 327 MWh which corresponds to 0,84% of the total electricity exported from the Authority's Power Stations.

The thermal coefficient of efficiency of the gas turbines for units generated reached 25,73% whereas the corresponding thermal coefficient of efficiency for units exported reached 25,08%.

### ENVIRONMENTAL ISSUES

For the protection of the environment and the continuous monitoring of the air quality, four mobile air quality units, two at each operating Power Stations (Vasilikos and Dhekelia), were in continuous operation at selected sites in the vicinity of the Power Stations during 2017. 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 wind speed and direction, air temperature and relative humidity.

Due to the high NOx emissions of the Internal Combustion Engines (ICE1) at Dhekelia Power Station, the Authority has decided the installation of a Selective Catalytic Reaction (SCR) DeNOx system on these Engines with the aim to lower these emissions. This system was put in operation at the beginning of 2017.

**STUDIES**

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 operations and especially in matters involving the environment and the generation of electricity.

The Operational Generation Unit prepared the verification report with calculations of the carbon dioxide (CO2) emissions for the period January-December 2016 based on the greenhouse gas Emissions Trading Directive. This report was subsequently verified by an external consultant and submitted to the Ministry of Agriculture, Rural Development and Environment.

**SYSTEM OPERATION  
Electricity supplied**

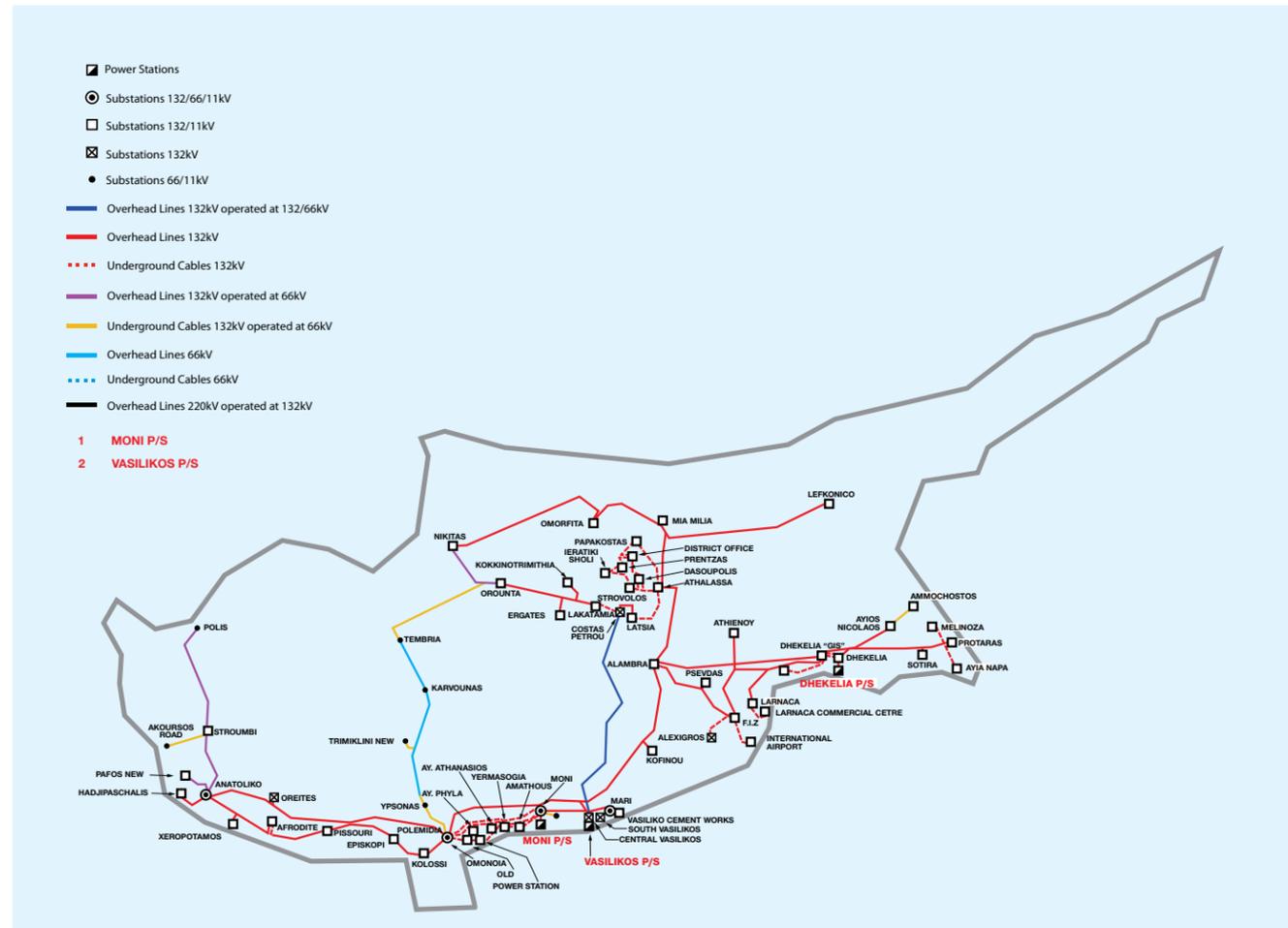
In 2017 the total number of units generated by the EAC's three Power Stations was 4 559 098 MWh, compared to 4 455 189 MWh in 2016, representing an increase of about 2,33% over the previous year.

Figure 2 (page 23) shows the total number of units generated annually from 2008 to 2017, as well as the predicted generation for the period 2018 - 2027.

**Generation, Transmission and Distribution Losses**

Electricity consumption at the Power Stations amounted to about 4,96% of the total generation, compared to 4,95% the previous year.

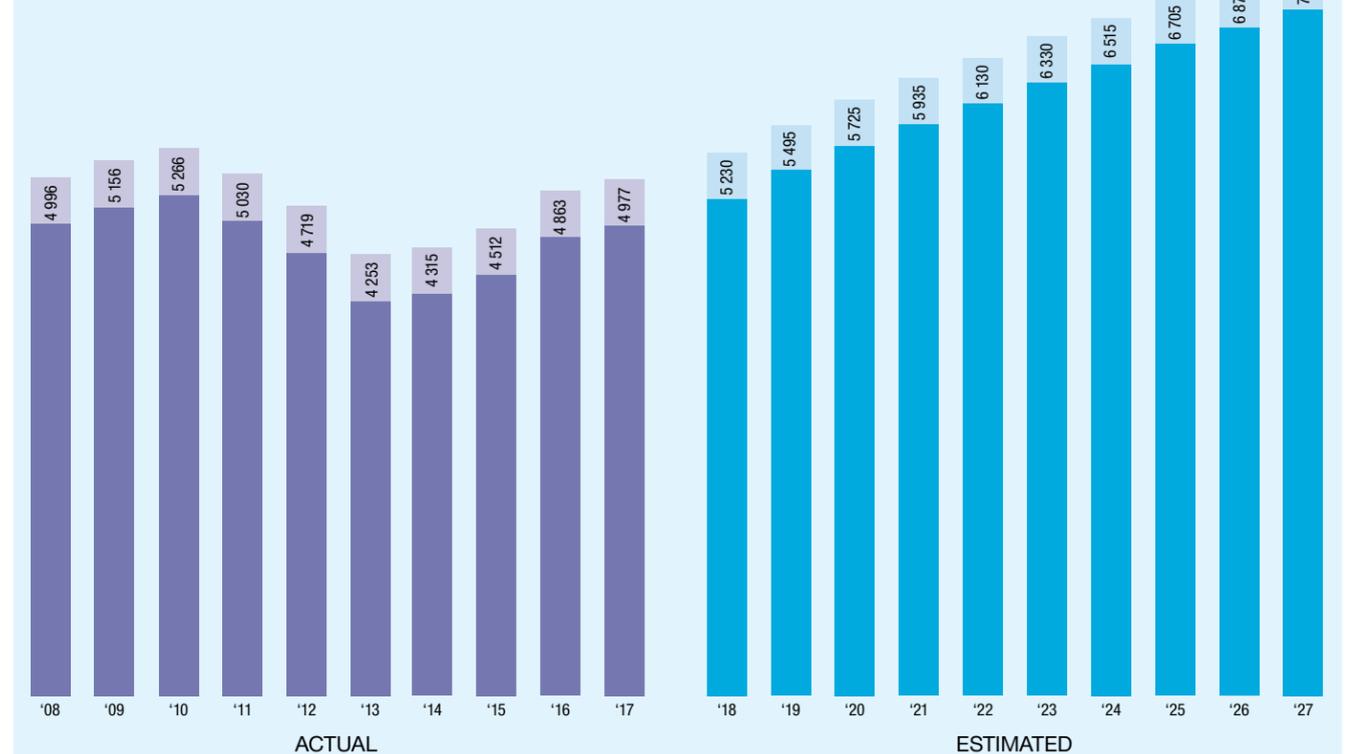
**Figure 1**



**Figure 2**

**TOTAL SYSTEM GENERATION  
(Million kWh)**

Note: Since 2009, the figures below, include also R.E.S. Generation.



### Fuel Consumption

The amount of heavy fuel oil consumed by the Power Stations totalled 777 929 Metric Tonnes, compared to 882 677 Metric Tonnes the previous year, representing a decrease of 11,87%.

The total quantity of diesel fuel consumed by the Power Stations was 255 220 Metric Tonnes, compared to 149 967 Metric Tonnes consumed during 2016, representing an increase of 70,18%.

The average calorific value of the fuel oil used was 42 889 kJ/kg compared to 42 844 kJ/kg in 2016.

### Plant Efficiency

The average generating system efficiency in 2017, based on the total units generated by the EAC's three Power Stations, was 37,04% compared to 36,25% in 2016. The heat rate per kWh generated was 10 226 kJ/kWh compared to 10 448 kJ/kWh in 2016.

### DEVELOPMENT PLAN OF EAC

The EAC has taken the decision to install an SCR DeNOx System on No. 1 Internal Combustion Engines (ICE1) at Dhekelia Power Station, the commercial operation of which was at the beginning of 2017.

The Authority has investigated and evaluated its options for the installation of reduction emission technologies on all Units at Vasilikos Power Station. In addition, EAC will proceed with the construction of the required Natural Gas infrastructure at Vasilikos Power Station.

The Authority has also issued a Tender for its Development Plant, with an aim, amongst others, to evaluate the necessity of installing a new Generating Unit.

## SUPPLY

### CONSUMERS

At the end of 2017, the total number of consumers in the government-controlled areas of Cyprus stood at 568 500, a net increase of 2 944 or 0,5%.

Table 1 below shows the number of consumers by category as well as the percentage increase/decrease over the previous year.

### BILLED SALES OF ELECTRICITY

Billed sales of electricity in the government-controlled areas amounted to 4 495,6 GWh, compared to 4 358,5 GWh the previous year, representing an increase of 3,1%.

The unbilled electricity consumption of Turkish Cypriots in the areas of the Republic of Cyprus where the Government of the Republic does not exercise effective control is 3,7 GWh.

Table 2 below 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 2015, 2016 and 2017 are shown in Figure 4. Sales and revenue for 2017 are shown by consumer category and as a percentage of the EAC's total sales and revenue in Figure 5.

Figure 3

RECORDED MAXIMUM AND MINIMUM TOTAL GENERATION FOR SUMMER AND WINTER PERIOD OF 2016

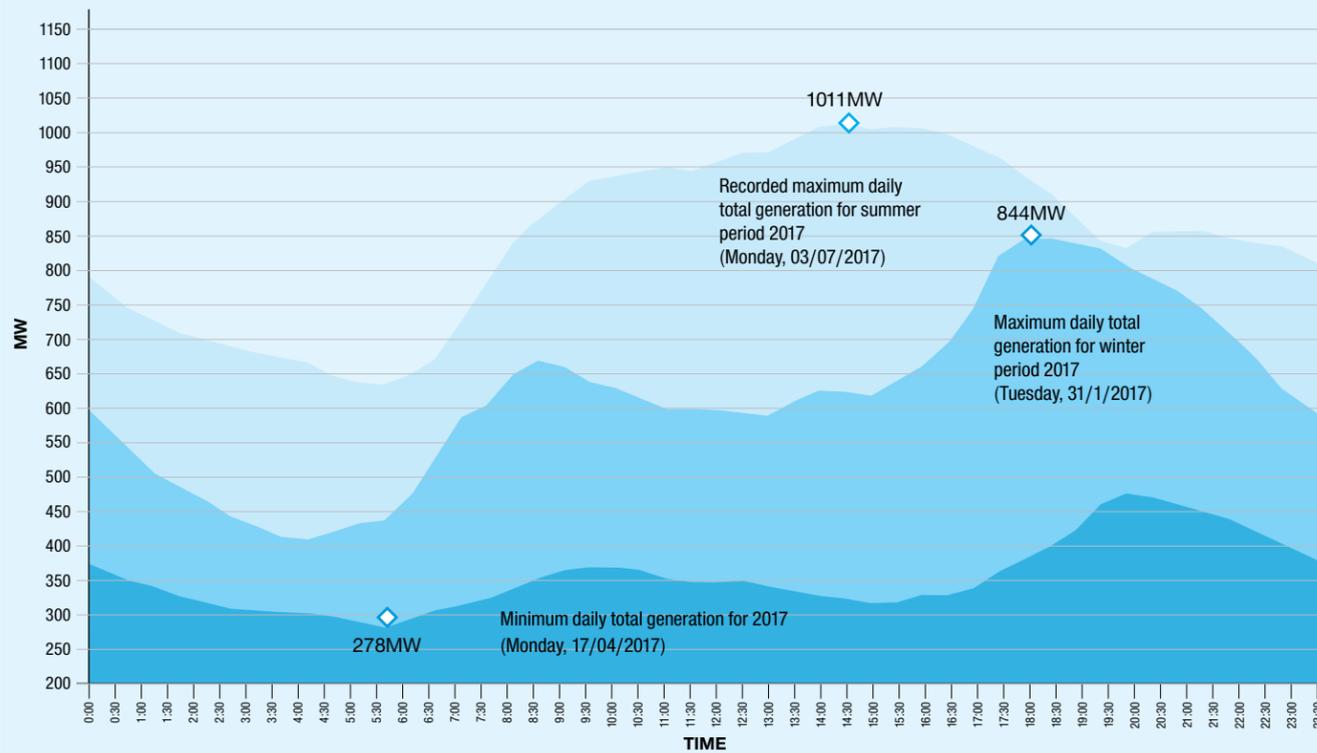


Table 1

NUMBER OF CONSUMERS

Consumer category	As at 31.12.2017	As at 31.12.2016	Change %
Domestic	444 895	442 293	0,6
Commercial	87 065	86 494	0,7
Industrial	9 760	9 596	1,7
Agricultural	15 902	15 886	0,1
Public Lighting	10 878	11 287	(3,6)
<b>TOTAL</b>	<b>568 500</b>	<b>565 556</b>	<b>0,5</b>

Table 2

BILLED SALES OF ELECTRICITY (MWh)

Consumer category	As at 31.12.2017	As at 31.12.2016	Change %
Domestic	1 641 033	1 567 312	4,7
Commercial	1 755 094	1 728 200	1,6
Industrial	856 422	819 693	4,5
Agricultural	156 453	155 638	0,5
Public Lighting	86 578	87 648	(1,2)
<b>TOTAL</b>	<b>4 495 580</b>	<b>4 358 491</b>	<b>3,1</b>

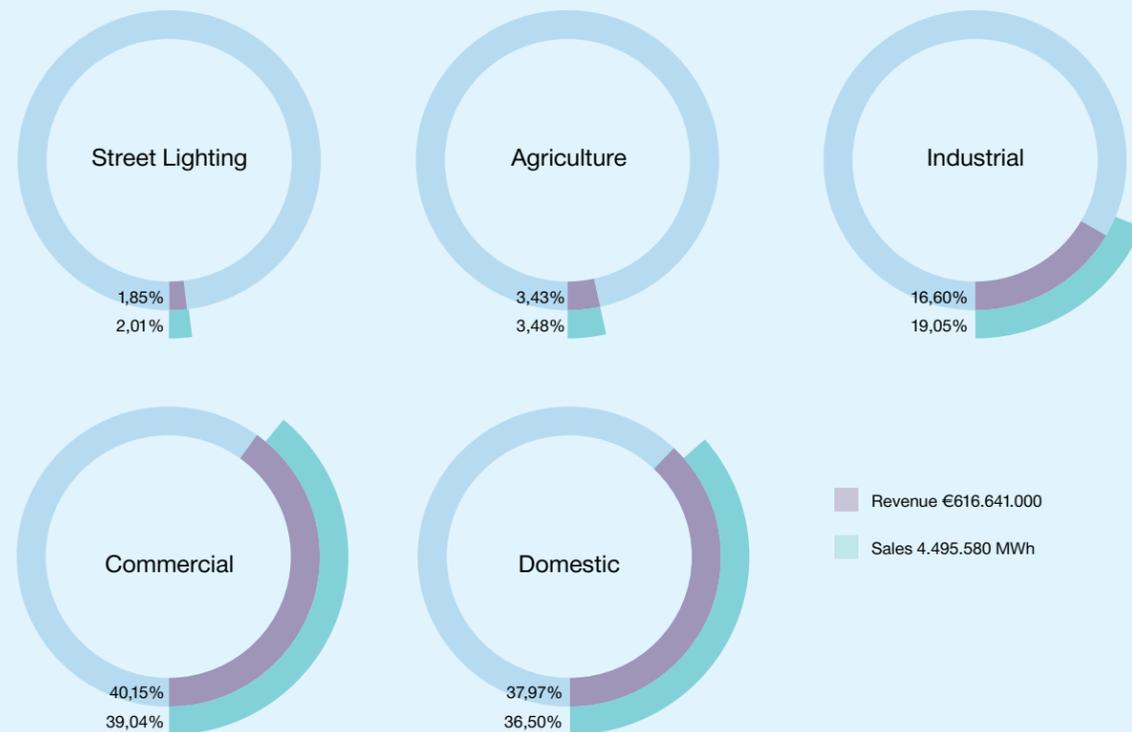
Figure 4

**SALES OF ELECTRICITY**  
(millions kWh)



Figure 5

**ELECTRICITY SALES & REVENUE BY CONSUMER CLASS**



**STORAGE OF THERMAL ENERGY TARIFF**

Storage of thermal energy sales (tariff Code 56) totalled 58 445 MWh, representing an increase of 14 345 MWh or 32,3% compared to 2016. This was due mainly to the most adverse weather conditions that prevailed. The average charge for the Tariff Code 56, increased from 6,38 cents in 2016 to 8,24 cents in 2017.

Consumers opting for the thermal energy storage tariff totalled 20 657, representing a reduction of 232. Of these, 20 360 (98,6%) were domestic consumers with an average consumption of 2 812 kWh compared to 2 092 kWh in 2016.

**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 proper energy use and conservation.

In the framework of the special domestic tariff (Code 08) for large and needy families, by the end of December 2017 some 20 823 customers were benefiting from this. The total benefit to customers in 2017 and consequently, the reduction in revenue to the EAC as a result of this special tariff, was €3.856.991 compared to what it would have been if these customers had remained on tariff Code 01.

The average selling price of electricity per kWh in all categories increased from 11,957 cents in 2016 to 13,717 cents in 2017 or 14,7 %, as a result of the increase of oil prices.

During the year 2017, within the framework of the liberalised electricity market in Cyprus, the EAC Tariffs Team in collaboration with external consultants started drafting new marginal cost tariffs.

The whole effort was focused on simplifying and reducing the number of tariffs as well as the elimination of cross subsidies that exist between various types of tariffs.

After discussions with the Cyprus Energy Regulatory Authority (CERA), EAC submitted a new revised study on tariffs to CERA in June 2017, which was approved by Regulatory Decision 97/2017.

The new tariffs came into force on 1/9/2017 for monthly customers and on 1/11/2017 for bi-monthly customers.

Following the adoption of new tariffs, the Maximum Demand charge for Large and Very Large Commercial/Industrial Customers has been abolished. For these customer categories, the new STOD tariff includes only the electricity price level applicable at the particular time of day and season.

**CUSTOMER SERVICE AND BILLING SYSTEM**

Since the implementation of this new system, the standard of EAC customer service and information has improved significantly. Moreover, the system facilitates and speeds up the day-to-day work of the EAC's Customer Service departments to a considerable degree. The entire system is the main tool and source of information for the EAC Contact Centre.

The technical upgrading of the system has been completed in 2017.

**CONTACT CENTRE**

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

**Billing Service**

The Billing Service enables customers to call the islandwide four-digit number 1800 (early in 2018 the number will change to 1818) and be automatically informed of the amount of their bill by keying in their bill number. They may also receive information and clarifications about bills, methods of settlement, connections, reconnections, disconnections, transfers, domestic tariffs, how to become a first-time customer, etc. In 2017, the Billing Service received approximately 155 000 calls.

Apart from the Billing Service the Supply Management, through the Contact Centre, provides by Service Level Agreement to the Distribution System Operator Unit the following other services:

**Meter Reading Service**

One of the services provided by the Contact Centre is that of Meter Reading service. This service enables customers whose meters have not been read because, for example, their premises were closed, to call the freephone number 80006000 at any time, and key in the 10-digit meter indication. In 2017, the Meter Reading Service received approximately 25 000 calls.



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

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

The aim of this service is to provide customers with a full, top quality telephone response during major faults causing lengthy power cuts as well as during daily, isolated faults on the EAC network, on customer premises and to street lighting. Furthermore, customer complaints are recorded on issues concerning the EAC network such as tree pruning, street lighting problems, etc.

Customer calls are routed via the islandwide four-digit number 1800 to Customer Service Officers at the Contact Centre where the faults are recorded automatically and subsequently reported to Area technical crews for repairs. In 2017, the Faults Reporting and Complaints Service received approximately 160 000 calls.

#### **New Applications Service**

Customers can dial the islandwide four-digit number 1800 to be informed either automatically or by a Contact Centre officer about the documentation required to accompany an application for electricity supply and about what stage their application has reached. In 2017, the service received approximately 18 200 calls.

#### **"Join And Win" Campaign**

During the year 2017, the Supply Management continued and ended the campaign "Join and Win" giving the opportunity to customers to win supermarket vouchers worth €100. Specifically, customers who settle their account via bank order participate in a draw for 10 vouchers every six months while customers

who settle their account via bank order and also receive their electricity bill electronically participate in a draw for 10 coupons every three months.

#### **e-bill CAMPAIGN**

At the end of the "Join and Win" campaign, the Supply Unit organised a new e-bill campaign under the banner "Go with the Flow!".

In a fast and simple way, by registering with the EAC website [www.eac.com.cy](http://www.eac.com.cy), customers can request to receive their bill by e-mail (e-Bill). In this way, they can organise their expenses in a better, more direct way and, through EAC's savings on paper, contribute to protecting the environment.

At the same time, for two years from November 2017, the money saved by EAC for not having to print and post electricity bills for customers opting for the e-Bill service will be donated to one of its chosen charities.

#### **Send SMS to customers**

During 2017, the Supply Management continued its effort to help even further its customers who for any reason have delayed the payment of their electricity bill, adopted, as an additional reminder the sending of SMS messages to customers for settling their bills, before EAC proceeds with disconnecting the electricity supply to their premises.

#### **Wireless Network Wifi in Customer Service Centres**

Since February 2017, the Supply Management is providing wireless wifi network in eight of EAC's Customer Service Centres throughout Cyprus, thus providing free online access to customers.

#### **EAC Mobile Application**

The Supply Management launched a tender for the design and operation of the EAC mobile application for iOS and Android, for mobile and tablets. Through the use of this application the EAC customers will be able to get information about various aspects of the EAC that interest them. The project will be completed in early 2018.

#### **New Electricity Bill**

In accordance with the provisions of the relevant Regulatory Decision, based on the corresponding provisions of the EU *acquis communautaire*, which operationally separate the four Core Regulated Activities, EAC proceeded with the revision of its electricity tariffs.

On the basis of EAC's operational unbundling, the allocation of costs and the related charges for each activity must be clearly shown.

With the new tariffs, charges for Energy, Network, Ancillary Services, Supply and Metering are shown separately so that customers can see and understand how their bills are calculated.

#### **Renewable Energy Sources**

EAC is acting always under the strict framework of Cyprus' appropriately adapted and amended Laws and Regulations concerning the subject of Renewable Energy Sources (RES), and continued in 2016 to give all possible technical assistance and priority in the examination of customer's applications to install units for generating electricity from RES. In accordance with the provisions of European Directive 2009/28/EC (previously 2001/77/EC), issued during Cyprus' accession

process and its compliance with the directives, legislation and regulations of the European Union, the Government proceeded with, among other things, the necessary legislative, regulatory and administrative measures for the promotion of the use of Renewable Energy Sources (RES) and, more generally, of energy conservation with the ultimate goal of increasing the contribution of RES to the country's energy balance.

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

By the end of 2017, a total of 1 937 photovoltaic systems had been installed (compared to 1 918 photovoltaic systems at the end of 2016, i.e. an increase of 1,0%) and were producing up to 75 040 kW, with a total installed voltage (compared to 53 778 kW at the end of 2016, i.e. an increase of 39,5%) and total production of 111 360 646 kWh (94 406 021 kWh at the end of 2016, i.e. an increase of 18,0%). It should also be noted that by the end of 2017, some 14 Generation Units using biomass/biogas were in operation with a total installed capacity of 9 714 kW and a total production of 36 496 169 kWh. The six Wind Parks operating on the island with a total installed capacity of 157,5 MW, generated 211 018 894 kWh in 2017.

# networks business unit

## INTRODUCTION

In accordance with recent amendments to Cypriot legislation, the Networks Business Unit is the Owner and Operator of the Distribution Network and the Owner of the Transmission Network. A particular characteristic of the Unit is that it deals with what is, by its very nature, the dominant part of the work of EAC and this creates a need for monitored Regulation, so that the objectives laid down by the EU and the Republic of Cyprus concerning the functioning of the electricity market are achieved.

The Networks Business Unit has long aimed at finding the best technological solutions, leading to the most reliable supply of electricity at the lowest possible cost. Especially nowadays, with the arrival of distributed generation and the development of two-way communication between consumers and network monitoring points through a modern, reliable telecommunications infrastructure, the need arises and the right circumstances are created for the networks' transformation into a smart network, with all the accompanying benefits.

Organisationally, the Networks Business Unit consists of the following Units and the respective Departments of the Area Offices

- Distribution System Operation (DSO) Unit
- Distribution System Owner (DAO) Unit
- Transmission System Owner (TAO) Unit

All the activities of the Area Offices, apart from Supplies, take place under the jurisdiction of the Networks Business Unit, with the objective of providing a complete range of network-related services. The aim of the Area Offices is the provision of the best possible customer service with the ultimate goal of offering an uninterrupted, reliable supply of electricity and connecting new consumers.

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

The EAC's Area Offices are the following:

- Nicosia-Kyrenia-Morphou
- Limassol
- Famagusta-Larnaca
- Paphos

The Area Offices are organised into Departments which fall under the jurisdiction of the three Units of the Networks Business Unit as follows:

- Studies/Planning/Connection Terms and Conditions (DSO)
- User Assistance/Inspection of Installations (DSO)
- Construction and Distribution Network Maintenance (DAO)
- Construction and Transmission Network Maintenance (TAO)

## DISTRIBUTION SYSTEM OPERATOR (DSO) UNIT

The particular responsibilities, rights and obligations concerning the Distribution System Operator (DSO) arising from Cyprus' legislation create special requirements for their optimal, strict and effective implementation for the benefit of consumers and the economy.

The work of the Distribution System Operator is the development and efficient operation of the Electricity Distribution Network in Cyprus, according to the new standards, as well as the assurance of transparent, impartial access to the network by the consumers and, in general, all network users. It aims at ensuring a reliable power supply for consumers, the quality of the voltage and making constant improvements to the quality of service, as well as the smooth operation of the electricity market, since almost all Producers, Suppliers, Consumers and Prosumers are users of the Distribution Network.

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

#### 1. Responding to applications from users

- New connections for consumers and producers.
- Increased capacity of existing connections.
- Network transfers.
- Expansion of the Street Lighting Network.

#### 2. Network Development

- Network reinforcement, improvement and modernisation.
- Construction of Distribution Centres and the necessary interconnecting network.
- Expansion of the e-charge network for electric vehicles.

#### 3. Distribution Network Operation and Use

- Distribution Network operation.
- Network user service.
- Provision of ancillary services.
- Consumption metering
- Support to the Cyprus TSO for the operation of the System, providing all the necessary elements for the operation of the country's interconnected electricity system.
- Metering Assurance and Intervention Management to EAC's equipment.

#### 4. The smooth and efficient operation of the Electricity Market at Distribution level.

- The management of information on the interconnected Distribution Network with the implementation of a smart network and smart meter architecture for the benefit of all stakeholders in the electricity market.
- Supporting distributed generation through net metering, demand forecasting, etc.
- Serving consumers through demand management systems for the optimum use of the distribution infrastructure so as to satisfy the needs of consumers in the most economical way.
- Providing the necessary ancillary services for the efficient operation of all active elements connected to the Distribution Network.

In the framework of its role as Distribution System Operator, the Networks Business Unit, among others:

- Managed the penetration of the following Photovoltaic Systems:

Photovoltaic Systems	Number of Producers	Total Installed Capacity (kW)
Net Metering	10 360	33 213
Autoproducers	94	4 277
Other systems through the purchase of electricity	1 936	75 041

- Undertook the management of the GREEN+ proposal, which was submitted by the Republic of Cyprus and approved by the European Commission in the context of the NER 300 project. It is an ambitious proposal which, if implemented as a project, will be a pioneering application of smart networks and distributed generation in environmentally sensitive areas, mainly in the Troodos region.
- Operated and managed the e-charge electric vehicle charging system with the aim of supporting the use of electric cars in Cyprus. At present, the system has 18 charging points. Also, an entire system for checking and monitoring electric vehicle charging points was installed and brought into operation. Proposals have been submitted to various stakeholders for expanding the charging infrastructure with additional points within the region of the Municipality of Nicosia and fast charging points on highways. In 2017, a decision was taken to expand the e-charge service with twelve (12) additional semi-fast charging points and six (6) fast charging points throughout Cyprus. The number of e-charge customers, as well as electricity sales, rose sharply during the year in review.
- Participated in various research projects, aiming in technology and technical solution development to help the electrical network to effectively and better integrate RES, both from a technical as well as from an economical point of view. These are projects showcasing the aforesaid technologies and solutions to help raise the level of technological readiness and make them widely implementable in the everchanging environment.
- H2020, LCE02, GOFLEX (Generalized Operational FLEXibility for Integrating Renewables in the Distribution Grid) <https://www.goflex-project.eu/>

- H2020, LCE04, FLEXITRANSTORE (An integrated Platform for Increased FLEXibility in smart TRANSMission grids with STORAGE Entities and large penetration of Renewable Energy Sources) <http://www.flexitranstore.eu/>
- H2020, LCE02, inteGRIDy (integrated Smart GRID Cross-Functional Solutions for Optimized Synergetic Energy Distribution, Utilization and Storage Technologies) <http://www.integridy.eu/>
- Interreg Mediterranean, Priority Axis 2 - Environment, StoRES (Promotion of higher penetration of distributed PV through storage for all) <https://stores.interreg-med.eu/>
- Interreg Balkan-Mediterranean, Priority Axis - Environment, PV-ESTIA, Enhancing storage integration in buildings with Photovoltaics) <https://www.pv-estia.eu/>
- SOLAR-ERA.NET Transnational Calls, PV4.3, INFORPV (Innovative Forecasting PV Energy Yield Solution for Sustainable Large Scale Deployment) <http://www.pvtechnology.ucy.ac.cy/pvtechnology/projects/inforpv/>

#### System Control and Data Acquisition / Distribution Management System (SCADA/DMS)

In 2017, in conjunction with its Consultants, the EAC continued with the preparation of the Technical Specification of the implementation of an integrated SCADA Distribution Management System (DMS). Furthermore, in 2017 progress was made in other important matters such as the market of remotely controlled equipment for Medium Voltage Substations and the promotion of central monitoring of the quality of power. The project includes the essential hardware and software as well as the establishment of the National Distribution Monitoring Centre (NDMC) and the Emergency Distribution Monitoring Centre (Emergency DMC). Progress has also been made in the construction works in the Central Offices where the NDMC will be established.

Through the aforementioned Monitoring Centres and the management applications for the SCADA/DMS system, a complete management of the Distribution Network will be achieved, as well as an effective management of the increasing penetration of electricity generation from RES, which will also contribute to the maximization of the network's capacity to absorb this kind of generation. This is why this project is of the utmost importance for the EAC and Cyprus in general. Connecting the SCADA/DMS system with the GIS Network

Data Management System (GeoDiaS) and the special outage management system (OMS) which will be integrated in the SCADA/DMS system, are the valuable tools for the minimization of power cuts for consumers and other users of the network and will help to improve the quality of services provided.

#### Distribution Network Development Studies

The Distribution Network Development Studies are carried out and monitored by the relevant departments of the Area Offices. The Studies and Planning Department of each Area Office deals with Studies/Planning and the publication of Connection Terms and Conditions. The main work in the area of Studies is the management of applications from consumers or producers for connection to the EAC Network and all the study related tasks, obtaining government approval and consent. The Connection Terms and Conditions Department deals exclusively with the publication of Connection Terms and Conditions for Applicants. In order to expand and develop the Distribution System, 4,582 studies were completed by the Area Office Study Departments in 2017 compared with 4,482 in 2016, an increase of approximately 22.3%.

#### User Assistance/Inspection of Installations

The main work of the Department includes the following:

- Providing assistance to Network Users regarding electrical/technical issues.
- Providing assistance to Network Users regarding Quality of Supply.
- Carrying out on-site inspections for connections to the current Low Voltage Network.
- Revenue Protection/Monitoring meter accuracy/Investigating meter faults.
- Tampering/Theft/Recording Damage to meters.
- Inspection/Re-checking of electrical installations of consumers and producers.
- Ensuring compliance with the current legislation regarding the inspection, connection and availability of electricity from Renewable Energy Sources.
- Ensuring compliance with the terms and conditions governing access to and use of the Distribution Network and with the Distribution Network market rules.
- Informing the Operations Department of problems on the Distribution Network.

This work is mainly carried out by the User Assistance/Inspection of Installations departments of the Area Offices.

During the year in review, the User Assistance Department proceeded with the implementation of the ISO 17020 standard with the objective of being accredited in the following fields:

- On-site inspection of installations
- Inspection of photovoltaic systems
- On-site inspection of meters
- Network quality measurement

#### Ring-fenced Measurement Recording Department

The main tasks of the Department are the following:

- Meter reading and recording
- Recording of interventions to EAC equipment
- Gathering metering data
- Data processing and monitoring
- Sending data to suppliers
- Supplier change process

During the year in review, a tender was awarded and a new software was implemented on a new meter reading system, as well as new meter readers. It is estimated that in the following year, this system will be fully used in other meter related areas. The specific department is operationally ring-fenced and its personnel are located in specific parts of the Area Offices.

#### Meter Data Management System (MDMS)

In 2017, in conjunction with its Consultants, EAC has proceeded with the detailed design and issue of a Tender for the implementation of a complete Meter Data Management System.

This project shall include all the necessary infrastructure on the inspection, management and storage of the total of readings collected from meters of electricity consumption and generation, in accordance with the requirements of the Electricity Market Regulations.

#### GIS Network Data Management System (GeoDiaS)

The GeoDiaS GIS Network Data Management System operates with the Geographical Information System (GIS) system at its core and constitutes the infrastructure within which the dynamic management of the Planning, Energising, Operation and Connections of the electricity network takes place.

The GIS is responsible for the dynamic management of the whole of the electricity and electronic communications systems and is updated constantly through the constant and systematic work of the technical departments across the whole network, thereby securing its dynamism and electrical function. The full operation of the GIS systems supports daily data updates and the management of the electricity system.

Work is carried out in the framework of the strict operating processes of the GeoDiaS system, including the certification and monitoring of the quality of the Network data updates, and the strict workflow management system.

With the whole Medium and Low Voltage Distribution System being recorded, attention is now focused on network data quality assurance, both for current and for new recordings. Updating the system includes 30% of connected network users and completion of all connections is being concluded at a rapid pace. At the same time, the active generation capacity from RES is maintained with the technical characteristics of each system. In mid of specific applications, the GIS also governs the applications received by EAC, the views towards Government Authorities and the process of establishing new Distribution Sub-stations.

During the year in review, the needs and specifications for the implementation of the “Designer” system were established with the supplying company “Schneider Electric” regarding the completion of the Electricity Distribution Network expansion studies.

As regards the Transmission System, all transmission substation premises and monitoring buildings, the route and circuits of the overhead power lines and underground cables, together with their connections, have been registered. Improvements to various parts of the Transmission System, such as the overhead and underground networks and the substations, are continuing at a rapid pace.

In 2017, the GIS obtained the third international award and it was featured in the 32nd edition of the annual series of Map Books issued by Esri (<http://www.esri.com/esri-map-book/#/details/22/0>), which includes approximately 100 examples of applications in various matters from around the globe. It is noted that the feature was the sole feature in this edition on electrical companies.

## DISTRIBUTION SYSTEM OWNER (DAO) UNIT

The Distribution System Owner (DAO) Unit deals with the entire range of work relating to the expansion, reinforcement and maintenance of the Distribution Network and the Telecommunications Network with the aim of responding to the present-day needs of the Electricity Authority and, more generally, the needs and demands of the country’s economy and society.

#### Construction

Distribution Network development projects are implemented and monitored by the responsible departments of the Area Offices. The cost of construction work for the expansion and development of the Distribution System in 2017 amounted to some €20,291,608 corresponding to 3,784 construction files/studies.

Specifically, in 2017, 158 kilometres of Medium Voltage and Low Voltage overhead power lines were installed, together with 226 kilometres of Medium Voltage and Low Voltage underground cables. Some 156 overhead transformers were installed and 53 distribution substations were established.

#### Maintenance

In the framework of implementing a Project Management environment across the entire network workload, all distribution network maintenance work was planned, monitored and managed as a single major annual project of the Distribution System Owner (DAO) Unit.

For the maintenance of the Low Voltage (LV) Network in 2017, patrols and tree pruning took place along an LV line length of 4,250 km. For the maintenance of the Medium Voltage (MV) Network, a total of 5,685 km of MV lines were patrolled, pruning took place and vegetation was cleared along a total of 5,851 km of MV power lines. Additionally, 958 equipment earthing systems were inspected and 177 were repaired while simple equipment maintenance was carried out in a further 199 cases.

As regards Transmission Substation maintenance, annual work was carried out on 2,695 substations, twice-yearly maintenance took place in 1,042 substations and ten-year maintenance was carried out on 107 Transmission Substations.

#### Technology, Specifications and Code of Practice

Among the responsibilities of the DAO Unit are the monitoring of developments in power distribution technology, the drawing up and updating of technical specifications for all Distribution Network equipment and materials. The Unit is also responsible for

the preparation of Codes of Practice and Construction Methods as well as Distribution Network Technical Manuals and Processes.

These technical specifications are under constant revision due to changes to International Standards, improvements in technology or changes in the use of materials. There are, in total, 235 approved technical specifications concerning 1,295 materials, 55 technical instructions and 39 Distribution Network procedures. In 2017, 31 technical specifications, 7 technical instructions and all Distribution Network procedures were revised.

At the same time, the DAO Unit provides technical support on issues of cooperation with strategic partners and of connections for producers using RES and other distributed generation to the Distribution Network.

#### Supply Chain Management

In order to satisfy the need for expansion, upgrading and maintenance of the Distribution Network, the DAO Unit maintains stocks of materials and equipment.

The single Distribution Supply Chain consists of the Distribution Network Materials Management Team, the Central Distribution Storage and the Area Storage.

The operation of the Central Distribution Storage and the centralised system of replacement of stocks by the DAO Unit has contributed substantially to a reduction of the accumulated Distribution Network material stocks held by the EAC. Stocks are now regulated dynamically according to the needs of technical/ financial studies as well as for Distribution Network material requirements of the past 12 months.

As of 31/12/2017, the total value of Distribution Network Material stocks (Central Storage, Area Storage and MRTC) amounted to €20,049,574.

#### Evaluation of Tenders and Contract Management

During 2017, the Network Purchase Department (NPD) issued 59 Category A Procurements. During the same time, the DAO Unit personnel participated in the evaluations of 7 large scale tenders (Category B- Community), 3 large scale tenders (Category B – Non-Community) and 43 small scale tenders (Category A), while managing 63 material supply contracts, 11 service provision contracts and 5 contracts related to both small scale (Category A) and large scale (Category B) projects.

For these contracts, quality control is carried out on materials in accordance with European and International Standards, type and design testing takes place in independent testing laboratories, routine and acceptance tests are held at the manufacturers’ labs, materials are checked upon delivery to the storages and network testing is also carried out.

### Vehicle Fleet Management

The DAO Unit is responsible for the management of the EAC's fleet of vehicles.

During the year under review, a large number of old cars was replaced, while the process of replacing more old cars is scheduled, on the one hand to reduce maintenance costs and, on the other, to lower fuel consumption and the EAC's carbon footprint, thereby making a serious contribution to the lowering of CO2 emissions and the limitation of environmental pollution.

In an effort to promote the use of electric vehicles in Cyprus and to further contribute to reducing pollution, having installed a number of charging points across the island, the DAO Unit has proceeded to purchase of six electric cars which will be used on a daily basis by staff of the Area Offices and the Authority's Head Offices.

### Area Offices - Construction and Maintenance

The Construction and Maintenance Departments of the EAC's Area Offices fall under the jurisdiction of the DAO Unit.

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

The responsibilities of the Construction and Maintenance Departments of the Area Offices include the expansion, reinforcement, improvement and maintenance of the Distribution Network, the installation of overhead power lines, the construction of overhead and underground feeders for connecting consumers, meter installation, cable laying/connection, the construction and commissioning of distribution substations, monitoring and supervision of contracted distribution project work, the installation of Street Lighting in new network development or expansion areas, and the disconnection and reconnection of consumers at the request of the Distribution System Operator. Furthermore, annual/two-yearly distribution substation maintenance is undertaken, together with maintenance of the overhead Distribution and Transmission Network, tree pruning around the power lines and the inspection and repair of earthing systems.

At Area Office level, the Construction and Maintenance Sub-unit also responsible for the detection, investigation and reparation of faults, as well as the operation of Emergency Crews that deal with immediate repairs and network-related consumer complaints on a 24-hour basis.

Vehicle fleet management is also carried out at a local level.

### Electronic Systems and Telecommunications

The Electronic Systems and Telecommunications Department deals with the design, installation, operation, maintenance, repair and upgrading of the EAC's electronic, telecommunications, fire detection, fire extinguishing and protective security systems, and with maintaining strategic telecommunications partnerships as well as technical support for other units of the EAC and the Cyprus TSO.

In 2017, the Department dealt with the maintenance, development, upgrading and operation of the following systems:

- The EAC's Optical Fibre Network, which interconnects its Transmission Substations, Power Stations, Offices, Storages and other premises of the Authority.
- The SDH/PDH and Metro/Ethernet Optical Fibre Telecommunications Systems, which uses digital multiplexers to interconnect the EAC's installations with the objective of catering for the requirements of the SCADA/EMS systems, Transmission Line Teleprotection, Telephony, Load Management (Ripple Control), IT and other services.
- The 10 G IP/MPLS Optical Fibre Telecommunications System, which is a fast, new generation telecommunications network that responds to the EAC's data transfer requirements via its own optical fibre network.
- The Supervisory Control and Data Acquisition and Energy Management System (SCADA/EMS), which controls the Generation, Transmission and Primary Distribution Network systems via the Energy Control Centre (ECC) and the Area Control Centres.
- The Load Management System (Ripple Control), which is used for controlled load management on customer premises (solar heaters, centralised climate control systems, water pumps, etc.) plus street lighting, using the Transmission and Distribution Networks as a telecommunications tool.
- The M2M Wireless Communication System, which is used for secure wireless communication with the equipment of the Virtual Power Plant, Electric Vehicle Charging Points, Smart Meters and remote SCADA/EMS terminals.
- The Telecommunications Networking that consists of the EAC's connected telephone systems in all locations and connections of the existing telephone network with the Customer Contact Centre system.
- The Wireless Communication Network (Radiotelephones).

In addition to the above, work continued on the installation of Security Systems, Access Monitoring Systems, Alarm Systems and Monitoring with Cameras at high risk installations, new Fire Detection and Fire Extinguishing systems were installed in EAC buildings and new Security Guard service contracts were signed for the Area Offices and Customer Service Centres across Cyprus.

### Meters and Metering Equipment - MRTC

The main task of this Sub-unit is the management of all EAC meters and relevant equipment.

During the year under review, the following were achieved:

- Replacement of 3,825 electric low voltage meters with new electronic meters, primarily related to domestic and small commercial consumers of EAC.
- Replacement of 984 old electronically programmed Low and/or Medium Voltage meters, related to large (monthly) commercial and industrial consumers of the EAC.
- Programming and customization of 4,212 Low and/or Medium Voltage meters for the implementation of the new STOD tariffs, related to the meters of all large (monthly) commercial and industrial consumers of the EAC.

## TRANSMISSION SYSTEM OWNER (TAO) UNIT

The Transmission Network is the backbone of the EAC's system, connecting the power stations to the load centres. Development works respond to the ever-increasing demand for electricity and, at the same time, increase the reliability of the Transmission System.

Transmission System planning, development and maintenance work is carried out by the Transmission System Owner, in accordance with the development plan and the terms of the Transmission Control Protocol and the Cyprus Transmission System Operator.

In addition, it carries out any other necessary tasks in accordance with the development plan and informs the Cyprus Transmission System Operator and CERA within a timeframe determined by a decision of CERA about the measures it intends to take for the implementation of the development plan in accordance with the Transmission Control Protocol.

During the year in review, the installed capacity of the transmission substations increased by 8.5 MVA.

### Construction Projects

In 2017, the following development and upgrading works were carried out on the Transmission Network:

#### Upgrading/Dismantling of Substations

- **Ieratiki 132/11kV Substation in Nicosia**  
In January 2017, work was completed on replacing a 31.5 MVA transformer with a new 40 MVA one.
- **Tseri 132/11kV Substation in Nicosia**  
In November 2017, the a 132kV 75MVAR conductor was installed and set into operation.
- **Dasoupoli 132/11kV Substation in Nicosia**  
The Substation's automation system has been upgraded.
- **Orounta 132/11kV Substation in Nicosia**  
The measuring device in the "Nikitas" circuit has been upgraded.
- **Alambra 132/11kV Substation in Nicosia**  
A 132kV 75MVAR conductor has been installed. It will be set into operation in early 2018.
- **Moni 132/22kV Substation in Limassol**  
Construction work has begun on the above transmission substation and is expected to be completed in late 2018.
- **Main Gate Primary Substation in Akrotiri**  
Construction work on the Substation's building has been completed. In Spring 2018 the electrical equipment will be fully installed and set into operation.
- **Kolossi 132/11kV Substation**  
The Substation is undergoing upgrading to 22-11kV, which will be completed in Spring 2018

#### Overhead Power Lines/Underground Transmission Cables

- **Ypsonas-Trimiklini 132kV overhead power line**  
Work on the middle department of the line in the Lania area remains at a standstill.
- **Vasilikos-Moni 132kV overhead power line**  
Construction work of the above interconnection has begun and it is expected to be completed in late 2018. Moreover, the tender for the cable of the interconnection has been awarded and the cable is expected to be installed within 2018.
- **Vasilikos-Mari-Kophinou 132kV overhead power line**  
Construction work of the above interconnection has begun and it is expected to be completed in late 2018.



#### Transmission System Development Studies

In 2017 the following studies were prepared in collaboration with the Transmission System Operator (TSO):

The following studies were completed and approved for Nicosia and the surrounding area:

- Revised study for the upgrade of the Moni 132/66kV Transmission Substation to an open type G.I.S. 132kV 2x40MVA.  
The following studies are also planned:
- Replacement of 132kV GIS equipment at the Strovolos Substation.
- New Vasilikos-Mari-Kophinou overhead power line (Rubus Twin).
- New Kophinou-Alambra overhead power line (Rubus Twin).
- New “Casino” Transmission Substation in Zakaki.
- Second circuit at the Athalassa Substation for connection with the occupied areas.
- Replacement of 300mm<sup>2</sup> oil cables of the Strovolos-Ieratiki interconnection with 800mm<sup>2</sup> XLPE cables.
- “New Harbour” Primary Substation in Limassol

#### Other studies:

The following studies have also been completed:

- EAC’s Ten-Year Transmission System Development Plan 2018 - 2027, which is sent to the CTSO in order to prepare the Ten-Year Transmission System Development Plan 2018-2027 by the CTSO.
- Study on the safe penetration of RES in conjunction with the Update of the National Action Plan RES 2015-2020.  
The following studies are also planned:
- EAC’s Ten-Year Transmission System Development Plan 2019-2028.
- Continuous Modelling of the Transmission System and Equipment and System Analysis.
- RES Penetration study 2012-30.

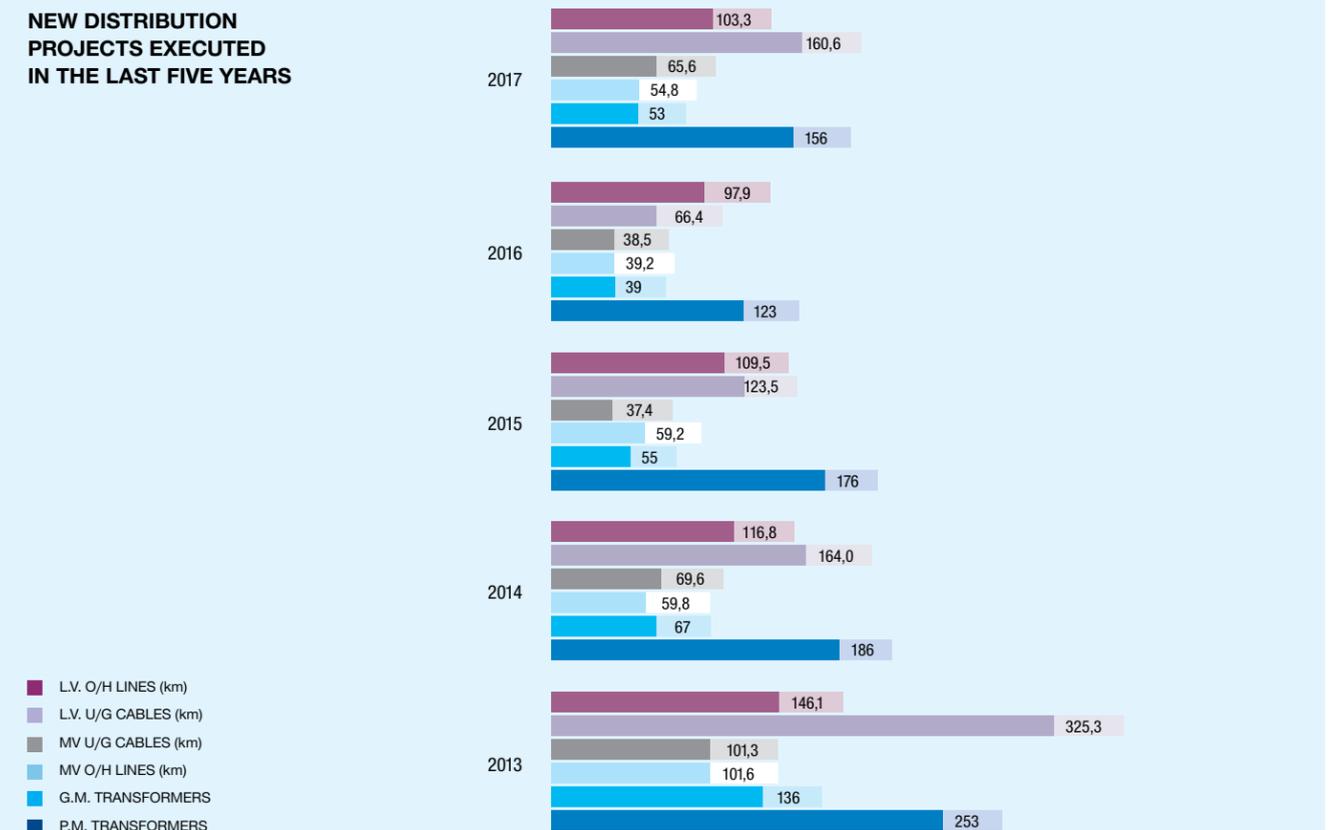
All Transmission System studies are carried out in collaboration with the Cyprus Transmission System Operator (CTSO) which is directly responsible for the operation and development of the Transmission System.

#### Transmission Network Maintenance

In the framework of creating a Project Management Environment across the complete range of Network works, all Transmission Network maintenance work was planned, monitored and managed as a single, unified, annual major Network project. It was 91% implemented.

Figure 6

#### NEW DISTRIBUTION PROJECTS EXECUTED IN THE LAST FIVE YEARS



# non-regulated services management

Based on the Cyprus Energy Regulatory Authority Operational Unbundling Decision 04/2014, the Authority has proceeded with the establishment of the Non-Regulated Services Management, comprising all non-regulated services of EAC.

The Non-Regulated Services is directly under the administration of the General Manager of EAC.

The Non-Regulated Services operating in a clear manner, separately from the Core Regulated services and their pricing is done separately from these services in a fair and transparent way. Management's responsibility amongst other is the exploitation of expertise and infrastructure owned by EAC with an objective to develop new profitable Services and the submission for the creation and development of new services.

The EAC may carry out Services in fields related to the operation and development of its assets, its technical capabilities, facilities, services and expertise, with the consent of the Minister of Energy, Commerce, Industry and Tourism. Therefore, EAC always receives advance permission from the Minister before deciding to engage the Non Regulated Services Management with a new activity.

The Non-Regulated Services cover a wide range of services, which among others are the following:

1. Inspection of internal electrical installations
2. The maintenance / replacement of street lighting
3. Other contractors eg maintenance, installation and inspection of third parties' electrical equipment (eg cables, transformers, relays, circuit breakers, etc.)
4. The operation and maintenance of Desalination Plant at Vasilikos Power Station

5. Operation and maintenance of Photovoltaic Park in Tseri
6. The design, supply and installation of photovoltaic systems for third parties
7. The use and exploitation of existing telecommunications infrastructures for commercial Services, other than the use for the needs of the energy network (telecommunication network rent to Strategic Partners)
8. Management of the Rental Contracts for the Fuel Tanks at Vasilikos Power Station to Cyprus Organisation for Storage and Management of Oil Stocks

During this year the Non-Regulated Services provides consulting services as well as technical services to the following (in some cases memorandum of understanding have been signed):

1. University of Cyprus (study and installation of a photovoltaic park with a capacity of 5MW)
2. The Ministry of Education and Culture and the Ministry of Energy, Commerce, Industry and Tourism (EAC will undertake the installation of photovoltaic systems on the ceilings of about 400 schools by the method of netting of measurements)
3. Municipalities and Community Councils (study and installation of photovoltaic parks in their area of responsibility and photovoltaic systems in their premises)
4. Post offices (installation of photovoltaic systems in their premises)

Finally, the Management of Non-Regulated Services cooperate with ESCO AHK LTD (subsidiary of the Electricity Authority of Cyprus) to replace the existing High Pressure Sodium street lighting lamps with LED lamps (which contribute to both energy saving and better quality lighting) in Municipalities and Communities.

# internal audit unit

The internal audit at EAC is conducted by the Internal Audit Unit which is directly responsible to the Audit Committee.

The basic activities of the Internal Audit Unit are as follows:

## Assurance activity

The internal auditor assures the Chairman and the Members of the Audit Committee, the General Manager, Executive Business Unit Managers and Managers at Area Offices and Power Stations that:

- Rules
- Regulations
- Procedures
- Decisions of the Members of the Board and Management
- EAC legislation etc.

are implemented without any delay and effectively.

## Consulting activity

The internal auditor makes suggestions which aim to:

- Improve the Organisation's operations
- Add value
- Bring a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance process.

## Main activities

During 2017, the following main activities were carried out:

### Supply of Heavy Fuel Oil at Vasilikos and Dhekelia Power Stations

Members of the Internal Audit Unit attended in 95 cases, the supply of heavy fuel oil at Vasilikos and Dhekelia Power Stations.

The process included sample testing and calculation of the quantity received.

It was established that the process for the supply of heavy fuel oil, was carried out as per instructions and regulations.

### Payments for the supply of heavy fuel oil and calculation of average price

All payment calculations for the supply of heavy fuel oil were checked by the Internal Audit Unit and found to be correct. In addition, the monthly fuel average price calculations were checked and found to be correct.

In addition, the following planned and surprise audits were carried out in all Area Offices, Power Stations and Head Office:

- Electricity bills in arrears
- Meter checks for Big Consumers
- Reports on illegal connections and damages to EAC meters and cut outs
- Issuing of terms for the supply of electricity
- EAC Defined Benefit Plan
- Excavation works for the installation of underground cables
- Surprise cash surveys
- Physical inventory taking at EAC stores based on sampling audit
- Open tenders at EAC Head Office for the supply of materials, equipment and services
- Local tenders for the supply of materials and services

In general, the audit results for the above audits were satisfactory. In a few cases, where weaknesses in the system of internal control were identified, suggestions were made for corrective action.

# general management office

## PUBLIC RELATIONS

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

In 2017 the EAC continued to provide advisory services to all its customers on matters of interest to them. As happens every year, during 2017 lectures were given to organised groups and to EAC customer groups on issues concerning energy saving and the safe use of electricity. The EAC also took part in the interactive exhibition "Your Planet Needs You" that all Elementary students visited. The SavEnergy exhibition was also jointly organized with the Employers and Industrialists Federation and within the framework of the Environmental Management System that the EAC follows, the EAC was involved in the "Let's Do It Cyprus" campaign.

During the course of the year, EAC Public Relations officers visited various primary and nursery schools to talk to the children about the importance of saving energy and the dangers of the unsafe use of electricity. Visits also took place at Vasilikos Power Station, the Desalination Plant at Vasilikos and the Tseri Photovoltaic Park by students, university students and other organised groups.

With the implementation of the new Tariffs of EAC, the Public Relation Department organised a campaign in order to inform the public regarding the new tariffs but also the new bill of the EAC that is now presenting in detail the cost for every regulated services for Power Generation, Transmission, Distribution and Supply.

The Public Relations Department organised the new EAC promotional campaign "Go with the Flow". The campaign is a social initiative that aims to support people in need and to protect the environment at the same time by inviting customers to register simply and quickly through the EAC's website to receive their

electricity bill by e-mail. At the same time, the money saved by EAC for not having to print and post electricity bills for customers opting for the e-bill service will be donated to one of its chosen charities.

Among the constitutive principles of the EAC is social contribution. During 2017 the main axes of the Corporate Social Responsibility program of the EAC was health environmental protection, sports, arts, music, projection of cultural monuments, support to various charitable associations and events. Also, like every year the "Give Light to a Life" event was jointly organised by the Cyprus Anti-Cancer Society and the Electricity Authority of Cyprus.

Life with no memories is an empty life. With this message at heart the EAC visited once again the schools in the Karpas Peninsula where it continued its financial support to the enclaved Greek Cypriot children.

## LEGAL SERVICES

The Legal Services Departments' mission is to provide legal advice and support to the Directors, to the Basic Regulated Activities and the Non-Regulated Activities and to all other Common Services Departments, at the Head Offices and at all EAC Area Offices, on all issues arising from the Electricity Authority of Cyprus activities.

In cooperation with the EAC's legal advisers, the Legal Services Department handles all cases against EAC in the relevant courts and legal action by EAC against third parties.

### Legal Cases Management

In this context, during 2017 the Legal Services Department dealt with the following cases:

- Appeals against EAC by members of staff regarding promotions, appointments, transfers and other demands.

- Third Party Appeals against EAC regarding the installation of EAC network on their immovable property.
- Third Party Legal action against EAC demanding mandatory orders or special or general damages regarding the placing and/or installation of network equipment (pylons, poles and other low or high voltage lines) on their immovable property.
- Third Party Legal action against EAC demanding compensation for damage to their property caused by EAC's works or electricity supply or electricity interruption, voltage fluctuations or loose connections.
- Third Party Legal action by EAC over unpaid final electricity bills.
- Legal action by EAC against third parties who have caused damage to its property and refuse to pay the amount required to repair it.
- Third Party Referrals against EAC regarding compensation that has either already been paid but the landowners have received it with all rights reserved, or not yet been paid for their immovable property which, according to the due process, was expropriated and requisitioned by EAC.

#### Expropriations/Leasing/Property Disputes

The Legal Services Department maintains an archive of all EAC's property regarding its Offices, Stores, Power Stations, Transmission and Distribution Substations.

When the expropriation of land is deemed necessary for reasons of public interest, the Legal Services Department is responsible for the entire process, from the preparation of a detailed report for approval by EAC's Board of Directors to the publication of the relevant expropriation notices and requisition orders.

The Legal Services Department obtains evaluation reports from private valuers regarding the amount of compensation payable by EAC to landowners whose property is affected by its network (pylons and high voltage power lines).

Further to the above, the legal Services Department is responsible for the payment of taxes to Municipalities and Community Councils, as well as filing objections to District Administrations and Municipalities where taxation is being disputed or considered too high.

The Legal Services Department concludes a monthly check for the rental of the Distribution Substations that are built on

government and private land and prepares the payment orders in relation to rent revisions.

Lastly, the Department prepares consent documents for the sale of land in which Distribution Substations are located. The sale is done by auction from Banking Institutions under the Transfer and Mortgage of Property Law of 1965.

#### Insurance Department

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

Further to the above, the Insurance Department deals with cases of accidents involving EAC personnel, damage to property belonging to third parties and to EAC, the insuring of goods imported/exported by EAC, insurance cover for its vehicles and for employees travelling abroad on EAC business.

#### Legal Support and Advisory Services

The Legal Services Department provides legal support, through participation in Evaluation and Working Groups, regarding the drafting of contracts and Memoranda of Cooperation with energy companies and/or other companies in the energy sector, confidentiality agreements for the optimum legal coverage of EAC, and agreements regarding outstanding amounts owed to the EAC as well as other projects.

The Legal Services Department provides everyday legal support and advice, to EAC's Basic Regulated Activities (Generation, Supply, Distribution, Transmission), as well as to all Non-Regulated Activities and other EAC Units, on legal matters pertaining to customer complaints addressed to EAC, to CERA and the Ombudsman, applications for damages, obtaining of consent, customer disconnections, connections and transfers, meter relocations, the provision of customer information and illegal tampering with meters, among other issues.

In addition to the above, the Legal Services Department carries out disciplinary investigations in accordance with EAC's Code of Discipline, it is responsible for the dissemination of new law and legal amendments within EAC and it is also responsible for the legal drafting for new Legislation concerning energy law.

In 2017 as a measure of compliance with EU General Data Protection Regulation 679/2016 (GDPR) a member of the Legal Services was appointed Data Protection Officer (DPO) with a responsibility to consult EAC on data protection and to participate in EAC GDPR Working Group for the full compliance of EAC with GDPR.

## CIVIL AND BUILDING WORKS

The Civil and Building Works Subsection is under the Common Services Unit which is under the General Management Office. The Civil and Building Works Subsection provides its services (both Executive and Supportive) to the whole of the EAC Organisation. Particularly, the Subsection is involved in the whole of the Building and Technical Works/Development Works, such as Networks Business Unit Projects (Transmission and Distribution of Electrical Energy), Development projects of the Generation Unit, the construction of buildings and the maintenance of EAC infrastructure.

The executive services that are provided by the Civil and Building Works Subsection for the construction of new buildings, the adaptation of spaces in existing building envelopes to suit new purposes, the preservation and maintenance of existing buildings, are in relation to the following services:

- Upgrading (both aesthetically and on the basis of energy efficiency) and maintenance of the existing building premises of the EAC Head Offices.
- Upgrading (both aesthetically and on the basis of energy efficiency) of the Lemesos Area Offices.
- The preparation of studies for the Maintenance/Reinstatement of buildings listed as historical heritage buildings; part of EAC's property.
- The establishment of Data Centre within the Head Offices building premises.
- Provision of technical support to the different Management Departments of Area Offices for current issues.

The main supportive services provided by the Civil and Building Works Subsection, are as follows:

- Preparation of Technical and Economic Feasibility Studies for Projects (where required).
- Architectural Studies for ensuring the issuing of Planning Permit.
- Structural analysis and design and the preparation of Architectural and Structural Drawings for the issuing of Building Permit.
- Consultations with third parties (for matters regarding the issuing of Planning Permit and Building Permit).

- Preparation of the necessary documents for the issuing of Tenders.
- Evaluation of Tenders.
- Monitoring and Management of Contracts.
- Management of Contractors Claims and Final Accounts.
- Management of Consultants Claims.
- Supervision of Maintenance/Upgrading Works for EAC existing buildings and infrastructure (Power Stations infrastructure, Transmission Substations, Office Buildings, Customers Service Centers, Stores, etc.).
- Participation – as part of the Design Team - for Firefighting Systems for Transmission System Substations (Open/ Closed Type).
- Provision of Consulting Services for Works regarding the Networks Overhead Power Line system and underground infrastructure.
- Services in relation to the vulnerability of Transmission System Substations building premises vulnerability in a seismic event.
- The training and supervision of EAC's personnel responsible for Building Works for the Maintenance of the Overhead Power Line Transmission Towers and Distribution Substations.

Apart from the above, the Civil and Building Works Subsection participates in the Networks (Transmission and Distribution Systems) Business Unit Projects, in the Development works of the Generation Unit, and in the upgrading/maintenance of all EAC building premises and infrastructures as noted below:

#### Transmission System Works

The Civil and Building Works Subsection is involved in all the stages of the design study for Transmission System Projects. During the year under review, the Civil and Building Works Subsection was involved in the preparation of design studies, drawings and documents for the issuing of Tenders for the construction of Transmission System Substations, which included works in relation to the Substations maintenance and extension (design study, supervision of works and Contract management), and the supervision of the erection and maintenance of high voltage Overhead Power Line Transmission Towers. Also, the Civil and Building Works Subsection was involved in the design, the preparation of drawings, specifications and Tender documents for building and civil works in relation to the installation of security systems in Transmission Substations.

### Distribution System Works

The design study for the adaptation of the Head Offices building spaces for the establishment of SCADA Centre for the issuing of the relevant Tender has been completed.

The Civil and Building Works Subsection is responsible for projects for the Maintenance/Improvement of existing premises, the Overhead Power Line system and underground infrastructure and the upgrading of existing premises on the basis of aesthetics and energy efficiency.

The issuing of Tenders (including the preparation of all the necessary documents/drawings) for the construction and maintenance works for the Distribution System Substations has been completed. The Contract Management of these projects is undertaken by the Civil and Building Works Subsection.

Also, various building works have been carried out under the supervision of the Civil and Building Works Subsection, such as the construction and maintenance of Distribution System Substations, the maintenance of Distribution System Stores as well as the supervision of EAC personnel for the maintenance of Distribution Substations.

### Generation Unit Works

The Civil and Building Works Subsection provided specialised services in relation to the building and maintenance works for the existing building premises and infrastructure and for Development Works of the Generation Unit. The Subsection provided the necessary support in the preparation of design studies, drawings and documentation for the Maintenance and Improvement of EAC Power Stations, in relation to the buildings premises, steel structures, infrastructure, marine works, Tank Farms etc. The Civil and Building Works Subsection also provided services in relation to civil works and for the reconstruction of Seawater Flue Gas Desulphurisation Unit of Generation Unit 3, and natural gas conversion works.

### Supply Department Works

The design study, as well as the execution of works, for the adaptation of spaces for the relocation of Strovolos Customer Service Centre has been completed. Furthermore, works for the upgrading of the energy efficiency of the premises, and maintenance works for the Unit have also been completed. A study for the upgrading of the existing Customers Services Centres is being carried out.

### Non-Regulated Business Projects

The evaluation of buildings energy efficiency (ESCO), projects involving renewable energy sources (such as the development of

Photovoltaic Parks), the development of terminals for the storage of strategic oil supplies, the maintenance of Desalination Works, etc.

### Common Services

The design study for the adaptation of spaces for the establishment of the new EAC Data Centre has been completed and the relevant Tender has been issued. The Civil and Building Works Department also provides specialized services (preparation of drawings/documentation for the issuing of Tenders) in relation to building and maintenance works for existing building premises, the adaptation of existing building premises and outdoor areas.

## ADMINISTRATIVE SUPPORT

The mission of the Administrative Support Section is to provide swift, reliable, professional and efficient logistic responsibility for the management of building and office facilities of the EAC. Mission of the Administrative Support Section, is the management of the Central and Area Offices Archive, the stationery supplies and cleaning items throughout the EAC.

Within this framework, the Administrative Support Section deals with:

### Contract Management

- Agreements concerning the lease of buildings, parking lots as well as warehouses for the needs of the EAC over Cyprus.
- Canteen management agreements.
- Maintenance agreements for the building of the Head Office.

### 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.

### 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 (B.M.S.).
- Photovoltaic system monitoring.
- Access Cards.

### Head Office Archive Operations

This concerns the computerisation of incoming and outgoing correspondence for daily distribution and archiving.

### Purchase and Supply of Stationery and General Provisions

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

## QUALITY ASSURANCE & BUSINESS EXCELLENCE

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

Following the relevant decisions by the Board of Directors in July 2015 a new business unit has been created called Systems Management Business Unit which was later renamed Quality Assurance Unit. The Quality Assurance Unit's mission is the implementation of relevant management systems based on International Standards and Business Excellence Models that will aid EAC to achieve its vision and mission. Implementing management systems is critical to the strategy of the Organisation.

Main aims are standardization of works, continuous improvements at operational level, environmental protection, creating an environment of good health and safety procedures for personnel, design and implementation of a performance management system benchmarking models, continuous risk assessment aiming to reduce risk, business continuity and implementing the corporate social responsibility, fully aware of EAC's responsibility towards society and within the context of EAC's strategic objective towards sustainable development.

During 2017, in the context of continuous improvement, the following actions were carried out:

### Integrated Management System

An audit of the Integrated Management system of EAC was carried out by the Cyprus Certification Company (CCC). The Audit confirmed that EAC's management system satisfies fully both the ISO 9000:2008 and the ISO 14001:2004 standards.

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

The results of the system measuring all performance indicators related to Κ.Δ.Π 571/2005 (legislation regarding Custom Service) are calculated and sent on an annual basis both to CERA and to EAC's top management. These results show that EAC is sensitive and cares about its customer's needs aiming continuously for further improvement.

### Internal Audits

Internal audits were conducted, according to the annual Audit plan, which covered most of the Critical processes of EAC. The aim was to identify areas for improvement and minimising the operational cost. The audit results were presented to the key process owners and the relevant corrective and preventive actions were agreed.

### Updating of records in Intranet Portal

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

During 2017 an update of the Intranet Portal was carried out to comply with the new organizational structure of EAC according to the CERA Regulatory Decision no. 4/2014 for the Operational Unbundling, which implements the corresponding provisions of the EU.

All documents on the Intranet Portal were moved from the old environment to the new one to depict the value chain of EAC.

### Target setting

The procedure for target setting for EAC's key performance indicators has been completed and the targets for all indicators have been approved by the Management Team. All Key Process owners are in the process of finalising their key own process indicators, which are necessary to achieve the Corporate key process indicators and targets.

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

#### **Management Reviews**

Management reviews have been completed and presented to the Management Council. These reviews include all business results for 2016, regarding the Integrated Management system of EAC.

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

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

#### **Health and Safety**

The project aiming to integrate the Health and Safety system with the current EAC Management system (Quality and Environment) has begun. In addition to the integration, the aim is the certification of the Health and Safety system with the OHSAS 18001 standard, as a way to control the OH&S risks and align them with the Organisational OH&S policy and objectives.

#### **Design of EAC's corporate strategy**

Within this continuously evolving environment due to the enforcement of the memorandum by Troika and the liberalisation of the energy market in Cyprus, as well as the market competition EAC is continuously monitoring the implementation level of its strategic and business planning using the balanced scorecard.

All Business Units and Departments are aligned towards meeting the strategic goals and the implementation of EAC's vision, contributing to the operational improvement and sustainability of the Organisation.

#### **Environmental Management Systems**

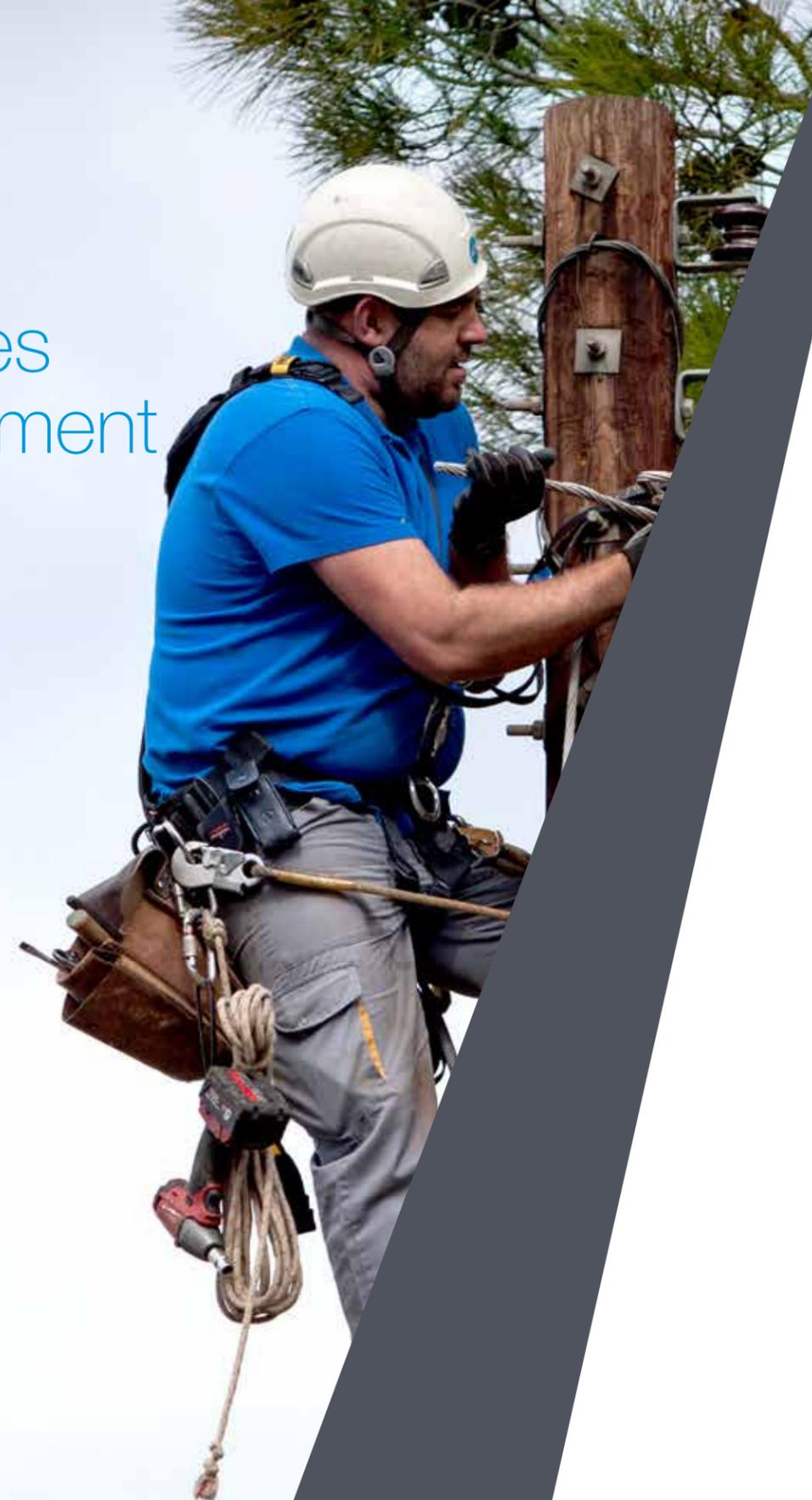
The project aiming to achieve ISO 14001:2004 certification for Vasilikos Power Station was completed in March 2017. All the operations at the Power Station is now certified to the ISO 14001:2004 standard.

#### **Research and Technological Development (RTD)**

Within EAC's efforts to achieve an effective and, at the same time, viable development is the applied scientific research. Scientific research is the foundation block for the creation of innovative and competitive technologies and methodologies. EAC research and development activities have already reached a mature stage with significant success regarding the submission and successful evaluation of scientific research proposals. This success was based on the sufficient know-how and experience of EAC scientific personnel. Through the ongoing participation of EAC in research programs, EAC achieves the partnerships with other technical institutions and research centres, the acquisition of useful experiences and the exchange of knowledge in specialised topics such as, environmental management, renewable energy sources, distributed generation, etc. This results in the development of management abilities regarding new technologies and the acquisition of experiences for the benefit of the Cyprus society.

Staff belonging to all the Departments of EAC's regulated activities forms the team that deals with the research and development projects.

# human resources management



## HUMAN RESOURCES MANAGEMENT

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

	2017	2016
Professional	208	209
Clerical	334	335
Technical	1 434	1 443
Other	47	48
<b>Total</b>	<b>2 023</b>	<b>2 035</b>

«Other» employee refers to 47 employees who their conditions of employment are regulated by a certain Collective Agreement.

### The Authority's pensioners

The total number of pensioners at the end of the year who received pension was 1 270 (including 9 missing persons since the Turkish invasion of 1974) compared to 1 286 at the end of the previous year. In addition 378 pensions were paid to widows and orphans of deceased pensioners/employees compared to 349 at the end of the previous year.

### Manpower indicators and Productivity

Variations in productivity are shown in Figure 7 (page 55) which indicates the relationship between the Authority's manpower, the total units billed and the number of consumers during the ten year period 2008-2017.

The Management of employee sick leaves is a persistent task, thus the Human Resource Management introduced new logistic programs able to get data that would be analyzed in order to find solutions that would better monitor absenteeism due to sickness.

## INDUSTRIAL RELATIONS

The gradual improvement of the economic climate more broadly and the consequent lifting of prohibitive legislative regulations on human resources procedures, enabled the Human Resources Management to steer the solution of the accumulated human resources issues.

Priority was given to the management of the incomplete staffing of both EAC as well as of the Cyprus Transmission System Operator (TSO), since the Electricity Authority of Cyprus has the legal obligation of its staffing.

The actions of the Human Resources Management concerned the preparation and forwarding of staffing needs to the Ministry of Energy Trade, Industry and Tourism and all actions pertaining to filling the vacant post of EAC's General Manager and the removal of the prohibition to fill other EAC vacant posts, were treated with high priority.

Furthermore, the Human Resources Management prepared drafts on new Schemes of Services concerning TSO's vacant posts. These new Schemes of Service were then examined by the Professional Staff's Schemes of Service Committee and finally received the Authority's formal approval.

A number of other contacts of the Human Resources Management with the Unions, examined various labor related matters in a positive and constructive way, which in turn helped in maintaining good labor relations within the Organization.

### EAC's Certification as a Gender Equality Employer

The Electricity Authority of Cyprus, as a Certified Gender Equality Employer is committed to forward actions aiming at promoting and strengthening gender equality, as well as integrating this dimension in its strategic choices.

In this context and in order to inform EAC's employees on gender equality issues, the following actions took place during 2017:

- Training for the Equality Committees members and persons responsible for managing indications of Harassment/ Sexual Harassment on sexism issues, in a workshop, organized by the Gender Equality Committee in Employment and Vocational Training.
- The organizing by the Ammohostos-Larnaka, local EAC committee of a presentation on Equality by the Professional Collaborator to the Gender Equality Committee in Employment and Vocational Training.

Furthermore, regarding the Authority's commitment to promote among women employment awareness on male-dominated occupations, EAC participated in a career fair organized by the Cyprus University of Technology (C.U.T). EAC's representatives, presented the employment opportunities in the Organization for Undergraduate and Graduate students of the CUT. Also, a representative of EAC's HRM, presented the Organization's occupations and employment opportunities to the Latsia High School students.

## HUMAN RECOURSES DEVELOPMENT

### Education and Training

During 2017, 1 854 members of the staff attended 127 in-house courses and seminars, organized by the Authority's Training School, which covered a wide range of topics. It is worth noting that HRM had also 341 additional participations of employees in various open educational programmes and training courses, organized by local educational institutions and organizations, whilst 27 members of the professional and technical staff attended training courses abroad. In total 2 222 participants attended training courses at an overall cost of €68,48 per employee (without taking into consideration the HRDA subsidy). The in-house training courses and the training courses abroad were subsidized by the HRDA with the amount of €6.090.

### Recruitment/ Promotions

Following a council of Ministers decision and the subsequent approval by the Parliamentary Finance Committee, thirteen Managerial vacant posts were exempted from the provisions of the law that prohibits and filling of vacant posts and EAC proceeded and filled the vacancies.

### Retirements/Termination of Employment

During the year six employees reached the retirement age limit, four employees opted for early retirement and two employees were deceased.

## SAFETY, HEALTH AND WELFARE

### Medical Care

During the year the EAC contributed €7.449.038,53 (€7.443.668,89 in 2016) to EAC Employees Medical Fund, as well as €51.260,00 to the Special Medical Fund set up to cover expenses incurred in the treatment of serious cases, in Cyprus and abroad.



**Benevolent Funds**

The EAC'S Employee Benevolent Funds continued to function satisfactorily during the year. The financial aid offered to needy members, pensioners or members of their families, exceeded the sum of €215.000. 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 Electricity Companies after their works were undertaken by the EAC. The members of the Funds, as at 31 December 2017 were 1 906.

**Welfare Funds**

EAC Employees' Welfare Funds continued to provide good service to their members and their families throughout the year, by offering accommodation facilities and other services.

**Long Service Certificates and Awards**

The following Awards were presented:

- The EAC's Long Service Certificates were awarded to four employees, who retired during 2017 upon completing more than 20 years of service.
- The EAC's silver metals were awarded to 14 employees who had completed 30 years of service.

**OCCUPATIONAL HEALTH AND SAFETY**

**Health and Safety Management**

The Electricity Authority of Cyprus, is pledged to achieve high levels on safety standards, continuous improvement of Health and Safety performance indicators and compliance to applicable legislative provisions, for the prevention of incidents which might result in injury to its personnel or the general public. Towards this, the Company developed and implemented an effective and appropriate Health & Safety Management System (HSMS), which serves as an important management tool for the implementation of the health and safety matters in the Organization. The Health & Safety Management System (HSMS) is uploaded on EAC's portal

server and is accessible by all company staff, aiming to become a useful tool in the workplace. An introduction course on the implementation of the "Health and Safety management system", which aims at the continuous development and improvement on occupational health and safety matters within the Organization, has been organised by the Safety Officers in collaboration with the District and Power Stations management.

**Health and Safety in the working environment**

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

In order to ensure compliance with health and safety legislation and good practice we use the Health and Safety Management System (HSMS) to perform internal auditing to identify and remedy any health and safety performance shortfalls. Furthermore, the Safety Officers of the Organisation, in addition to their daily duties, they investigated workplace accidents, dangerous occurrences and hazardous malfunctions, monitored the implementation of the Safety Management System (HSMS), studied Health and Safety plans submitted by the contractors and made recommendations for their completeness and functionality as far as the legislation requirements are concerned. Furthermore, they performed on site safety audits, which covered all the works carried out by the Electricity Authority and gave consultation on health and safety matters to the personnel. Additional audits were also carried out on sub-contracted projects to ensure, that they comply with the health and safety issues and legislations.

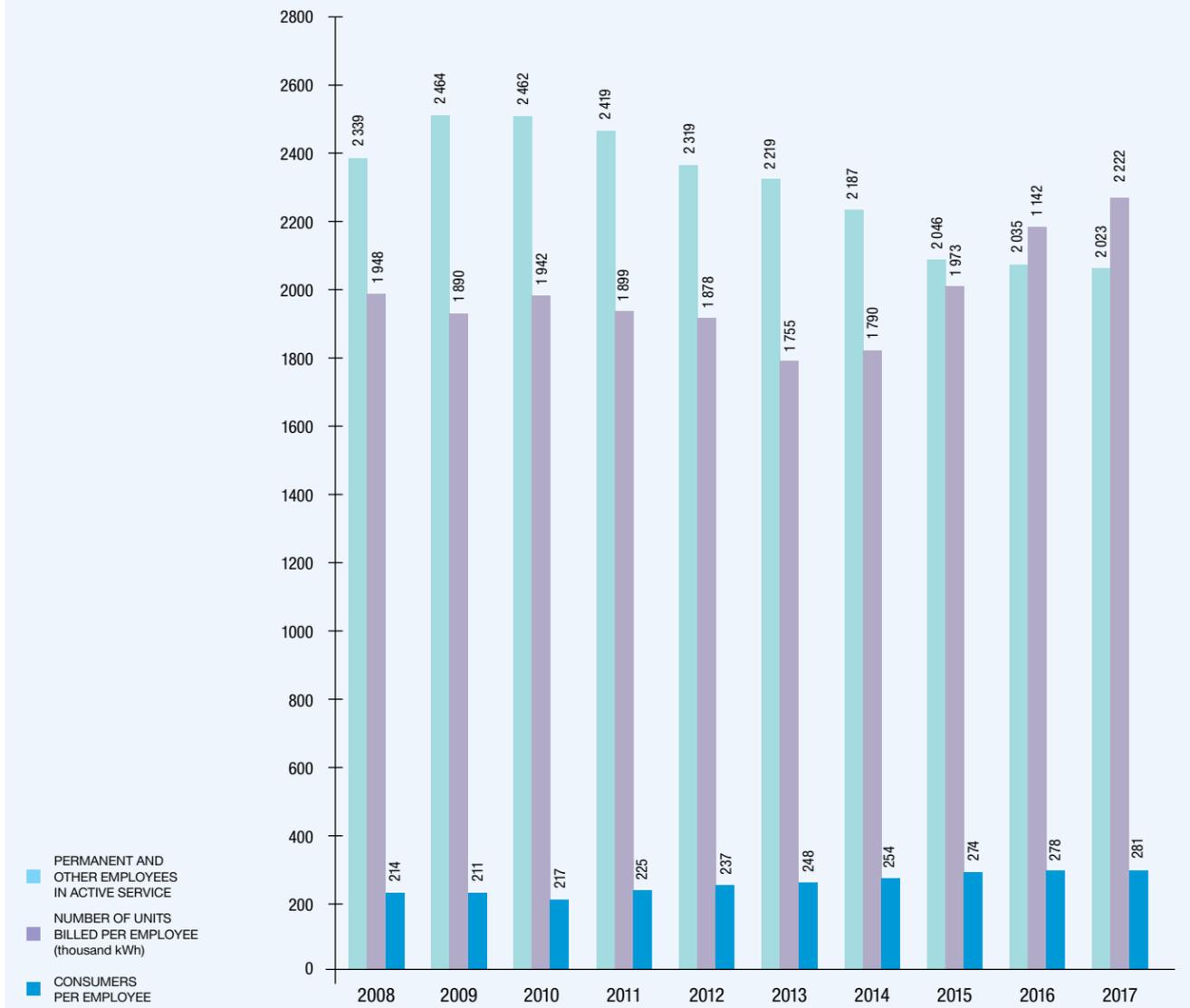
**Education/Training**

The technical personnel, who use mobile man lift equipment or mobile cranes, have been trained and certified according to the Cyprus legislation. Furthermore, a complete refreshing training on working with safety at height was delivered successfully to members of the technical staff, who work in the overhead construction of EAC's District Area Offices. An additional training for safe working practices on roofs was organized for personnel working on the installation of solar systems.

Further training and seminars on Health and Safety matters have been organized during the year by the Safety Officers according to the needs of the Organisation. Furthermore, during the Safety Week, fire drills have been organized in all District Areas Offices and Power Stations.

**Figure 7**

**WORKFORCE INDICATORS**



**Personal Protective Equipment**

The purchase of high quality Personal Protective Equipment (PPE) is ensured through the close cooperation between the Department of Occupational Safety and Health and the Purchasing Department. The specifications of the PPE are continuously adapted to the latest European Standards and when needed, necessary revisions are made accordingly.

**Accidents**

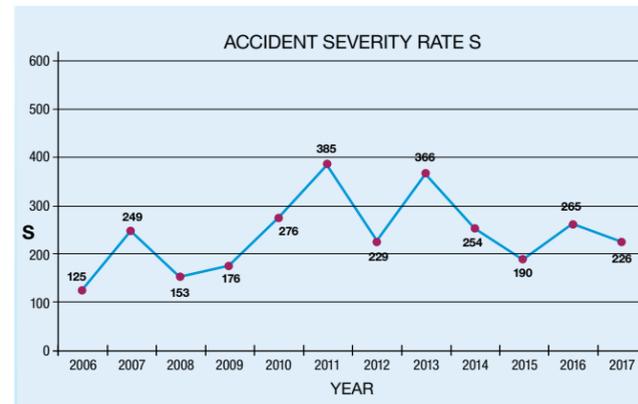
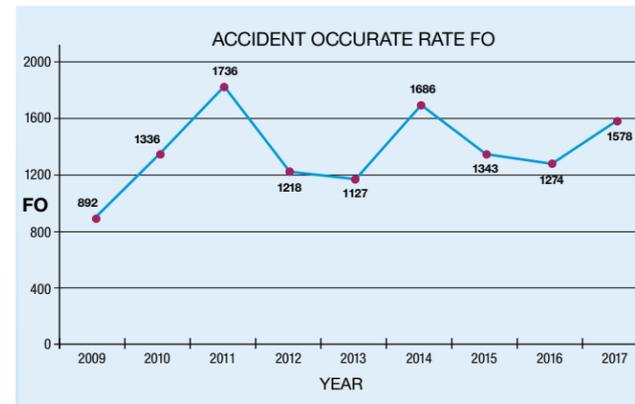
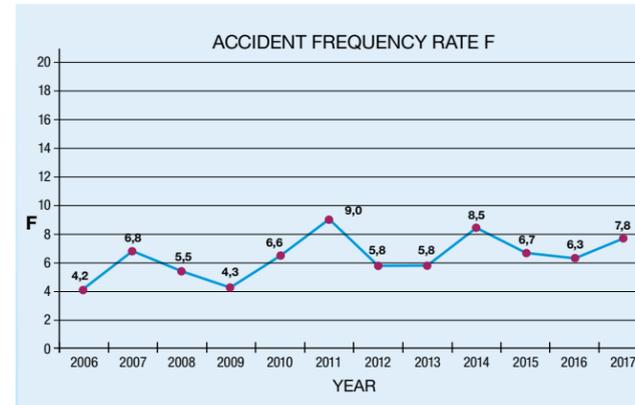
A total number of 31 occupational accidents occurred during 2017, which resulted in the injury of 32 people. Four of those accidents were road accidents. All the accidents have been reported and investigated by the Safety Officers and appropriate measures, to prevent them from happening again in the future, have been taken.

The graphs below show the variation of the three indexes, Frequency Index (F), Severity Index (S) and Frequency of Occurrence (FO) for the period 2006 to 2017. The Frequency index shows the number of accidents in relation to the total worked hours in the Organisation and the Severity Index shows the days lost in relation to the worked hours in the Organisation and the

Occurrence Index shows the number of accidents in relation to the number of employees.

In relation with the previous year, the Frequency Index (F), the Occurrence Index (FO) and the Severity Index (S) have been varied as follow:

The Frequency Index (F) from 6.3 to 7.8 ,the Occurrence Index (FO) 1 274 to 1 578 and the Severity Index (S) from 265 to 226 .



# information technology department



The mission of the Information Technology (IT) Department is to select, provide and support IT systems, to provide Consulting Services to the Authority, and 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.

In this framework, the IT Department deals with:

- The provision of information services.
- The Identification and Evaluation of new IT technologies that will satisfy the Operational Needs of the Authority.
- The development, implementation and maintenance of IT software and systems.
- Technical infrastructure services.
- Security services and Administration.

**During the period January-December 2017:**

Legal regulations/changes for the Human Resources and Payroll systems were successfully completed and implemented in the following:

- The integration of the Automatic Wage Adjustment and the Basic Wage increases in the Payroll
- Pension Scheme (implementation of the new legislation -01.12.2015)

The processes for the new Budget/Planning Consolidation System Software – Labour Cost distribution in the various Business Units are in progress.

The required adjustments in the existing EAC Software Systems have been carried out so as to accommodate the needs for Operational Unbundling of the Authority according to the CERA regulatory decision 04/2014.

The design for the commencement of work concerning the Operational Unbundling of the Customer Care and Billing of EAC was completed. Separate accesses to the System were defined for the Users of Networks and Supply according to the CERA regulatory decision 04/2014.

The modification of the EAC's website so as to incorporate the registration of the consumers who wish to receive their bills via email was successfully completed and implemented.

The consumers will also be able to choose one out of 6 charity institutions to which the money saved from postage cost will be donated.

The implementation of MobileFirst platform was successfully completed. The platform will secure the prerequisites for an improved management of the Authority's Mobile Applications.

The introduction of jBoss Fuse (Red Hat) in high availability environment was successfully completed. JBoss Fuse will constitute a flexible integration platform that will allow the direct interface in real time among the Authority's Software Systems. The platform was successfully used to interface EAC's first mobile Application (under construction) with several of the Authority's software (back-end systems).

Following an Open Tender, the development of the first Mobile Application commenced, targeting the improvement of the Customer service. The Mobile Application is expected to be completed in the first quart of 2018.

Modifications of Prometheus Software were carried out successfully. The Software manages customer requests entered through the Mobile Application (under construction).

The upgrade of the Filenet system catering for Document Management has commenced at specific Organizational units and is expected to be completed in the quart of 2018. The system will provide accessibility to documents via mobile devices (tablets & phones).

The System Center Configuration Manager platform was successfully upgraded from version 2012 to "current branch" version which will be upgraded automatically with the latest available version. The management/support of the organization's computers, via a central platform, becomes more efficient through this upgrade.

The operating system of the Authority's computers is being upgraded from Windows 7 to Windows 10.

The upgrade of Oracle Utilities CC&B software from version 1.5 to version 2.4 was successfully completed and implemented.

The introduction of new Tariffs in the Oracle Utilities CC&B was completed and put into use.

Following an open tender, a new cutting/folding/enveloping machine was purchased, installed and put into use successfully.

Following an open tender, VMware infrastructure was upgraded successfully with additional servers so as to support all the IT Applications, both on the Main and on the Back-up Computer Centers.

Following an open tender, the purchase of a new upgraded Customers' Call Center System was awarded.

The upgrade of Software System SAP to the Enhancement Package 7 (EHP7) ECC6 providing the capability of using state of art development tools was successfully completed.

Steps are being taken for the EAC's compliance with the new EU 2016/679 General Data Protection Regulation which comes into effect as of May 25th 2018.

Following an open tender, the installation of TrendMicro Officescan was successfully completed on all the EAC's computers, portables and towers, as well as on all the servers. The specific software protects computers, whether connected or not to the Organization's network, from malicious software such as, trojans, worms, spyware, ransomware as well as from other yet known variations.

The Tender for INTERNET PERIMETER SECURITY INFRASTRUCTURE was awarded. The tender purports in replacing the existing infrastructure of Perimeter Security with a new, and more advance, one which will provide protection from threats stemming from the internet. The tender aims at the installation of security systems (firewalls) for the protection of the infrastructure within the IT Network (Data Center).

Specifications were prepared, and a tender was issued for the introduction of the Meter Data Management (MDM) system.

A tender was issued for the creation of a new/modern Main Computer Center at the Head Office. The tender also covers the creation of a SCADA computer Center for the Distribution Network.



corporate  
finance unit

## FINANCIAL STATEMENTS

The financial statements of the EAC for the year 2017 together with the supporting statements are set out in pages 67 to 122. The principal financial statistics for the ten year period 2008 - 2017 are summarized in pages 64 to 65.

**Table 3**

### Consolidated income statement for the year ended 31 December 2017 and changes from previous year

	2017	% Increase (Decrease)
	€000	€000
<b>INCOME</b>		
Revenue from Sale of electricity	609.991	94.369
Consumers' capital contributions	22.068	352
Income from Desalination	13.613	906
Other operating income	24.763	222
Finance income	6.047	345
	676.482	96.194
Other losses net	(78)	5.337
<b>OPERATING COSTS</b>	(614.182)	(122.999)
<b>Operating profit</b>	62.222	(21.468)
Finance costs	(2.661)	3.924
<b>Profit before tax</b>	59.561	(17.544)
Tax	(8.871)	2.450
<b>Net profit for the year</b>	50.690	(15.094)
Sales of electricity (million kWh)	4.495,6	137,1

## 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, totaled to €609.991.000 showing an increase of €94.369.000 or 18,3%. The total operating costs were €614.182.000 showing an increase of €122.999.000 or 25,0%. After accounting for finance costs amounting to €2.661.000, there was a profit before tax of €59.561.000 compared to a profit of €77.105.000 in the previous year. After the deduction of tax amounting to €8.871.000, the net profit was €50.690.000 (2016: €65.784.000).

## ANALYSIS OF OPERATING COSTS

Table 4 (page 62) 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 36,5% to €325,15 per metric tonne. The consumption increased by 0,05% to 1 033,1 thousand metric tonnes. As a result of the increase in price the fuel oil bill increased by €89.995.000 to €335.931.000.

The purchase of electricity from third parties €28.213.000 increased by 40,7% due to the increase in fuel oil price.

The total salaries and related costs amounted to €94.726.000 out of which €6.208.000 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 €88.518.000 or 93,5% was charged to the income statement. The increase of €7.956.000 or 9,2% to the total salaries and related costs charge is mainly due to the increase in pension fund contribution.

Materials services and other expenditure were €36.472.000 (increase of €5.508.000 or 17,8%).

The depreciation charge was €97.822.000 (increase of €1.421.000 or 1,5%).

Figure 8

Income, operating costs & profit from operations (euro thousand)



Table 4

Analysis of Operating costs

	2017		Increase/(Decrease) over 2016	
	€000	%	€000	%
Fuel	335.931	54,7	89.995	36,6
Purchase of Electricity from third parties	28.213	4,6	8.154	40,7
Staff costs	88.518	14,4	9.573	12,1
Repairs and maintenance	21.326	3,5	8.121	61,5
Compensation for early retirement	-	-	-	-
Cyprus Transmission System Operator fee	4.130	0,7	200	5,1
Cyprus Energy Regulatory Authority fees	1.770	0,3	27	1,5
Materials, services and other expenditure	36.472	5,9	5.508	17,8
Depreciation	97.822	15,9	1.421	1,5
<b>TOTAL</b>	<b>614.182</b>	<b>100,0</b>	<b>122.999</b>	<b>25,0</b>

CAPITAL REQUIREMENTS AND SOURCES OF FINANCE

Capital expenditure during the year amounted to €45.434.000 compared with €36.923.000 in 2016 (increase of €8.511.000).

The amount paid for taxation during the year 2017 amounted to €1.586.000 (2016: €5.169.000).

Loan and bank overdraft repayments amounted to €75.709.000 (2016: €55.441.000).

The total financing requirements of €122.729.000 were covered from internal sources and consumers contributions. Table 5 below shows the financing requirements during the year and the sources of finance.

Table 5

Financing Requirements and Sources of Finance

	2017		2016	
	€000	%	€000	%
<b>FINANCING REQUIREMENTS</b>				
Tax	1.586	1,3	5.169	5,3
Capital expenditure	45.434	37,0	36.923	37,9
Loan repayments/bank overdraft	75.709	61,7	55.441	56,8
	<b>122.729</b>	<b>100,0</b>	<b>97.533</b>	<b>100,0</b>
<b>SOURCES OF FINANCE</b>				
Profit before tax	59.561	48,5	77.105	79,1
Depreciation less consumers' contributions	75.754	61,7	74.685	76,6
Impairment of property, plant and equipment	-	-	5.516	5,7
Proceeds from disposal of fixed assets	4	-	153	0,2
Consumers' contributions	22.578	18,4	17.633	18,1
Working Capital changes	(35.168)	(28,6)	(77.559)	(79,7)
	<b>122.729</b>	<b>100,0</b>	<b>97.533</b>	<b>100,0</b>

FINANCIAL POSITION AT END OF YEAR

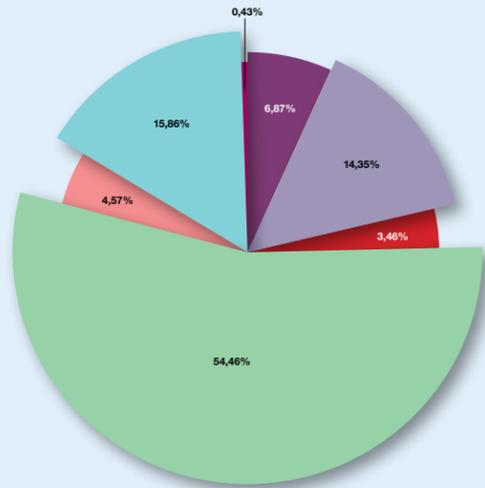
The historical cost of the assets employed at 31 December 2017 was €3.118.486.000 and the accumulated depreciation was €1.441.919.000 or 53,8% of the historic cost. The total net assets at 31 December 2017 were €1.922.382.000. Finance derived from loans (€299.817.000 or 15,6%), other long term liabilities (€508.003.000 or 26,4%), and the balance (€1.114.562.000 or 58,0%) from own sources.

A. MARANGOS  
CHAIRMAN

Figure 9

**EXPENDITURE**  
(Euro Thousand)  
AS PERCENTAGE OF TOTAL EXPENDITURE

- FINANCE COST €2 661 (0,43%)
- REPAIRS AND MAINTENANCE €21 326 (3,46%)
- PURCHASE OF ELECTRICITY FROM THIRD PARTIES €28 213 (4,57%)
- MATERIALS, SERVICES AND OTHER EXPENDITURE €42 372 (6,87%)
- SALARIES AND RELATED EXPENSES €88 518 (14,35%)
- DEPRECIATION €97 822 (15,86%)
- FUEL OIL €335 931 (54,46%)



**CONSOLIDATED BALANCE SHEET AT 31 DECEMBER**

ASSETS (€THOUSAND)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Non current assets</b>										
Property, plant and equipment	1.387.312	1.583.500	1.789.271	1.926.871	1.936.747	1.898.029	1.875.146	1.795.536	1.728.960	1.676.567
Trade and other receivables	1.800	1.845	2.302	2.028	2.242	1.702	631	322	239	5.432
	1.389.112	1.585.345	1.791.573	1.928.899	1.938.989	1.899.731	1.875.777	1.795.858	1.729.199	1.681.999
<b>Current assets</b>	325.719	259.762	329.501	372.388	518.233	460.411	406.043	506.460	594.582	637.941
<b>Total assets</b>	<b>1.714.831</b>	<b>1.845.107</b>	<b>2.121.074</b>	<b>2.301.287</b>	<b>2.457.222</b>	<b>2.360.142</b>	<b>2.281.820</b>	<b>2.302.318</b>	<b>2.323.781</b>	<b>2.319.940</b>
<b>RESERVES AND LIABILITIES (€THOUSAND)</b>										
<b>Reserves</b>										
Revenue reserve	702.809	806.393	879.568	943.913	1.021.516	1.084.727	1.160.933	1.213.561	1.279.345	1.312.660
Actuarial loss reserve	-	-	-	-	22.063	4.763	(239.554)	(155.071)	(263.408)	(213.653)
Capital reserve	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555	15.555
	718.364	821.948	895.123	959.468	1.059.134	1.105.045	936.934	1.074.045	1.031.492	1.114.562
<b>Non current liabilities</b>										
Borrowings	334.773	300.750	451.597	403.608	432.447	564.002	472.648	441.596	386.183	299.817
Deferred tax liabilities	98.056	38.402	24.479	27.762	36.103	51.596	57.066	65.804	75.673	82.958
Deferred income	382.973	406.250	428.704	441.808	447.544	443.403	437.020	429.443	425.008	425.045
	815.802	745.402	904.780	873.178	916.094	1.059.001	966.734	936.843	886.864	807.820
<b>Current liabilities</b>	180.665	277.757	321.171	468.641	481.994	196.096	378.152	291.430	405.425	397.558
<b>Total liabilities</b>	<b>996.467</b>	<b>1.023.159</b>	<b>1.225.951</b>	<b>1.341.819</b>	<b>1.398.088</b>	<b>1.255.097</b>	<b>1.344.886</b>	<b>1.228.273</b>	<b>1.292.289</b>	<b>1.205.378</b>
<b>Total reserves and liabilities</b>	<b>1.714.831</b>	<b>1.845.107</b>	<b>2.121.074</b>	<b>2.301.287</b>	<b>2.457.222</b>	<b>2.360.142</b>	<b>2.281.820</b>	<b>2.302.318</b>	<b>2.323.781</b>	<b>2.319.940</b>

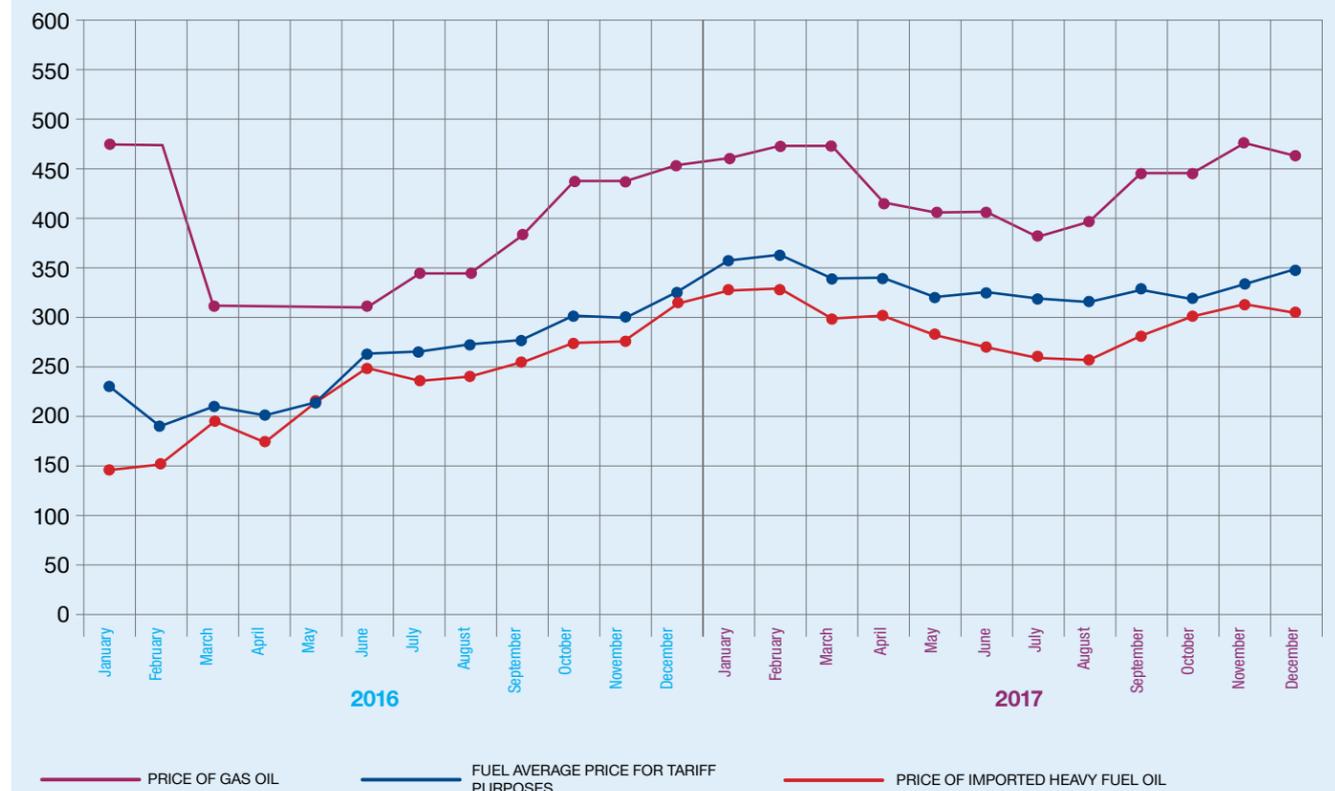
Table 6

**PRINCIPAL FINANCIAL STATISTICS 2008 2017**

DURING THE FINANCIAL YEAR TO 31 DECEMBER	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Units sold (million kWh)	4.556	4.656	4.782	4.595	4.356	3.890	3.915	4.036	4.358	4.496
Consumption in the turkish occupied area (million kWh)	9	8	8	7	7	6	6	2	3	4
Total units (million kWh)	4 565	4 664	4 790	4 602	4 363	3 896	3 921	4 038	4 361	4 500
<b>Installed capacity (MW)</b>	1 168	1 388	1 438	965	1 493	1 598	1 478	1 478	1 478	1 478
<b>INCOME (€ THOUSAND)</b>										
Sales of electricity	736.215	627.253	776.390	857.776	966.552	796.930	721.137	574.038	515.622	609.991
Consumers capital contributions	15.389	16.655	17.855	19.047	19.973	20.698	21.119	21.447	21.716	22.068
Temporary Generators Cost Recovered by the Republic of Cyprus	-	-	-	17.229	31.702	-	-	-	-	-
Compensation from insurance	-	-	-	-	89.301	61.790	1.000	-	-	-
Temporary surcharge	-	-	-	19.858	61.680	8.047	-	-	-	-
Other operating income	5.575	5.846	15.174	10.628	14.129	18.298	30.972	26.592	37.248	38.376
Finance income	2.637	1.377	740	1.579	1.802	2.014	2.040	5.710	5.702	6.047
<b>Total Income</b>	<b>759.816</b>	<b>651.131</b>	<b>810.159</b>	<b>926.117</b>	<b>1.185.139</b>	<b>907.777</b>	<b>776.268</b>	<b>627.787</b>	<b>580.288</b>	<b>676.482</b>
<b>OPERATING COSTS (€ THOUSAND)</b>										
Other losses net	-	-	-	-	76	3.324	21	291	5.415	78
Operating costs	652.539	523.569	622.669	747.364	830.561	659.626	620.328	455.885	394.782	516.360
Temporary Generators Cost	-	-	-	17.229	35.302	-	-	-	-	-
Provision for the non recoverability of temporary generators cost	-	-	-	-	24.465	-	-	-	-	-
Repairs at Vasilikos power station	-	-	-	-	104.508	43.867	1.023	231	-	-
Depreciation	59.703	71.526	75.393	77.056	89.811	94.405	95.244	97.493	96.401	97.822
<b>Total operating costs</b>	<b>712.242</b>	<b>595.095</b>	<b>698.062</b>	<b>841.649</b>	<b>1.084.723</b>	<b>801.222</b>	<b>716.616</b>	<b>553.900</b>	<b>496.598</b>	<b>614.260</b>
Operating profit	47.574	56.036	112.097	84.468	100.416	106.555	59.652	73.887	83.690	62.222
Finance costs	(19.310)	(10.757)	(10.243)	(8.991)	(13.960)	(12.594)	(11.199)	(7.577)	(6.585)	(2.661)
<b>Profit before tax</b>	<b>28.264</b>	<b>45.279</b>	<b>101.854</b>	<b>75.477</b>	<b>86.456</b>	<b>93.961</b>	<b>48.453</b>	<b>66.310</b>	<b>77.105</b>	<b>59.561</b>
Tax	(7.933)	58.305	(10.440)	(7.788)	(8.935)	(20.970)	(6.477)	(9.964)	(11.321)	(8.871)
Provision as a result of the Tax Council Decision	-	-	(18.239)	1.896	-	-	-	-	-	-
<b>Net profit for the year</b>	<b>20.331</b>	<b>103.584</b>	<b>73.175</b>	<b>69.585</b>	<b>77.521</b>	<b>72.991</b>	<b>41.976</b>	<b>56.346</b>	<b>65.784</b>	<b>50.690</b>
<b>RATIOS TO TOTAL INCOME</b>										
Profit from operations (%)	6,3	8,6	13,8	9,1	8,5	11,7	7,7	11,8	14,4	9,2
Profit before tax (%)	3,7	7,0	12,6	8,1	7,3	10,4	6,2	10,6	13,3	8,8

Figure 10

**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 2017

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## Board of Directors and other officers

### Board of Directors

<b>Chairman:</b>	<b>Andreas Marangos</b> (from 18.7.2016) <b>Othonas Theodoulou</b> (until 30.6.2016)
<b>Vice-Chairman:</b>	<b>Michalis Hadjipantela</b> (from 18.7.2016) <b>Demetra Karantoki</b> (until 30.6.2016)
<b>Members:</b>	<b>Elena Tsolakis</b> (from 18.7.2016) <b>Agni Shialarou</b> (from 18.7.2016) <b>Charalambos Artemi</b> (until 30.6.2016 and from 18.7.2016) <b>Christina Zikkou</b> (from 18.7.2016) <b>Yiannis Constantinides</b> (from 18.7.2016) <b>Constantinos Costi</b> (until 30.6.2016 and from 18.7.2016) <b>Michael Komodromos</b> (from 18.7.2016) <b>Alexandra Pelagia-Christodoulou</b> (until 30.6.2016) <b>Michalis Hadjipantela</b> (until 30.6.2016) <b>Nikolas Nikolaou</b> (until 30.6.2016) <b>Loizos Loizou</b> (until 30.6.2016) <b>Giannos Athienitis</b> (until 30.6.2016)

### Legal Advisers:

**Ioannides Demetriou**, Nicosia

### Auditors:

**Auditor General of the Republic**  
**PricewaterhouseCoopers Limited**

## Consolidated Management Report

1. The Board of Directors presents its report together with the audited consolidated financial statements of the Electricity Authority of Cyprus (the "Authority") and its subsidiaries Elektri Ananeosimes Ltd, EAC LNG Investments Company Ltd, EAC Solar Thermal Power Ltd and ESCO AHK Ltd (together the "Group") for the year ended 31 December 2017.

### Principal activities

2. The principal activities of the Group, which have not changed since last year, are 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, knowhow and renewable energy sources.

### Group Changes

3. During the year there were no changes in the Group structure. The Authority does not intend to proceed with any acquisitions or mergers.

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

4. The profit of the Group for the year ended 31 December 2017 was €50.690 thousand (2016: €65.784 thousand). On 31 December 2017 the total assets of the Group were €2.319.940 thousand (2016: €2.323.781 thousand) and the net assets were €1.114.562 thousand (2016: €1.031.492 thousand). The financial position of the Group as presented in the consolidated financial statements is considered satisfactory. The Board of Directors does not anticipate any significant changes in the activities of the Group in the near future.
5. As at 31 December 2017 the Group had 2.023 employees (2016: 2.035) and 568.500 consumers of electricity (2016: 565.556).

### Principal risks and uncertainties

6. The principal risks and uncertainties faced by the Group are disclosed in notes 1, 3, 4 and 26 of the consolidated financial statements.
7. The Cypriot economy has recorded positive growth in 2016 and 2017 after overcoming the economic recession of recent years. The overall economic outlook of the economy remains favorable, however there are still downside risks emanating from the still high levels of non-performing loans, the public debt ratio, as well as possible deterioration of the external environment for Cyprus.
8. Management determined impairment provisions for financial assets carried at amortised cost using the "incurred loss" model required by International Accounting Standard 39 "Financial Instruments: Recognition and Measurement". This standard requires recognition of impairment losses for loans and receivables that arose from past events and prohibits recognition of impairment losses that could arise from future events, including future changes in the economic environment, no matter how likely those future events are. Thus final impairment losses from financial assets could differ significantly from the current level of provisions.

### Financial risk management

9. 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.
10. The Group's risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. Risk management is carried out by a central treasury department under policies approved by the Board of Directors. The treasury department identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

## Consolidated Management Report (cont')

### Market Risk

11. Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's income or the value of its holdings of financial instruments.
12. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

### Foreign exchange risk

13. Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Foreign exchange risk arises when future commercial transactions or recognized assets or liabilities are denominated in a currency that is not the Group's functional currency. The Group is exposed to foreign exchange risk arising from various currency exposures with respect to the US Dollar but believes that any change in foreign exchange rates will not have a material effect on its results.

Management monitors the exchange rate fluctuations on a continuous basis and acts accordingly.

### Cash flow interest rate risk

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

The Group's interest rate risk arises from long term borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk. Borrowings issued at fixed rates expose the Group to fair value interest rate risk. See Note 3 for further disclosures on cash flow interest rate risk.

### Credit risk

15. Credit risk arises when a failure by counter parties to discharge their obligations could reduce the amount of future cash inflows from financial assets on hand at the reporting date. The Group has no significant concentration of credit risk. The carrying amount of financial assets represents the maximum credit exposure.

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

Sales to customers are settled in cash, direct debits or using major credit cards. See Notes 14 and 16 for further disclosures on credit risk.

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

### Liquidity risk

16. Liquidity risk is the risk that arises when the maturity of assets and liabilities does not match. An unmatched position potentially enhances profitability, but can also increase the risk of losses. See Note 3 for further disclosures on liquidity risk.

### Future developments of the Group

17. The Board of Directors of the Authority does not expect any major changes or developments in the operations, financial position and performance of the Group in the foreseeable future.

### Results

18. The results of the Group for the year are presented on page 11. The net profit for the year is transferred to reserves.

### Board of Directors

19. The members of the Board of Directors as at 31 December 2017 and at the date of this report, as well as changes during the year, are presented on page 1.
20. There were no changes in the assignment of responsibilities of the Board of Directors. With the approval of the Council of Ministers there was an increase in the remuneration of the Board of Directors as from 1 January 2017.

### Events after the reporting period

21. Until the date of approval of these Consolidated Financial Statements an amount of €2.238.000 has been received from the insurance company as compensation for the loss suffered by the Flue Gas Desulphurization Plant of Unit 3 of Vasilikos Power Station from the fire incurred on 30 November 2016. The insurance company has accepted full responsibility for the restoration cost and has implemented a procedure for covering this cost. This process has not been completed by the date of approval of these Financial Statements and additional amounts are expected to be received from the insurance company until the full restoration of the Plant.
22. There were no other material events after the reporting period, which have a bearing on the understanding of the consolidated financial statements.

### Branches

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

### Independent Auditors

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

*By order of the Board of Directors*

### Andreas Marangos

Chairman

5 June 2018

Nicosia

## Independent Auditor's report

To: Board of directors of the Electricity Authority of Cyprus,  
Minister of Energy, Commerce, Industry and Tourism,  
Auditor General of the Republic

### Report on the Audit of the Consolidated Financial Statements

#### Opinion

We have audited the consolidated financial statements of the Electricity Authority of Cyprus (the "Company"), and its subsidiaries (the "Group"), which are presented in pages 76 to 122 and comprise the consolidated statement of financial position as at 31 December 2017, and the consolidated statements of profit or loss and other comprehensive income, changes in equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2017, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union, the requirement of the Electricity Development Laws, Cap. 171, the requirements of the Laws Regulating the Electricity Market of 2003-2017 and the requirements of the Cyprus Companies Law, Cap. 113.

#### Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the *International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code)* together with the ethical requirements that are relevant to our audit of the consolidated financial statements in Cyprus, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Other information

The Board of Directors is responsible for the other information. The other information comprises the information included in the Consolidated Management Report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

#### Responsibilities of the Board of Directors for the Consolidated Financial Statements

The Board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union and the requirements of the Cyprus Companies Law, Cap. 113, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the Group's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

## Independent Auditor's report (cont')

To: Board of directors of the Electricity Authority of Cyprus,  
Minister of Energy, Commerce, Industry and Tourism,  
Auditor General of the Republic

### Report on Other Legal Requirements

Pursuant to the additional requirements of the Auditors Law of 2017, we report the following:

- In our opinion, the Consolidated Management Report has been prepared in accordance with the requirements of the Cyprus Companies Law, Cap. 113, and the information given is consistent with the consolidated financial statements.
- In our opinion, and in the light of the knowledge and understanding of the Group and its environment obtained in the course of the audit, we have not identified material misstatements in the Consolidated Management Report.

### Other Matter

This report, including the opinion, has been prepared for and only for the Board of Directors of the Electricity Authority of Cyprus as a body, the Minister of Energy, Commerce, Industry and Tourism, the House of Representatives, and the Auditor General of the Republic in accordance with Section 69 of the Auditors Law of 2017 and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whose knowledge this report may come to.

### Loizos A. Markides

Certified Public Accountant and Registered Auditor  
for and on behalf of

### PricewaterhouseCoopers Limited

Certified Public Accountants and Registered Auditors

Nicosia

5 June 2018

## 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 76 to 122, of the Electricity Authority of Cyprus for the year ended 31 December 2017, submitted by the appointed auditors in accordance with section 3(1) of the Public Corporate Bodies (Audit of Accounts) Laws of 1983 to 2007 and I am satisfied that it is appropriate.

### Other matter

This report has been prepared for the members of the Board of Directors as a body, the Minister of Energy, Commerce, Industry and Tourism and the members of the House of Representatives, as a body, on the basis of the provisions of the Provision of Evidence and Information to the Auditor General of the Republic and the House of Representatives Laws of 2002 to (No. 2) of 2016, Article 109(3) of the Fiscal Responsibility and Fiscal Framework Laws of 2014 to 2017 and of the Financial Audit of Statutory Bodies Laws of 1983 to 2007 and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whose knowledge this report may come.

### Dr Odysseas Ph. Michaelides

Auditor General of the Republic

Nicosia

25 September 2018

*Note: Greek version signed on 14/6/2018*

## Consolidated income statement for the year ended 31 December 2017

	Note	2017 €000	2016 €000
Revenue	5	609.991	515.622
Other operating income - net	6	66.491	64.666
Other losses - net	7	(78)	(5.415)
Operating costs	8	(614.182)	(491.183)
<b>Operating profit</b>		<b>62.222</b>	<b>83.690</b>
Finance costs	10	(2.661)	(6.585)
<b>Profit before tax</b>		<b>59.561</b>	<b>77.105</b>
Tax charge	11	(8.871)	(11.321)
<b>Profit for the year</b>		<b>50.690</b>	<b>65.784</b>

## Consolidated statement of comprehensive income for the year ended 31 December 2017

	Note	2017 €000	2016 €000
<b>Profit for the year</b>		<b>50.690</b>	<b>65.784</b>
<b>Other comprehensive income/ (loss) for the year, net of tax</b>			
<b>Items that will not be reclassified to income statement in future periods:</b>			
Remeasurements of post-employment benefit obligations	9	49.755	(108.337)
<b>Total comprehensive income/ (loss) for the year</b>		<b>100.445</b>	<b>(42.553)</b>

Other comprehensive income/ (expense) is presented after tax. The tax relating to each item of other comprehensive income is shown in Note 11.

## Consolidated statement of financial position at 31 December 2017

	Note	2017 €000	2016 €000
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	15	1.676.567	1.728.960
Trade and other receivables	16	5.432	239
		<b>1.681.999</b>	<b>1.729.199</b>
<b>Current assets</b>			
Inventories	17	119.072	104.410
Trade and other receivables	16	101.577	113.560
Greenhouse gasses emission allowances		349	-
Financial assets at fair value through profit or loss	12	557	635
Tax refundable	18	4.287	4.287
Short term deposits	19	378.687	358.233
Cash and cash at bank	20	33.412	13.457
		<b>637.941</b>	<b>594.582</b>
<b>Total assets</b>		<b>2.319.940</b>	<b>2.323.781</b>
<b>Reserves and liabilities</b>			
Reserves		1.114.562	1.031.492
<b>Total equity</b>		<b>1.114.562</b>	<b>1.031.492</b>
<b>Non-current liabilities</b>			
Borrowings	21	299.817	386.183
Deferred tax liabilities	22	82.958	75.673
Deferred income	23	425.045	425.008
		<b>807.820</b>	<b>886.864</b>
<b>Current liabilities</b>			
Trade and other payables	24	128.222	118.865
Net defined benefit obligation	9	187.740	233.469
Tax liability	18	17.375	-
Borrowings	21	41.680	31.023
Deferred income	23	22.541	22.068
		<b>397.558</b>	<b>405.425</b>
<b>Total liabilities</b>		<b>1.205.378</b>	<b>1.292.289</b>
<b>Total reserves and liabilities</b>		<b>2.319.940</b>	<b>2.323.781</b>

These consolidated financial statements are signed today, 5 June 2018, as a result of the approval and decision of the Board of Directors.

**A. MARANGOS**  
Chairman

**P. OLYMPIOS**  
General Manager

**M. CHARALAMBOUS**  
Executive Manager Finance

## Consolidated statement of changes in equity for the year ended 31 December 2017

	Note	Capital reserve €000	Actuarial losses reserve €000	Revenue reserve €000	Total €000
<b>Balance at 1 January 2016</b>		<b>15.555</b>	<b>(155.071)</b>	<b>1.213.561</b>	<b>1.074.045</b>
<b>Comprehensive income</b>					
Profit for the year		-	-	65.784	65.784
<b>Other comprehensive expenses</b>					
Remeasurement of post-employment benefit obligation	9	-	(108.337)	-	(108.337)
Total other comprehensive expenses		-	(108.337)	-	(108.337)
Total comprehensive expenses for the year		-	(108.337)	65.784	(42.553)
Balance at 31 December 2016		<b>15.555</b>	<b>(263.408)</b>	<b>1.279.345</b>	<b>1.031.492</b>
Balance at 1 January 2017		<b>15.555</b>	<b>(263.408)</b>	<b>1.279.345</b>	<b>1.031.492</b>
<b>Comprehensive income</b>					
Profit for the year		-	-	50.690	50.690
<b>Other comprehensive income</b>					
Remeasurement of post-employment benefit obligation	9	-	49.755	-	49.755
Total other comprehensive income		-	49.755	-	49.755
Total comprehensive income for the year		-	49.755	50.690	100.445
<b>Contributions and distributions</b>					
Defence contribution on deemed dividend distribution		-	-	(17.375)	(17.375)
<b>Total contributions and distributions</b>		-	-	(17.375)	(17.375)
<b>Balance at 31 December 2017</b>		<b>15.555</b>	<b>(213.653)</b>	<b>1.312.660</b>	<b>1.114.562</b>

(1) The Capital Reserve represents a government grant.

(2) Organizations 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 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. Special contribution for Defence was increased from 15% to 17% for the taxable year 2009 and 20% for taxable years 2010-11 and decreased to 17% for taxable years 2012 - onwards. The amount of this deemed dividend distribution is reduced by any actual dividend paid out of the profits of the relevant year by the end of the period of two years from the end of the year of assessment to which the profits refer. This special contribution for defence is paid by the Group on behalf of the Government of Cyprus.

(3) The actuarial losses reserve represents the cumulative losses from the Defined Benefit Plan that were recognized in the Consolidated Statement of other comprehensive income. The actuarial losses arise from changes in the present value of post-employment benefit obligation resulting from experienced adjustments and the consequences of changes in actuarial assumptions.

The notes on pages 80 to 122 form an integral part of these consolidated financial statements.

## Consolidated statement of cash flows for the year ended 31 December 2017

	Note	2017 €000	2016 €000
<b>Cash flows from operating activities</b>			
Profit before tax		<b>59.561</b>	77.105
Adjustments for:			
Depreciation of property, plant and equipment	15	<b>97.822</b>	96.401
Amortization of consumers' capital contributions	23	<b>(22.068)</b>	(21.716)
Loss/(profit) from the sale of property, plant and equipment	7	<b>1</b>	(137)
Impairment charge - property, plant and equipment	15	<b>-</b>	5.516
Interest expense	10	<b>4.163</b>	5.794
Interest income	6	<b>(6.047)</b>	(5.702)
		<b>133.432</b>	157.261
Changes in working capital:			
Inventories		<b>(14.662)</b>	(11.447)
Trade and other receivables		<b>6.799</b>	(24.380)
Greenhouse gasses emission allowances		<b>(349)</b>	-
Financial assets at fair value through profit or loss	7	<b>78</b>	36
Trade and other payables		<b>9.397</b>	16.893
Defined benefit obligation		<b>4.026</b>	(7.798)
<b>Cash generated from operations</b>		<b>138.721</b>	130.565
Tax paid		<b>(1.586)</b>	(5.169)
Net cash from operating activities		<b>137.135</b>	125.396
<b>Cash flows from investing activities</b>			
Acquisition of property, plant and equipment	15	<b>(45.434)</b>	(36.923)
Short-term deposits		<b>(20.454)</b>	(56.461)
Proceeds from sale of property, plant and equipment		<b>4</b>	153
Additions to consumers' capital contributions	23	<b>22.578</b>	17.633
Interest received		<b>6.038</b>	5.662
<b>Net cash used in investing activities</b>		<b>(37.268)</b>	(69.936)
<b>Cash flows from financing activities</b>			
Repayments of long term borrowings		<b>(75.709)</b>	(55.441)
Interest paid		<b>(4.203)</b>	(5.837)
<b>Net cash used in financing activities</b>		<b>(79.912)</b>	(61.278)
<b>Net increase/ (decrease) in cash and cash equivalents</b>		<b>19.955</b>	(5.818)
<b>Cash and cash equivalents at beginning of the year</b>		<b>13.457</b>	19.275
<b>Cash and cash equivalents at end of the year</b>	<b>20</b>	<b>33.412</b>	13.457

The notes on pages 80 to 122 form an integral part of these consolidated financial statements.

## Notes to the consolidated financial statements for the year ended 31 December 2017

### 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, 1399 Nicosia, Cyprus.

Pursuant to the above Law, the Group 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 for electricity.

The Group prepares separate financial statements for the activities of generation, transmission, distribution and supply of electricity and other activities in accordance to the Laws regulating the Electricity Market of 2003-2017 and the relevant resolutions of the Cyprus Energy Regulatory Authority (CERA) regarding the functional and accounts unbundling.

#### Operating environment of the Group

The Cypriot economy has recorded positive growth in 2016 and 2017 after overcoming the economic recession of recent years. The overall economic outlook of the economy remains favorable, however there are still downside risks emanating from the still high levels of non-performing loans, the public debt ratio, as well as possible deterioration of the external environment for Cyprus.

Management determined impairment provisions for financial assets carried at amortised cost using the "incurred loss" model required by International Accounting Standard 39 "Financial Instruments: Recognition and Measurement". This standard requires recognition of impairment losses for loans and receivables that arose from past events and prohibits recognition of impairment losses that could arise from future events, including future changes in the economic environment, no matter how likely those future events are. Thus final impairment losses from financial assets could differ significantly from the current level of provisions.

### 2. Summary of significant accounting policies

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

#### Basis of preparation

The consolidated financial statements of the Electricity Authority of Cyprus have been prepared in accordance with International Financial Reporting Standards (IFRSs), as adopted by the European Union (EU), the requirements of the Electricity Development Law, Cap. 171, the Laws Regulating the Electricity Market of 2003-2017 and the Companies Law Cap. 113.

As of the date of the authorisation of the consolidated financial statements, all International Financial Reporting Standards issued by the International Accounting Standards Board (IASB) that are effective as of 1 January 2017 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 and IAS 14 "Regulatory Deferral accounts".

The consolidated financial statements have been prepared under the historical cost convention, except in the case of financial assets at fair value through profit or loss which are shown at their fair value and the defined benefit obligation which is recognized as plan assets, less the present value of the defined benefit obligation.

The methods used for determining fair values are explained in detail in Note 3. Financial assets and liabilities and non financial assets and liabilities which are valued at historic cost are stated at amortized cost or historic cost, as appropriate, net of any relevant impairment.

The preparation of consolidated 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 Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

#### Adoption of new and revised International Financial Reporting Standards (IFRS)

During the current year the Group 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 2017. This adoption did not have a material effect on the accounting policies of the Group, except the below:

- Disclosure Initiative - Amendments to IAS 7 (issued on 29 January 2016 and effective for annual periods beginning on or after 1 January 2017). As a result of this amendment, the Group has disclosed a reconciliation of movements in liabilities arising from financing activities. Refer to Note 20.
- At the date of approval of these financial statements a number of new standards and amendments to standards and interpretations are effective for annual periods beginning after 1 January 2017, and have not been applied in preparing these financial statements. None of these is expected to have a significant effect on the financial statements of the Group, except the below:

IFRS 9 "Financial Instruments: Classification and Measurement" (issued in July 2014 and effective for annual periods beginning on or after 1 January 2018). Key features of the new standard are:

- i) Financial assets are required to be classified into three measurement categories: those to be measured subsequently at amortised cost, those to be measured subsequently at fair value through other comprehensive income and those to be measured subsequently at fair value through profit or loss.
- ii) Classification for debt instruments is driven by the entity's business model for managing the financial assets and whether the contractual cash flows represent solely payments of principal and interest (SPPI). If a debt instrument is held to collect, it may be carried at amortised cost if it also meets the SPPI requirement. Debt instruments that meet the SPPI requirement that are held in a portfolio where an entity both holds to collect assets' cash flows and sells assets may be classified as FVOCI. Financial assets that do not contain cash flows that are SPPI must be measured at FVPL (for example, derivatives). Embedded derivatives are no longer separated from financial assets but will be included in assessing the SPPI condition.
- iii) Investments in equity instruments are always measured at fair value. However, management can make an irrevocable election to present changes in fair value in other comprehensive income, provided the instrument is not held for trading. If the equity instrument is held for trading, changes in fair value are presented in profit or loss.
- iv) Most of the requirements in IAS 39 for classification and measurement of financial liabilities were carried forward unchanged to IFRS 9. The key change is that an entity will be required to present the effects of changes in own credit risk of financial liabilities designated at fair value through profit or loss in other comprehensive income.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 2. Summary of significant accounting policies (cont')

#### Adoption of new and revised International Financial Reporting Standards (IFRS) (cont')

- v) IFRS 9 introduces a new model for the recognition of impairment losses - the expected credit losses (ECL) model. There is a 'three stage' approach which is based on the change in credit quality of financial assets since initial recognition. In practice, the new rules mean that entities will have to record an immediate loss equal to the 12-month ECL on initial recognition of financial assets that are not credit impaired (or lifetime ECL for trade receivables). Where there has been a significant increase in credit risk, impairment is measured using lifetime ECL rather than 12-month ECL. The model includes operational simplifications for lease and trade receivables.
  - vi) Hedge accounting requirements were amended to align accounting more closely with risk management. The standard provides entities with an accounting policy choice between applying the hedge accounting requirements of IFRS 9 and continuing to apply IAS 39 to all hedges because the standard currently does not address accounting for macro hedging.
  - vii) The Group is currently assessing the impact of the new standard on its financial statements and as of the date of issue of these financial statements the impact of the adoption of this standard is not known.
- IFRS 15, Revenue from Contracts with Customers (issued on 28 May 2014 and effective for the periods beginning on or after 1 January 2018). The new standard introduces the core principle that revenue must be recognised when the goods or services are transferred to the customer, at the transaction price. Any bundled goods or services that are distinct must be separately recognised, and any discounts or rebates on the contract price must generally be allocated to the separate elements. When the consideration varies for any reason, minimum amounts must be recognised if they are not at significant risk of reversal. Costs incurred to secure contracts with customers have to be capitalised and amortised over the period when the benefits of the contract are consumed. The Group is currently assessing the impact of the new standard on its financial statements and as of the date of issue of these financial statements the impact of the adoption of this standard is not known.
  - Amendments to IFRS 15, Revenue from Contracts with Customers (issued on 12 April 2016 and effective for annual periods beginning on or after 1 January 2018)\*. The amendments do not change the underlying principles of the Standard but clarify how those principles should be applied. The amendments clarify how to identify a performance obligation (the promise to transfer a good or a service to a customer) in a contract; how to determine whether a company is a principal (the provider of a good or service) or an agent (responsible for arranging for the good or service to be provided); and how to determine whether the revenue from granting a license should be recognised at a point in time or over time. In addition to the clarifications, the amendments include two additional reliefs to reduce cost and complexity for a company when it first applies the new Standard. The Group is currently assessing the impact of the amendments on its financial statements and as of the date of issue of these financial statements the impact of the amendments is not known.
  - IFRS 16 "Leases" (issued on 13 January 2016 and effective for annual periods beginning on or after 1 January 2019). The new standard sets out the principles for the recognition, measurement, presentation and disclosure of leases. All leases result in the lessee obtaining the right to use an asset at the start of the lease and, if lease payments are made over time, also obtaining financing. Accordingly, IFRS 16 eliminates the classification of leases as either operating leases or finance leases as is required by IAS 17 and, instead, introduces a single lessee accounting model. Lessees will be required to recognise: (a) assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value; and (b) depreciation of lease assets separately from interest on lease liabilities in the income statement. IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17. Accordingly, a lessor continues to classify its leases as operating leases or finance leases, and to account for those two types of leases differently. The Group is currently assessing the impact of the new standard on its financial statements and as of the date of issue of these financial statements the impact of the adoption of this standard is not known.

#### Subsidiary undertakings

Subsidiary undertaking is an entity controlled by the Group. Control exists where the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The subsidiary undertaking is consolidated from the date on which control is transferred to the Group 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 unrealized losses unless cost cannot be recovered.

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

#### Revenue recognition

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

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

##### (a) Sales of electricity

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

##### (b) Interest Income

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

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

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

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

Applicants are ensured of the right of permanent access to the network for an unlimited period of time. The Group is committed to provide

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 2. Summary of significant accounting policies (cont')

#### Revenue recognition (cont')

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

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

##### (d) Revenue from Desalination

Revenue from Desalination represents the sale of desalinated water to the Water Board Authority in accordance with the supply as recorded by meters net of VAT. Sales also include an estimate of the value of metric tonnes supplied between the date of the last invoice and the end of the year and this estimate is included in receivables in the consolidated statement of financial position.

#### Foreign currency translation

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

Items included in the Group's consolidated financial statements are measured using the currency of the primary economic environment in which the Group operates ("the functional currency"). The consolidated financial statements are presented in Euro (€), which is the Group'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 recognized in profit or loss.

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

#### Employee benefits

The Group operates a defined benefit plan, comprising of a lump sum amount at the termination of employees services and post-employment benefits, and various other defined contribution plans, the assets of which are held in separate trustee-administered funds. These plans are mainly funded by the Group.

The net expense/(income) from interest and current service cost is charged to the income statement over the period of the expected service lives of the employees and is estimated annually by independent actuaries, using the projected unit method, in order to create sufficient reserves. The Group determines the net interest expense/(income) on the net defined benefit obligation (asset) for the period by applying the discount rate used to measure the defined benefit obligation (asset), taking into account any changes in the net defined benefit obligation (asset) during the period as a result of contributions and benefit payments. Remeasurements of the net defined benefit obligation, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income.

A provision for the contribution to the defined benefit scheme is made on a monthly basis so that adequate reserves are created during the

working life of the employees. Additionally, from 2015 a recovery plan was effected which provides that an annual deficit payment should be made to the Pension Plan. From October 2011 under the first package of austerity measures, the members of the defined benefit plan are making contributions amounting to 3%.

IAS 19 does not specify whether an entity should distinguish current and non-current portions of assets and liabilities arising from post-employment benefits. The Group recognizes the net defined benefit obligation as current liability because a distinction between current and non-current portion arising from defined benefit plans may sometimes be arbitrary.

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 income tax

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

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

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

Deferred income tax assets are recognized to the extent that it is probable that future taxable profits 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.

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

Major spare parts and stand-by equipment are accounted for as property, plant and equipment when the Group 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

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 2. Summary of significant accounting policies (cont')

#### Property, plant and equipment (cont')

their cost to their residual values, over their estimated useful lives. The estimated useful lives of the major elements of property plant and equipment are as follows:

	Years		Years
Power station buildings	30	Meters	15
Other buildings	35	Motor vehicles	7
Power station plant and machinery	25	Furniture, fixtures and office equipment	10
Other plant and machinery	25-30	Tools and instruments	10
Lines and cables	35-40	Computer hardware	5
		Computer software	3

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

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

Expenditure for repairs and maintenance of property, plant and equipment is charged to the consolidated 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 Group and the cost of the item can be measured reliably.

Gains and losses on disposal of property, plant and equipment is determined by comparing proceeds with the carrying amount and these are included in "other gains/losses-net" in the consolidated 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 allocated for the specific year, is obliged to buy as many emission allowances as required to cover the shortage and in addition to pay a penalty fee for each unit of excess emission.

Granted CO<sub>2</sub> emission allowances are initially recognized at nominal value (nil value) when the Group is able to exercise control over these rights. Purchased CO<sub>2</sub> emission allowances are initially recognized at cost (purchase price) within intangible assets. A liability is recognized 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 reporting date. Movements in the liability are recognized in the consolidated statement of profit or loss.

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

#### Impairment of non-financial assets

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

Impairment loss is recognized in the profit or loss.

#### Financial assets

##### (i) Classification

The Group classifies its financial assets as financial assets at fair value through profit or loss and loans and receivables. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of financial assets at initial recognition.

- **Financial assets at fair value through profit or loss**

This category has two sub categories: financial assets held for trading and those designated at fair value through profit or loss at inception. A financial asset is classified as held for trading if acquired principally for the purpose of selling in the short term. Financial assets designated as at fair value through profit or loss at inception are those that are managed and their performance is evaluated on a fair value basis, in accordance with the Group's documented investment strategy. Information about these financial assets is provided internally on a fair value basis to the Group's key management personnel. Assets in this category are classified as current assets if they are either held for trading or are expected to be recognized within twelve months of the reporting date.

- **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 reporting date. These are classified as non current assets. The Group's loans and receivables comprise trade and other receivables, and cash and cash at bank in the consolidated statement of financial position.

##### (ii) Recognition and measurement

Regular way purchases and sales of financial assets are recognized on the trade date which is the date on which the Group commits to purchase or sell the asset. Financial assets are initially recognized at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss. Financial assets carried at fair value through profit or loss are initially recognized at fair value and transaction costs are expensed in profit or loss. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

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

Gains or losses arising from changes in the fair value of the 'financial assets at fair value through profit or loss' category are presented in profit or loss within 'other gains/(losses) net' in the period in which they arise. Dividend income from financial assets at fair value through profit or loss is recognized in the profit or loss as part of other income when the Group's right to receive payments is established.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 2. Summary of significant accounting policies (cont')

#### Financial assets (cont')

##### (iii) Impairment of financial assets

The Group assesses at each reporting date whether there is objective evidence that a financial asset, other than financial assets at fair value through profit or loss, or a group of financial assets, other than financial assets at fair value through profit or loss, is impaired.

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

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

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

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

#### Leases

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

#### Inventories

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

#### Trade receivables

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

Trade receivables are recognized initially at fair value and subsequently measured at amortized 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 Group will not be able to collect all amounts due according to the original terms of receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or delinquency in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the carrying amount and the recoverable amount, being the present

value of estimated future cash flows, discounted at the effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account, and the amount of the loss is recognized in profit or loss within operating costs. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against operating costs in profit or loss.

#### Provisions

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

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

#### Cash and cash equivalent

Cash and cash equivalents include cash in bank and in hand, short term deposits held at call with banks with average maturity up to 90 days and bank overdrafts. Short term bank deposits with maturity of 3-12 months are included in short-term bank deposits and within investing activities for cash flow purposes. In the consolidated statement of financial position bank overdrafts are shown within borrowings in current liabilities.

#### Borrowings

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

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a prepayment (for liquidity services) and amortised over the period of the facility to which it relates.

Borrowings are removed from the balance sheet when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as other income or finance costs.

A substantial modification of the terms of an existing financial liability or a part of it is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Any gain or loss on extinguishment is recognised in profit or loss except to the extent that it arises as a result of transactions with shareholders acting in their capacity as shareholders when it is recognised directly in equity. The terms are considered to be substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective interest rate, is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. Any costs or fees incurred are recognised as part of the gain or loss on the extinguishment.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 2. Summary of significant accounting policies (cont')

#### Borrowings (cont')

Borrowing costs are interest and other costs that the Group 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 Group and the costs can be measured reliably. Borrowings are classified as current liabilities, unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the balance sheet date.

#### Trade and other payables

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

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

#### Comparatives

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

### 3. Financial risk management

#### (i) Financial risk factors

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

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

- Market Risk**

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's income or the value of its holdings of financial instruments.

The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

- Foreign exchange risk**

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Foreign exchange risk arises when future commercial transactions or recognized assets or liabilities are denominated in a currency that is not the Group's functional currency. The Group is exposed to foreign exchange risk arising from various currency exposures with respect to the US Dollar but believes that any change in foreign exchange rates will not have a material effect on its results.

Management monitors the exchange rate fluctuations on a continuous basis and acts accordingly.

The net foreign exchange difference credited/ debited to the consolidated income statement amounts to €(1.502.000) (2016: €791.000) and relates to normal operating and financing activities (Note 10).

The Group's exposure to foreign currency risk was as follows:

	United States Dollars €000
<b>31 December 2017</b>	
<b>Assets</b>	
Short term deposits	11.746
	11.746
<b>Liabilities</b>	
Suppliers	(32.532)
Amount available for interpleader proceedings	(12.717)
	(45.249)
Net foreign currency exposure	<b>(33.503)</b>

	United States Dollars €000
<b>31 December 2016</b>	
<b>Assets</b>	
Short term deposits	13.165
	13.165
<b>Liabilities</b>	
Suppliers	(20.756)
Amount available for interpleader proceedings	(14.277)
	(35.033)
Net foreign currency exposure	<b>(21.868)</b>

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 3. Financial risk management (cont')

#### Foreign exchange risk (cont')

##### Sensitivity analysis

A 10% strengthening of the Euro against the following currencies at 31 December 2017 and 2016 would have increased equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular interest rates, remain constant. For a 10% weakening of the Euro against the relevant foreign currency at 31 December 2017 and 2016, there would be an equal and opposite impact on the equity and profit or loss.

	Equity		Profit or loss	
	2017 €000	2016 €000	2017 €000	2016 €000
United States Dollars	2.931	1.914	2.931	1.914
	2.931	1.914	2.931	1.914

##### 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 Group's income and operating cash flows are dependent on changes in market interest rates.

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

At 31 December 2017, if interest rates on Euro denominated borrowings had been 0,1% higher/lower with all other variables held constant, post tax profit for the year would have been €341.093 (2016: €416.764) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings.

At the reporting date the interest rate profile of interest-bearing financial instruments was:

	2017 €000	2016 €000
<i>Fixed rate instruments</i>		
Financial assets	378.687	358.233
Financial liabilities	(404)	(442)
<i>Variable rate instruments</i>		
Financial liabilities	(341.093)	(416.764)
	37.190	(58.973)

##### Sensitivity analysis

A decrease of 100 basis points in interest rates at 31 December 2017 and 2016 would have increased equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. For a decrease of 100 basis points there would be an equal and opposite impact on the equity and profit or loss.

	Equity		Profit or loss	
	2017 €000	2016 €000	2017 €000	2016 €000
Variable rate instruments	2.985	3.647	2.985	3.647
	2.985	3.647	2.985	3.647

The Management of the Group monitors the interest rate fluctuations on a continuous basis and acts accordingly.

##### • Credit risk

Credit risk arises when a failure by counter parties to discharge their obligations could reduce the amount of future cash inflows from financial assets on hand at the reporting date. The Group has no significant concentration of credit risk.

The carrying amount of financial assets represents the maximum credit exposure.

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

Sales to customers are settled in cash, direct debits or using major credit cards. See Note 16 for further disclosures on credit risk.

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

##### • Liquidity risk

Liquidity risk is the risk that arises when the maturity of assets and liabilities does not match. An unmatched position potentially enhances profitability, but can also increase the risk of losses.

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

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 3. Financial risk management (cont')

#### Liquidity risk (cont')

	Less than 1 year €000	Between 1 and 2 years €000	Between 2 to 5 years €000	More than 5 years €000
<b>At 31 December 2016</b>				
Borrowings (Capital and interest)	36.239	56.937	143.503	278.278
Trade and other payables*	107.671	-	-	-
	143.910	56.937	143.503	278.278
<b>At 31 December 2017</b>				
Borrowings (Capital and interest)	47.838	46.717	122.793	193.029
Trade and other payables*	121.442	-	-	-
	169.280	46.717	122.793	193.029

\*Excluding statutory liabilities and deferred income.

The Group has procedures with the object of minimising such losses such as maintaining sufficient cash and other highly liquid current assets and by having available an adequate amount of committed credit facilities.

#### (ii) Capital risk management

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

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

During 2017, the Group's strategy, which was unchanged from 2016, was to maintain the gearing ratio within 0% to 10%. The gearing ratio at 31 December 2017 and 2016 was as follows:

	2017 €000	2016 €000
Total borrowings (Note 21)	341.497	417.206
Less: Short term deposits (Note 19)	(378.687)	(358.233)
Less: Cash and cash equivalents (Note 20)	(33.412)	(13.457)
Net debt	(70.602)	45.516
Total equity	1.562.148	1.478.568
<b>Total Capital as defined by Management</b>	<b>1.491.546</b>	<b>1.524.084</b>
<b>Gearing ratio</b>	<b>(5%)</b>	<b>3%</b>

#### (iii) Fair value estimation

The fair values of the Group's financial assets and liabilities approximate their carrying amounts at the reporting date.

The table below analyses financial instruments measured in the statement of financial position at fair value by valuation method. Different levels are defined as follow:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1).
- Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (Level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (Level 3).

	Level 1 2017 €000	Level 1 2016 €000
<b>Assets</b>		
Financial assets at fair value through profit or loss:		
Equity securities	557	635
<b>Total financial assets measured at fair value</b>	<b>557</b>	<b>635</b>

The fair value of financial instruments traded in active markets is based on quoted market prices at the reporting date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in Level 1. Instruments included in Level 1 comprise primarily equity investments listed on the Cyprus Stock Exchange classified as trading securities.

The fair value of financial instruments that are not traded in an active market (for example, unlisted equity securities) is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 3. Financial risk management (cont')

#### (iii) Fair value estimation (cont')

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- Adjusted comparable price-to-book value multiples.
- Other techniques, such as discounted cash flow analysis.

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.

### 4. Critical accounting estimates and judgements

The preparation of consolidated financial statements in accordance with IFRSs requires from Management the exercise of judgment, to make estimates and assumptions that influence the application of the Group's accounting policies and the reported amounts of assets, liabilities, income and expenses. The estimates and underlying assumptions are based on historical experience and various other factors that are deemed to be reasonable based on knowledge available at that time. Actual results may deviate from such estimates.

The estimates and underlying assumptions are revised on a continuous basis. Revisions in accounting estimates are recognized in the period during which the estimate is revised, if the estimate affects only that period, or in the period of the revision and future periods, if the revision affects the present as well as future periods.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

#### (i) Deferred income

The Group accepts applications for extension of its network in areas not yet covered by the existing network by individuals and legal entities. Furthermore the Group accepts applications for additional load from the existing network. In both cases, the Group charges the applicants with the construction cost. The assets remain under the control of the Group, which performs all necessary repairs and maintenance. Construction cost is recognized in property, plant and equipment.

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

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

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

#### (ii) Tax

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

If the actual final outcome differed by 10% from Management's estimates then the Group would need to increase its current tax liabilities by €176.200 (2016: €171.100) if the final outcome was not in the Group's favour.

#### (iii) Defined Benefit Plan

The present value of the Defined Benefit Plan obligation, depends on several factors that are determined based on the actuarial valuation by using various assumptions and estimates. The assumptions and estimates used for determining the defined benefit cost and the obligation/asset, includes the discount rate, the expected increase of salaries and pensions. Such assumptions and estimates are subject to considerable uncertainty due to the long term nature of the plan.

### 5. Revenue from sale of electricity

Sale of electricity does not include the consumption of Turkish Cypriots in the areas of the Republic of Cyprus where the Government of the Republic does not exercise effective control. The unbilled electrical energy, calculated at a special rate, amounts to €465.000 (2016: €310.000).

### 6. Other operating income - net

	2017 €000	2016 €000
Income from reconnection	1.596	1.683
Employees contribution to the defined benefit plan (Footnote 1)	1.699	1.680
Income from fees for telecommunication usage of optical fibers	1.612	1.508
Income from Desalination	13.613	12.707
Consumers' capital contributions	22.068	21.716
Greenhouse gas emission allowances cost recovered	13.272	13.218
Income from TSOC	3.019	2.714
Sundry income	3.565	3.738
Interest income from:		
Bank balances	5.417	4.855
Other	630	847
	<b>66.491</b>	<b>64.666</b>

#### Footnote 1:

The amount represents deduction from the employees' salaries at the rate of 3% and is paid to the Group for maintaining the viability of the Defined Benefit Plan per Law 216 (i) 2012, paragraph 4 and is included in employer's contributions.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 7. Other losses - net

	2017 €000	2016 €000
Property, plant and equipment (Note 15):		
Loss/(profit) on sale	(1)	137
Impairment charge of property, plant and equipment	-	(5.516)
Fair value losses on financial assets at fair value through profit or loss	(77)	(36)
	<b>(78)</b>	<b>(5.415)</b>

### 8. Operating costs

	2017 €000	2016 €000
Fuel	335.931	245.936
Purchase of Electricity from third parties	28.213	20.059
Salaries and employer's contributions (Note 9)	88.518	78.945
Depreciation (Note 15)	97.822	96.401
Repairs and maintenance	21.326	13.205
Independent auditor's fees for the compulsory audit of the annual financial statements	50	50
Auditor General's remuneration	33	33
Audit of the Funds	16	16
Audit fees prior years	-	(1)
Rental expenses	609	648
Provision for impairment of inventories	1.286	975
Stock write off	971	-
Bad debts written off/ provision for bad debts	(1.794)	(607)
Immovable property tax	-	103
Cyprus Energy Regulatory Authority fees	1.770	1.743
Cyprus Transmission System Operator fee	4.130	3.930
Transport	2.196	2.208
Insurance	2.996	2.937
Telephones and postages	1.726	1.577
Electricity, cleaning and water	1.866	1.061
Greenhouse gas emission allowances cost	12.238	9.010
Other expenses	14.279	12.954
Total expenses	<b>614.182</b>	<b>491.183</b>

The total fees charged by the Authority's statutory auditor during the year ended 31 December 2017 for tax consultancy services amounted to €6.000 (2016: €4.700) and for other non-audit services amounted to €27.500 (2016: €18.600).

### 9. Staff costs

	2017 €000	2016 €000
Salaries	65.571	64.257
Social insurance and other costs	8.212	8.042
Social cohesion fund	1.322	1.292
Defined benefit cost - current year cost	16.233	9.828
Other defined contribution plans	3.388	3.351
	<b>94.726</b>	<b>86.770</b>
Average number of staff employed during the year	1.981	1.993

	2017 €000	2016 €000
The staff costs were allocated as follows:		
Income statement (Note 8):		
- Staff costs	88.518	78.945
Capitalised in fixed assets and work in progress	6.208	7.825
	<b>94.726</b>	<b>86.770</b>

#### Defined Benefit Plan

The amounts recognised in the consolidated statement of financial position and the consolidated statement of other comprehensive income of the Group as at 31 December 2017 are in accordance with the actuarial valuation as at 31 December 2017 for the defined benefit plan. The assets used for the purposes of the actuarial valuation were extracted from the financial statements of the Electricity Authority's employees defined benefit plan (the "Plan") for the year ended 31 December 2017.

	2017 €000	2016 €000
Present value of defined benefit obligation	735.745	771.662
Fair value of plan assets	(548.005)	(538.193)
<b>Net obligation on the consolidated statement of financial position</b>	<b>187.740</b>	<b>233.469</b>
<b>Funding level</b>	<b>74%</b>	<b>70%</b>

Notes to the consolidated financial statements  
for the year ended 31 December 2017 (cont')

## 9. Staff costs (cont')

	2017 €000	2016 €000
Current service cost	12.496	6.944
Net interest expense	3.737	2.884
Total expense recognized in 'staff costs'	16.233	9.828

	2017 €000	2016 €000
<b>Movement in net obligation included in the consolidated statement of financial position</b>		
Net obligation in the statement of financial position at the beginning of the year	233.469	132.930
Contributions by the employer	(12.207)	(17.626)
Total expense recognised in the consolidated income statement	16.233	9.828
Total amount recognised in other comprehensive (income)/ loss	(49.755)	108.337
<b>Net obligation at the end of the year</b>	<b>187.740</b>	<b>233.469</b>

	2017 €000	2016 €000
<b>Changes to the present value of the defined benefit obligation during the year</b>		
Present value of the defined benefit obligation at beginning of the year	771.662	662.902
Current service cost	12.496	6.944
Interest cost	12.257	14.785
Contributions by participants	1.064	1.059
Benefits paid out	(24.710)	(25.422)
Adjustments:		
- Actuarial (gain)/ loss - (financial assumptions)	(31.012)	110.004
- Actuarial (gain)/ loss - (experience)	(6.012)	1.390
Present value of the defined benefit obligation at the end of the year	735.745	771.662

	2017 €000	2016 €000
<b>Changes to the fair value of plan assets during the year</b>		
Fair value of plan assets at the beginning of year	538.193	529.972
Expected return on plan assets	8.520	11.901
Contributions by the employer (Note)	12.207	17.626
Contributions by participants	1.064	1.059
Benefits paid out	(24.710)	(25.422)
Adjustments:		
Actuarial gain	12.731	3.057
<b>Fair value of plan assets at the end of the year</b>	<b>548.005</b>	<b>538.193</b>

## Note:

Employer's contributions include an amount of €1.699.000 (2016: €1.680.000), that was deducted at the rate of 3% from the employees' salaries for maintaining the viability of the Defined Benefit Plan per Law 216 (ii) 2012, paragraph 4 and is presented in other operating income of the Group.

	2017 €000	2016 €000
<b>Remeasurements:</b>		
Gain/ (loss) from the remeasurement of the defined benefit obligation	37.024	(111.394)
Difference between the expected and actual return on plan assets	12.731	3.057
<b>Total actuarial Gain/ (loss) recognized in other comprehensive income/(expense)</b>	<b>49.755</b>	<b>(108.337)</b>

The cumulative actuarial amount recognised in the statement of other comprehensive income until 31 December 2017 was a deficit of €213.653.000 (2016: €263.408.000).

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 9. Staff costs (cont')

The principal actuarial assumptions used for the actuarial valuation were:

	2017 %	2016 %
Discount rate	1,79	1,60
Average expected return on plan assets	1,79	1,60
Total salary increases	1,25 (0,75%+0,50%) + promotional and merit increases	1,25 (0,75%+0,50%) + promotional and merit increases
General salary increases	0,50	0,50
Social Insurance Scheme supplementary pension increases	1,50	1,50
Pension increases	1,00	1,00
Increase on maximum insurable earnings limit	2,50	2,50
Price inflation	1,50	1,50
Mortality table	60% of PA90	60% of PA90
Plan duration	18,57 years	19,41 years

In accordance with the amended IAS19, the discount rate should reflect the rate at which the liabilities could effectively be settled. Accordingly, the discount rate has been extracted from annual yield of the iBoxx Euro Corporates AA 10+ Bond Index with maturity of 18,57 years (2016: 19,41 years) which corresponds to the average maturity life of the Plan's liabilities.

Assumptions regarding current year's future mortality rates are according to the published general mortality table PA90 (2016: PA90). The underlying table reduced by 40% represents the expected mortality of the Plan's members after retirement. According to the underlying mortality rate table, the expected life for a male and female aged 65 (normal retirement age) is 18,4 years and 22,2 years respectively.

The sensitivity of the defined benefit obligation to changes in the significant financial assumptions, keeping other assumptions constant, is as follows:

	2017		2016	
	Change	Impact	Change	Impact
Discount rate	+0,50%	-8,30%	+0,50%	-8,50%
Discount rate	-0,50%	9,50%	-0,50%	9,80%
Salaries	+0,50%	6,00%	+0,50%	6,40%
Salaries	-0,50%	-5,60%	-0,50%	-5,80%
Pensions	+0,50%	9,90%	+0,50%	10,00%
Pensions	-0,50%	-9,00%	-0,50%	-9,10%
Life expectancy	+1 year	4,20%	+1 year	4,20%
Life expectancy	-1 year	-4,10%	-1 year	-4,20%

Based on the unaudited financial statements of the Plan, its assets are comprised as follows:

	2017		2016	
	€000	%	€000	%
Immovable property	28.362	5,16	27.198	5,02
Shares	94.091	17,11	80.325	14,83
Debentures - (Government)	49.815	9,06	54.613	10,09
Debentures - (Other)	3.929	0,71	3.659	0,68
Receivables	1.296	0,24	7.685	1,42
Loans	19.974	3,63	21.134	3,90
Hedge Funds	4.268	0,78	4.065	0,75
Mutual debenture funds	196.953	35,81	190.329	35,15
Cash and cash equivalents	151.242	27,50	152.463	28,16
	<b>549.930</b>	<b>100,00</b>	<b>541.471</b>	<b>100,00</b>

The amount above represents the total of assets before deducting reserves and liabilities.

The Plan did not hold any of the Group's financial assets, immovable property or other assets.

The estimated regular statement of profit or loss charge for the financial year 2018 based on the amended IAS 19 is as follows:

	2018 €000	2017 €000
Current service cost	11.083	12.137
Net interest charge	3.482	3.735
<b>Total</b>	<b>14.565</b>	<b>15.872</b>

The actual charge in the consolidated income statement will remain unknown until the end of the year, where any potential additional costs will be determined.

Expected benefits to be paid from the defined benefit plan for the next year are €24.799.360 (2017: €24.819.608).

The expected contributions to be paid to the defined benefit plan for the financial year 2018 are €14.119.324 (2017: €13.263.580).

Notes to the consolidated financial statements  
for the year ended 31 December 2017 (cont')

## 10. Finance costs

	2017 €000	2016 €000
Interest expense:		
Borrowings	4.116	5.148
Interest on taxes	1	2
Other	46	644
	4.163	5.794
Net foreign exchange transaction losses	(1.502)	791
	2.661	6.585

The finance cost is allocated as follows:

	2017 €000	2016 €000
Consolidated income statement	2.661	6.585
	2.661	6.585

## 11. Tax

	2017 €000	2016 €000
<b>Current tax:</b>		
Defence contribution	1.586	1.451
Total current tax	1.586	1.451
<b>Deferred tax (Note 22):</b>		
Origination and reversal of temporary differences	7.285	9.870
Total deferred tax	7.285	9.870
<b>Tax charge</b>	<b>8.871</b>	<b>11.321</b>

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

	2017 €000	2016 €000
Profit before tax	59.561	77.105
Tax calculated at the applicable tax rates on income	7.445	9.638
Tax effect of expenses not deductible for tax purposes	688	836
Tax effect of income not subject to tax	(848)	(604)
Defence contribution	1.586	1.451
Tax charge	8.871	11.321

The Group is subject to income tax on taxable profits at the rate of 12,5%

As from tax year 2012 tax losses of 5 years can be carried forward and set against taxable profits. Under certain conditions, interest received may be subject to special contribution for defence at the rate of 30%. In such cases this interest will be exempt from income tax.

In certain cases dividends received from abroad may be subject to special contribution for defence at the rate of 20% for the years 2012 and 2013 and 17% for the year 2014 and thereafter.

Gains on disposal of qualifying titles (including shares, bonds, debentures, rights thereon etc) are exempt from Cyprus income tax.

The tax (charge)/credit relating to components of other comprehensive income is as follows:

## Tax effects of components of other comprehensive income

	Year ended 31 December 2017			Year ended 31 December 2016		
	Before tax €000	Tax (charge)/ credit €000	After tax €000	Before tax €000	Tax (charge)/ credit €000	After tax €000
<b>Defined benefit obligation:</b>						
Remeasurements of post employment benefit obligation	49.755	-	49.755	(108.337)	-	(108.337)
Other comprehensive income	49.755	-	49.755	(108.337)	-	(108.337)

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 12. Financial assets at fair value through profit or loss

	2017 €000	2016 €000
Equity securities (Note 3(iii))	557	635

Financial assets at fair value through profit or loss are recorded in the consolidated statement of cash flow as part of the movement in working capital.

Changes in fair values of financial assets at fair value through profit or loss are recorded in 'Other losses - net' (Note 7) in profit or loss.

### 13. Financial instruments by category

Assets as per consolidated statement of financial position - 2017			
	Assets measured at fair value €000	Loans and receivables €000	Total €000
Non current receivables	-	5.432	5.432
Trade and other receivables	-	94.099	94.099
Financial assets at fair value through profit or loss	557	-	557
Short term deposits	-	378.687	378.687
Cash and cash equivalents	-	33.412	33.412
<b>Total</b>	<b>557</b>	<b>511.630</b>	<b>512.187</b>

Note:  
The rest of the statement of financial position item "trade and other receivables" is deposits and prepayments.

Assets as per consolidated statement of financial position - 2016			
	Assets measured at fair value €000	Loans and receivables €000	Total €000
Non current receivables	-	239	239
Trade and other receivables	-	108.108	108.108
Financial assets at fair value through profit or loss	635	-	635
Short term deposits	-	358.233	358.233
Cash and cash equivalents	-	13.457	13.457
<b>Total</b>	<b>635</b>	<b>480.037</b>	<b>480.672</b>

Note:  
The rest of the statement of financial position item "trade and other receivables" is deposits and prepayments.

Liabilities as per consolidated statement of financial position		
	Other financial liabilities	
	2017 €000	2016 €000
Borrowings	341.497	417.206
Net defined benefit obligation	187.740	233.469
Trade and other payables (Note)	121.442	107.671
<b>Total</b>	<b>650.679</b>	<b>758.346</b>

Note:  
The rest of the statement of financial position item "trade and other payables" is statutory liabilities and deferred income.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 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):

	2017 €000	2016 €000
<b>Fully performing trade receivables - net</b>		
Group 1	1.430	1.435
Group 2	8.469	7.977
Group 3	29.818	33.255
	<b>39.717</b>	42.667
<b>Past due trade receivables - net</b>		
Group 4	11.817	12.781
Group 5	2.511	3.025
Group 6	686	724
Group 7	5.117	2.963
Group 8	20.322	21.286
	<b>40.453</b>	40.779
Other receivables		
Group 9	8.671	9.641
Group 10	10.690	15.260
	<b>19.361</b>	24.901
<b>Short term bank deposits</b>		
B1	23.700	-
Caa1	133.023	70.313
Caa2	11.147	69.848
Caa3	39.991	96.375
Without external credit rating <sup>(1)</sup>	170.826	121.697
	<b>378.687</b>	358.233

	2017 €000	2016 €000
<b>Cash and cash equivalents<sup>(2)</sup></b>		
BB	-	563
Ba3	708	-
Caa1	26.390	1.115
Caa2	1.369	6.624
Caa3	2.112	711
	<b>30.579</b>	9.013

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

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

Group 3: Trade receivables billed during the next year.

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

Group 5: Receivables that have been provided for, excluding related parties

Group 6: Receivables from related parties that have been provided for.

Group 7: Receivables from related parties including amounts with defaults in the past.

Group 8: Other trade receivables including amounts with defaults in the past.

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

Group 10: Past due receivables

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

(2) The rest of the consolidated statement of financial position item 'cash and cash equivalents' is cash in hand and cash and cash equivalents without external credit ratings. The cash and cash equivalents without external credit ratings amount to €2.357.000 (2016: €4.444.000).

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

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 15. Property, plant and equipment

	Freehold land	Buildings	Plant and machinery	Lines, cables and meters	Motor vehicles	Furniture fixtures and office equipment	Tools and instruments	Computer hardware and software	Work in progress	Total
	€000	€000	€000	€000	€000	€000	€000	€000	€000	€000
<b>At 1 January 2016</b>										
Cost	41.592	355.993	1.524.158	1.043.369	20.663	7.286	7.335	35.628	12.271	3.048.295
Accumulated depreciation	-	(134.672)	(667.020)	(385.414)	(19.646)	(6.400)	(6.714)	(32.893)	-	(1.252.759)
Net book value	41.592	221.321	857.138	657.955	1.017	886	621	2.735	12.271	1.795.536
<b>Year ended 31 December 2016</b>										
Opening net book value	41.592	221.321	857.138	657.955	1.017	886	621	2.735	12.271	1.795.536
Additions	483	35	533	186	311	123	53	489	34.710	36.923
Disposals	(7)	(8)	-	-	-	(1)	-	-	-	(16)
Transfer to inventory	-	-	(1.566)	-	-	-	-	-	-	(1.566)
Impairment charge	-	-	(5.516)	-	-	-	-	-	-	(5.516)
Depreciation charge	-	(11.879)	(55.214)	(27.142)	(614)	(223)	(191)	(1.138)	-	(96.401)
Transfers	103	1.131	2.758	13.460	-	-	-	2	(17.454)	-
Closing net book value	42.171	210.600	798.133	644.459	714	785	483	2.088	29.527	1.728.960
<b>At 31 December 2016</b>										
Cost	42.171	357.149	1.515.897	1.057.015	20.974	7.408	7.389	35.851	29.527	3.073.381
Accumulated depreciation	-	(146.549)	(717.764)	(412.556)	(20.260)	(6.623)	(6.906)	(33.763)	-	(1.344.421)
Net book value	42.171	210.600	798.133	644.459	714	785	483	2.088	29.527	1.728.960
<b>Year ended 31 December 2017</b>										
Opening net book value	42.171	210.600	798.133	644.459	714	785	483	2.088	29.527	1.728.960
Additions	264	70	48	211	1.103	182	71	555	42.930	45.434
Disposals	-	-	-	-	-	-	-	(5)	-	(5)
Depreciation charge	-	(11.901)	(55.825)	(27.575)	(569)	(222)	(151)	(1.579)	-	(97.822)
Transfers	160	2.119	18.312	19.535	-	-	-	1.355	(41.481)	-
Closing net book value	42.595	200.888	760.668	636.630	1.248	745	403	2.414	30.976	1.676.567
<b>At 31 December 2017</b>										
Cost	42.595	359.338	1.534.257	1.076.760	22.020	7.377	7.460	37.703	30.976	3.118.486
Accumulated depreciation	-	(158.450)	(773.589)	(440.130)	(20.772)	(6.632)	(7.057)	(35.289)	-	(1.441.919)
Net book value	42.595	200.888	760.668	636.630	1.248	745	403	2.414	30.976	1.676.567

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

	2017 €000	2016 €000
Net book value	5	19
(Loss)/Profit from the sale of property, plant and equipment (Note 7)	(1)	137
Proceeds from disposal of property, plant and equipment	4	153

Depreciation amounting to €97.822.000 (2016: €96.401.000) has been charged to operating costs.

#### Land and equipment located in Turkish occupied area

The total fixed assets shown in the consolidated statement of financial position 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 (2016: NIL) bringing the accumulated provision at 31 December 2017 to €12.440.000 (2016: €12.440.000) and leaving a written down value of €538.000 (2016: €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

	2017 €000	2016 €000
Trade receivables	95.429	101.184
Less: Provision for impairment of receivables	(15.259)	(17.738)
Trade receivables - net	80.170	83.446
Capital contributions receivable by instalments	510	678
Advance payments to subcontractors	3.969	4.369
Receivable from RES fund	10.690	15.260
Other receivables	8.161	8.963
Deposits and prepayments	3.509	1.083
	107.009	113.799
Less non-current receivables	(5.432)	(239)
Current receivables	101.577	113.560

The amount of 10.690.000 relates to past due receivable from the RES fund. On 16/5/2017, the Board of Directors of the Authority decided to deduct from the total receipts of the RES fee charged on electricity bills every month, the amount payable to RES producers as subsidy and then deduct the amount of €450.000, which is the minimum amount required to settle the amount due to the Authority within a period of 3 years.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 16. Trade and other receivables (cont')

The maturity of non-current receivables and prepayments is as follows:

	2017 €000	2016 €000
Between 1 and 2 years	5.343	144
Between 2 and 5 years	89	95
	<b>5.432</b>	<b>239</b>

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

At 31 December 2017, trade receivables of €58.101.000 (2016: €65.455.000) were neither due nor impaired.

Trade receivables that are less than three months past due are not considered impaired. As of 31 December 2017, trade receivables of €18.872.000 (2016: €14.892.000) were past due but not impaired. These relate to a number of independent customers for whom there is no recent history of default. The ageing analysis of these trade receivables is as follows:

	2017 €000	2016 €000
Up to 3 months	15.581	13.080
3 to 6 months	1.129	682
Over 6 months	2.162	1.130
	<b>18.872</b>	<b>14.892</b>

As at 31 December 2017, trade receivables of €18.456.000 (2016: €20.837.000) were impaired and provided for. As at 31 December 2017 the amount of the provision was €15.259.000 (2016: €17.738.000). The individually impaired receivables mainly relate to consumers, which are in an unexpectedly difficult economic situation. It was assessed that a portion of the receivables is expected to be recovered. The ageing of these receivables is as follows:

	2017 €000	2016 €000
Up to 3 months	1.650	1.660
3 to 6 months	1.340	1.423
Over 6 months	15.466	17.754
	<b>18.456</b>	<b>20.837</b>

Concentrations of credit risk with respect to trade receivables are limited due to the Group's large number of customers who have a variety of end markets in which they sell. The Group'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 Group's trade receivables.

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

	2017 €000	2016 €000
At 1 January	17.738	19.297
Provision for impairment of receivables	(2.479)	(1.559)
At 31 December	<b>15.259</b>	<b>17.738</b>

The creation and release of provision for impaired receivables have been included in operating costs in the consolidated statement of comprehensive income (Note 8). Amounts charged to the provision account are generally written off, when there is no expectation of recovering additional cash.

Other groups within trade and other receivables contain impaired assets or past due amounting to €75.000 (2016: €75.000).

The maximum exposure to credit risk at the reporting date is the carrying value of each group of receivable mentioned above. The Group does not hold any collateral as security.

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

	2017 €000	2016 €000
Euro - functional and presentation currency	107.009	113.799
	<b>107.009</b>	<b>113.799</b>

Notes to the consolidated financial statements  
for the year ended 31 December 2017 (cont')**17. Inventories**

	2017 €000	2016 €000
Fuel	56.761	42.497
Spare parts and other consumables	62.311	61.913
	<b>119.072</b>	104.410

The cost of inventories recognized as expense and included in operating costs amounted to €345.525.000 (2016: €252.990.000).

At 31 December 2017, inventories amounting to €7.825.113 (2016: € 6.903.802) were impaired and they were provided for. The amount of provision was €1.286.418 (2016: €975.000).

Inventories are stated at cost less impairment.

**18. Tax refundable / Tax (liability)**

	2017 €000	2016 €000
Corporation tax	4.287	4.287
Special contribution for defence	(17.375)	-
	<b>(13.088)</b>	4.287

There are transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. The Group recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

**19. Short term deposits**

	2017 €000	2016 €000
Short-term bank deposits	<b>378.687</b>	358.233

The effective interest rate on short term bank deposits was 0,50% - 2,15% (2016: 0,70% - 2,20%) and these deposits had a maturity of 3 - 12 months (2016: 3 - 12 months), Deposits of €11,7 million (2016: €13,2 million) are used as guarantees for fuel deliveries.

The short-term bank deposits are denominated in the following currencies:

	2017 €000	2016 €000
Euro - functional and presentation currency	<b>366.941</b>	345.068
United States Dollars	<b>11.746</b>	13.165
	<b>378.687</b>	358.233

**20. Cash and cash at bank**

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

	2017 €000	2016 €000
Cash at bank and in hand	<b>32.637</b>	13.094
Short-term bank deposits	<b>775</b>	363
	<b>33.412</b>	13.457

The effective interest rate on short term bank deposits was 1,00% - 1,40% (2016: 1,25% - 1,75%) and these deposits had a maturity of 30 days (2016: 56 days).

Cash and bank balances are denominated in the following currencies:

	2017 €000	2016 €000
Euro - functional and presentation currency	<b>32.862</b>	12.922
United States Dollars	<b>550</b>	535
	<b>33.412</b>	13.457

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 20. Cash and cash at bank (cont')

Reconciliation of liabilities arising from financing activities:		
	Bank borrowings €000	Total €000
Balance at 1 January 2017	417.206	417.206
Cash flows:		
Repayment of principal	(75.709)	(75.709)
Repayment of interest	(4.113)	(4.113)
Interest expense	4.113	4.113
<b>Balance at 31 December 2017</b>	<b>341.497</b>	<b>341.497</b>

### 21. Borrowings

	2017 €000	2016 €000
<b>Current</b>		
Bank borrowings	41.680	31.023
<b>Non-current</b>		
Bank borrowings	299.817	386.183
<b>Total borrowings</b>	<b>341.497</b>	<b>417.206</b>

Maturity of non-current borrowings is as follows:

	2017 €000	2016 €000
Between 1 and 2 years	37.135	44.032
Between 2 and 5 years	99.893	112.300
Over 5 years	162.789	229.851
	<b>299.817</b>	<b>386.183</b>

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

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

	2017 %	2016 %
Bank overdrafts and loans	1,0	1,0

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

	2017 €000	2016 €000
<b>Floating rate</b>		
6 months or less	341.093	416.764
<b>Fixed rate on maturity</b>	<b>404</b>	<b>442</b>
	<b>341.497</b>	<b>417.206</b>

The Group has the following unutilized borrowing facilities:

	2017 €000	2016 €000
<b>Floating rate</b>		
Expiring within one year	35.000	85.000
Expiring beyond one year	42.500	2.500
	<b>77.500</b>	<b>87.500</b>

The carrying amounts of bank overdrafts and bank loans approximate their fair value. The carrying value of the Group's borrowings is denominated in the following currencies:

	2017 €000	2016 €000
Euro - functional and presentation currency	341.497	417.206
	<b>341.497</b>	<b>417.206</b>

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 22. Deferred tax liabilities

Deferred tax liabilities are analysed as follows:

	2017 €000	2016 €000
Deferred tax liabilities to be settled after twelve months	82.958	75.673

Deferred taxation is calculated in full on all temporary differences under the liability method using the applicable tax rates (Note 11).

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. The gross movement of the deferred taxation account is as follows:

	2017 €000	2016 €000
At 1 January	75.673	65.803
Charge to income statement (Note 11)	7.285	9.870
<b>At 31 December</b>	<b>82.958</b>	<b>75.673</b>

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

	Accelerated tax depreciation €000	Deferred income €000	Tax loss €000	Other €000	Total €000
<b>At 1 January 2016</b>	128.185	(56.395)	(4.283)	(1.704)	65.803
Charged/ (credited):					
Income statement	6.951	510	2.059	350	9.870
<b>Balance at 1 January 2017</b>	<b>135.136</b>	<b>(55.885)</b>	<b>(2.224)</b>	<b>(1.354)</b>	<b>75.673</b>
Charged/ (credited):					
Income statement	5.484	(64)	1.820	45	7.285
<b>Balance at 31 December 2017</b>	<b>140.620</b>	<b>(55.949)</b>	<b>(404)</b>	<b>(1.309)</b>	<b>82.958</b>

### 23. Deferred income

	2017 €000	2016 €000
Balance at 1 January	447.076	451.159
Additions	22.578	17.633
Transferred to the consolidated income statement	(22.068)	(21.716)
Balance at 31 December	447.586	447.076
Deferred income more than one year	(425.045)	(425.008)
Deferred income within one year	22.541	22.068

### 24. Trade and other payables

	2017 €000	2016 €000
Fuel oil suppliers	32.532	20.756
Other Suppliers	20.009	12.964
Value Added Tax payable	6.179	10.692
Pay As You Earn tax payable	601	502
Retention from contractors on capital contracts	2.489	2.054
Consumers' deposits	31.265	27.839
Interest payable	83	123
Other contribution to defined benefit plan	-	6.000
Accrued expenses	3.139	2.378
Creditors for purchase of land and substations	8.409	8.660
Amount available for interpleader proceedings	12.717 <sup>(1)</sup>	14.277 <sup>(1)</sup>
Other creditors	10.799	12.620
	<b>128.222</b>	<b>118.865</b>

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

(1) This amount represents a retention of amounts payable to a supplier of fuel to award beneficiaries through interpleader proceedings of various demanders against the Group and the specific supplier.

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 25. Subsidiary undertakings

	2017 % Holding	2016 % Holding	Country of incorporatio	Principal activities
Electriki Ananeosimes Limited	100	100	Cyprus	Dormant
EAC LNG Investments Company Ltd	100	100	Cyprus	Dormant
EAC Solar Thermal Power Ltd	100	100	Cyprus	Dormant
ESCO AHK Ltd	100	100	Cyprus	Dormant

The results of Subsidiary undertakings, which during 2017 remained dormant were consolidated in the Group accounts of Electricity Authority of Cyprus.

### 26. Contingent liabilities

- (a) As at 31 December 2017 the Group had a contingent liability in respect of possible tax for various expenses, amounting to €1.762.000 (2016: €1.711.000) and possible refund for defence contribution amounting to €4.073.000 (2016: €3.939.000).
- (b) On 2 December 2015, Income Tax authorities sent a notification letter to the Authority regarding Tax Enforcement for non-withholding tax from employees emoluments for the year 2009, which amounted to €3.925.000 plus interests and penalties. The Authority filed an objection on 26 January 2016 for the above mentioned case. The Group believes that there is an adequate defence against all claims and therefore no provision has been made in the financial statements.
- (c) As at 31 December 2017 the Group had contingent liabilities in respect of pending litigations amounting to €4.082.000 (2016: €5.123.000) and contingent asset of €10.000 (2016: €259.000).

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.

- (d) On 31 December 2017 the Group had the following guarantee documents:
- An amount of €2.771.000 for the benefit of Senior Customs Officer regarding the authorization granted to the Group for exemption from payment of excise duty on energy products used for electricity generation, including fuel oil (diesel).
  - An amount of €210.000 for the benefit of the Department of Environment for the permit of industrial emissions and waste management.
  - An amount of €11.000 for the benefit of the Human Resources Development Authority for participating in the development plan of training.

### 27. Commitments

#### Capital commitments

	2017 €000	2016 €000
Commitments in respect of contracts or with work in progress	112.769	9.933
Approved commitments but not contracted or without any work in progress	83.923	80.974
Approved commitments with expenditure outstanding	196.692	90.907

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

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

	2017 €000	2016 €000
Not later than one year	366	349
Later than one year and not later than 5 years	505	660
Over 5 years	13	13
	884	1.022

### 28. Related party transactions

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

#### (i) Sales

	2017 €000	2016 €000
Sales of electricity to related parties of the Group	61.609	53.981

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

## Notes to the consolidated financial statements for the year ended 31 December 2017 (cont')

### 28. Related party transactions (cont')

#### (ii) Year end balances - net

	2017 €000	2016 €000
Receivable from related parties from sales of electricity	5.803	3.461

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

#### (iii) Key management personnel compensation

The compensation of key management personnel is as follows:

	2017 €000	2016 €000
Salaries	217	244
Social insurance and other costs	42	53
Social cohesion fund	4	5
Pension fund costs	56	421
	319	723

#### (iv) Directors' remuneration

The total remuneration of the Directors is as follows:

	2017 €000	2016 €000
Emoluments in their executive capacity	58	23

### 29. Events after the reporting period

Until the date of approval of these Consolidated Financial statements an amount of €2.238.000 has been received from the insurance company as compensation for the loss suffered by the Flue Gas Desulphurization Plant of Unit 3 of Vasilikos Power Station from the fire incurred on 30 November 2016. The insurance company has accepted full responsibility and has implemented a procedure for covering the restoration cost. This process has not been completed by the date of approval of these Financial Statements and additional amounts are expected to be received from the insurance company until the full restoration of the Plant.

There were no other material events after the reporting date which have a bearing on the understanding of the Consolidated Financial Statements.

Reports of the Independent Auditor and Auditor General of the Republic on pages 72 to 75

## Appendices

Appendix	1									
<b>CONSUMERS, SALES AND AVERAGE PRICES</b>										
AS AT 31 DECEMBER	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>NUMBER OF CONSUMERS</b>										
Domestic	386 489	402 671	415 150	422 655	427 184	428 616	433 072	437 577	442 293	444 895
Commercial	80 913	83 160	84 800	85 325	85 198	84 695	85 188	85 525	86 494	87 065
Industrial	11 792	11 618	11 391	11 255	10 805	10 222	9 836	9 712	9 596	9 760
Agricultural	12 796	13 546	14 209	14 692	14 978	15 280	15 536	15 748	15 886	15 902
Street lighting	8 499	9 035	9 500	9 983	10 333	10 635	10 942	11 138	11 287	10 878
<b>TOTAL</b>	<b>500 489</b>	<b>520 030</b>	<b>535 050</b>	<b>543 910</b>	<b>548 498</b>	<b>549 448</b>	<b>554 574</b>	<b>559 700</b>	<b>565 556</b>	<b>568 500</b>
<b>SALES TO CONSUMERS (Thousand kWh)</b>										
Domestic	1 682 327	1 720 777	1 737 474	1 721 663	1 671 095	1 435 231	1 407 656	1 475 972	1 567 312	1 641 033
Commercial	1 881 173	1 918 932	1 990 994	1 854 782	1 836 756	1 655 761	1 630 789	1 659 588	1 728 200	1 755 094
Industrial	757 803	791 640	816 074	796 187	631 829	581 860	656 097	685 864	819 693	856 422
Agricultural	156 930	143 971	152 642	136 747	128 590	129 129	135 680	129 447	155 638	156 453
Street lighting	77 596	80 426	84 788	85 502	87 330	87 807	85 257	85 211	87 648	86 578
<b>TOTAL</b>	<b>4 555 829</b>	<b>4 655 746</b>	<b>4 781 972</b>	<b>4 594 881</b>	<b>4 355 600</b>	<b>3 889 788</b>	<b>3 915 479</b>	<b>4 036 082</b>	<b>4 358 491</b>	<b>4 495 580</b>
<b>AVERAGE SALES PER CONSUMER (kWh)</b>										
Domestic	4 353	4 273	4 185	4 073	3 912	3 349	3 250	3 373	3 544	3 689
Commercial	23 249	23 075	23 479	21 738	21 559	19 550	19 143	19 405	19 981	20 158
Industrial	64 264	68 139	71 642	70 741	58 476	56 922	66 704	70 620	85 420	87 748
Agricultural	12 264	10 628	10 743	9 308	8 585	8 451	8 733	8 220	9 797	9 839
Street lighting	9 130	8 902	8 925	8 565	8 452	8 256	7 792	7 650	7 765	7 959
<b>AVERAGE PRICE PER UNIT BILLED (cent)</b>										
Domestic	15,988	13,321	16,192	18,695	22,271	20,743	18,663	14,654	12,417	14,267
Commercial	16,982	14,196	16,905	19,377	22,645	20,84	18,923	14,731	12,498	14,108
Industrial	14,955	12,325	14,982	17,148	20,868	19,127	16,824	12,531	10,079	11,949
Agricultural	15,296	12,697	15,440	18,293	21,929	20,013	18,168	14,127	11,996	13,533
Street lighting	14,554	12,129	14,711	17,481	20,909	19,393	17,353	13,366	10,558	13,166
<b>AVERAGE PRICE</b>	<b>16,178</b>	<b>13,473</b>	<b>16,232</b>	<b>18,668</b>	<b>22,188</b>	<b>20,488</b>	<b>18,418</b>	<b>14,281</b>	<b>11,957</b>	<b>13,717</b>

## Appendices

## Appendix 2

## GENERATION, TRANSMISSION &amp; DISTRIBUTION EQUIPMENT

Description	Unit	In Commission 2016	Commissioned in 2017	Taken out of Commission in 2017	In Commission 2017
<b>POWER STATIONS</b>					
<b>Dhekelia "B" Power Station</b>					
Steam Turbines	No.	6	-	-	6
Capacity	MW	360	-	-	360
Internal Combustion Engines	No.	6	-	-	6
Capacity	MW	100	-	-	100
<b>Moni Power Station:</b>					
Steam Turbines	No.	-	-	-	-
Capacity	MW	-	-	-	-
Gas Turbines	No.	4	-	-	4
Capacity	MW	150	-	-	150
<b>Vasilikos Power Station:</b>					
Gas Turbines	No.	1	-	-	1
Capacity	MW	38	-	-	38
Steam Turbines	No.	3	-	-	3
Capacity	MW	390	-	-	390
Combined Cycle Gas Turbine	No.	2	-	-	2
Capacity	MW	440	-	-	440
<b>TRANSMISSION EQUIPMENT</b>					
<b>220kV Transmission Lines operated at 132kV</b>					
Route Length	km	43,885	-	-	43,885
Circuit Length	km	87,770	-	-	87,770
<b>132kV Transmission Lines</b>					
Route Length	km	447,397	-	5,287	442,11
Circuit Length	km	894,794	-	9,644	885,15
<b>132kV Underground Cables</b>					
Route Length	km	211,425	16,014	-	227,439
Circuit Length	km	211,425	16,014	-	227,439
<b>132kV Underground Cables-Operated at 66kV</b>					
Route Length	km	0	-	-	0
Circuit Length	km	0	-	-	0
<b>66kV Underground Cables</b>					
Route Length	km	0,491	-	-	0,491
Circuit Length	km	0,491	-	-	0,491

## Appendix 2

## GENERATION, TRANSMISSION &amp; DISTRIBUTION EQUIPMENT (cont')

Description	Unit	In Commission 2016	Commissioned in 2017	Taken out of Commission in 2017	In Commission 2017
<b>TRANSMISSION EQUIPMENT (cont')</b>					
<b>132kV Transmission Lines</b>					
operated 66kV					
Route Length	km	42,575	-	-	42,575
Circuit Length	km	85,150	-	-	85,150
<b>66kV Transmission Lines</b>					
Route Length	km	40,263	-	-	40,263
Circuit Length	km	40,263	-	-	40,263
132/66kV Interbus Transformers	No.	13	-	-	13
	MVA	648	-	-	648
132/11kV Step Down Transformers	Ap.	107	1	1	107
	MVA	3 591,5	40	31,5	3 600
132/6,6kV Step Down Transformers	No.	2	-	-	2
	MVA	58	-	-	58
132/3,3kV Step Down Transformers	No.	2	-	-	2
	MVA	20	-	-	20
66/11kV Step Down Transformers	No.	21	1	-	22
	MVA	271	10	-	281
66/3,3kV Step Down Transformers	No.	2	-	-	2
	MVA	5	-	-	5
15,75/132kV Step Down Transformers	No.	3	-	-	3
	MVA	495	-	-	495
11/132kV Step Down Transformers	No.	20	-	-	20
	MVA	1 304	-	-	1 304
11/66kV Step Down Transformers	No.	0	-	4	0
	MVA	0	-	150	0
Shunt Reactor 75 MVAR	No.	2	1	-	3
	MVAR	150	75	-	225
Substations	No.	63	-	-	63
<b>DISTRIBUTION EQUIPMENT:</b>					
MV Overhead Lines	km	5 855,782	54,84	16,4	5 894,22
MV Underground Cables	km	3 812,047	65,55	12,63	3 864,97
LV Overhead Lines	km	9 921,407	103,31	19,9	10 004,82
LV Underground Cables	km	6 038,26	160,57	0,44	6 198,34
22000-11000/433/250V P.M. Transformers	No.	10 327	156	34	10 449
	kVA	959 508	10 880	3 980	966 408
22000-11000/433V G.M. Transformers	No.	6 250	53	11	6 292
	kVA	3 523 590	34 720	9 000	3 549 310

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