

ANNUAL REPORT FOR 2006

The Cyprus Energy Regulatory Authority (CERA) was established by virtue of the Law of 2003 On regulating the Electricity Market, L.122(I)/2003, which was enacted by the House of Representatives on the 25th of July 2003. The Members of CERA were appointed on the 21st of January 2004 and assumed their duties on the 4th of February 2004 after giving the prescribed affirmation for the faithful execution of their duties to the President of the Republic of Cyprus.

The present Annual Report on CERA's proceedings covers the period from the 1st of January 2006 to and including the 31st of December 2006, and is the third one to be issued.

By virtue of the provisions of the above Law and in particular of Article 18, CERA submits to the President of the Republic of Cyprus an Annual Report on its Activities by the end of March every year, and provides copies of the Report to the Council of Ministers and the House of Representatives.

The Annual Report of the CYPRUS ENERGY REGULATORY AUTHORITY also incorporates the Report on the Activities of the Transmission System Operator (TSO) as provided by the Law L.122(I)/2003 (Article 61).

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His Excellency the President
of the Republic of Cyprus
Mr. Tassos Papadopoulos
Nicosia

31 March 2007

Your Excellency, Mr. President

We have the honour to submit the 3rd Annual Report and the Accounts of the Cyprus Energy Regulatory Authority, which also includes the Annual Report of the Transmission System Operator, for the year ended 31st of December 2006, as well as the Report of the Auditors.

The Report and Accounts is submitted to you in accordance with Articles 18(1), 19(3) and 61(3) of the Laws on Regulating the Electricity Market L.122(I)/2003 to 2006.

Respectfully

Costas Ioannou
Chairman

Stelios Petrides
Vice-Chairman

Kypros Kyprianides
Member

INTRODUCTION

The year under review, 2006, may be characterized as very important year with respect to discharging CERA's obligations and mission.

Particular emphasis was given to the sector of Renewable Energy Sources and to the examination of the relevant applications, at all times having in mind the contractual obligation undertaken by Cyprus towards the European Union by which 6% of the total electrical energy consumed should be derived from RES by the year 2010.

In April 2006, the European Union indicated to the Cyprus Government that granting Licences for Construction and Operation of generation from RES should be promoted, facilitated and the procedures simplified.

CERA, respecting the European Unions suggestions, simplified as far as possible CERA's individual procedures for granting its Licences.

During the year under review CERA granted eighteen (18) Licences for the Construction of Electricity Generating Stations by Renewable Energy Sources (Wind Farms) of an Installed capacity 362,8MW with the prospect of maximum expansion by a further 411.85MW depending on market conditions.

From its establishment in 2004 up until now CERA has issued twenty-two (22) Licences for the construction of Wind Farms, while in the year under review three (3) applications, which did not conform to the criteria set, were rejected.

It is important to note that the 6% target / obligation towards the European Union will be discharged / attained by the Licenced projects. Moreover, the provisions of the Kyoto Protocol for a cleaner environment are being promoted. The approval of these projects by the other Bodies involved is awaited in order for the projects to materialize as soon as possible.

The wide use of the photovoltaic systems is expected to promote further the use of Renewable Energy Sources. CERA in cooperation with Cyprus University carried out a specialised study on the subject, soon to be submitted to the Government for adoption.

Another issue of importance to which CERA has given the proper attention is the issue of the arrival and use of natural gas, which is generally considered to be an economical and environmentally friendly primary fuel source.

CERA's efforts, which commenced in 2005, continued with intense activity in 2006 and were targeted at completing the legal framework for the natural gas market. The basic legislation has now been completed. CERA, in cooperation with the Ministry of Commerce, Industry & Tourism follows this subject closely because the arrival and use of natural gas will be the major factor affecting the cost of electrical energy supply in the next decades with the corresponding impact on the economy of the country.

The detailed examination of Applications for Electrical Energy generation continued during 2006 and resulted in the issue of twenty-five (25) licenses for a total capacity of 1054,25MW (by Conventional Generating Units, RES including Biomass).

A complete picture of the licenses issued is shown in the relevant chapter of this Annual Report.

Particular importance and attention were also given to other major issues such as, the Declaration of the Regulating Practice and Methodology for electricity prices, made by CERA by means of its Regulating Decision Number 1/06, on the basis of which prices for electricity will be formed in future.

The philosophy of the electricity pricing is to reflect the real costs in a transparent manner, along with a reasonable profit for the Producers/Suppliers of electrical energy for the services they provide whilst, at the same time, to offer protection to the consumer and to the competition.

All of CERA's activities aim towards securing healthy competition in the Energy Market, whilst protecting consumer interests and the environment. At the same time, however, top priority is given by CERA to securing the quality, reliability, and the adequacy of electricity.

For the best possible attainment of its goals, as those were set at the time of its formation, CERA cooperates closely with the relevant Government and other Bodies.

In any case, our compliance with EU Directives and our cooperation with its departments is absolute our main concern being the strict adherence to the European legal framework, which governs the Energy Sector and its related branches.

In concluding this brief report on CERA's activities in 2006, which is presented in the Annual Report, we express our thanks to all associates and members of staff of CERA's Office for their best efforts.

CERA also wishes to thank the relevant Minister of Commerce, Industry & Tourism and his staff, the General Auditor of the Republic and the Transmission System Operator for their cooperation.

THE BASIC MISSION OF CERA IN THE ENERGY MARKET (ELECTRICITY AND NATURAL GAS)

- To secure essential and healthy competition in the Electricity and Natural Gas Market, avoiding discrimination both between the Licencees and the applicants for Licences.
- To protect the interests of Consumers of Electricity and Natural Gas.
- To promote the development of an economically viable and efficient Electricity and Natural Gas Market.
- To ensure the Security, Continuation, Quality and Reliability of Electricity and of Natural Gas Supply.
- To take into serious consideration the Protection of the Environment.
- To take into consideration the needs of the consumers of agricultural areas, of the consumers who are in a disadvantageous position and of the elderly.
- To encourage the efficient generation and use of Electricity.
- To promote the use of Renewable Energy Sources (RES).
- To encourage research and development of production, transmission, distribution and the use of Electricity and Natural Gas.

THE ESTABLISHMENT OF CERA AND ITS ROLE IN THE ENERGY MARKET

The structural changes of the energy markets in the European Union (EU) Member States, aiming at a Common Internal Energy Market, have created the need to establish Regulatory Authorities in the EU countries.

Directive 96/92/EEC of the European Parliament and the Council of the 19th of December 1996 regarding the common regulations for the internal Electricity Market in the European Union, created the need to the Republic of Cyprus, for harmonisation purposes with the Directive, to enact the Laws of 2003 – 2006 On Regulating the Electricity Market, by virtue of which the Cyprus Energy Regulatory Authority (CERA) was established.

The establishment of the Energy Regulatory Authority emanates from the obligations of Cyprus towards the European Union. The basic purpose of its establishment is the supervision of the operation of the Energy Market (Electricity and Natural Gas) in a new liberalised environment, in the absence of monopolies.

According to the Law on Regulating the Electricity Market, which was enacted in 2003 and, in essence, was put into effect on the 1st of May 2004, the generation and supply of electricity ceased to be monopolistic activities of the Electricity Authority of Cyprus (EAC).

The implementation of the provisions of the relevant legislation began with the assumption of the duties by the members of CERA on the 4th of February 2004. CERA is, inter alia, responsible for the safeguarding of competition in

the electricity market, the protection of the consumers' interests and the promotion and development of an economically viable and efficient electricity market. Any enterprise which is interested in generating and supplying electricity may submit an application to the Energy Regulatory Authority and obtain the relevant Licence provided the criteria set are fulfilled. The companies obtaining such a Licence have the right to use the existing electricity transmission and distribution network. Although these networks remain the property of the EAC, a Transmission System Operator has been appointed and functions independently in terms of organisation and decision making from the EAC, and its activities of production, distribution and supply, in order to safeguard access onto the Transmission network and the equal treatment of all users of the said network. The Owner of the Distribution System has also been nominated as the Distribution System Operator and although he is not independent in the same sense as the Transmission System Operator, he has the same duty / responsibility of safeguarding access to the Distribution network and equal treatment of all users of the said network.

The Energy Regulatory Authority also regulates all the Tariffs, Charges and Quality Standards, examines complaints relating to the services offered by the Licencees, and imposes fines and other measures.

One of the top and urgent priorities of CERA was the opening of the Electricity Market. This was achieved and the Electricity Market was liberalised by 35% on 1st May 2004. In 2006 this percentage includes the 726 biggest electricity consumers in Cyprus, each of whom consumes at least 350,000 kilowatt-hours per year. The annual electricity bill of these 726 consumers is estimated to amount to about CY£85 (€145) million. These consumers are free to select their Electricity Supplier. With effect from January 1st 2009 the market will be liberalised for all "non domestic" consumers, and with effect from January 1st, 2014 **all** consumers of electrical energy will be able to select their Supplier according to what is in their best interest.

POWERS, COMPETENCES AND DUTIES OF CERA

The Cyprus Energy Regulatory Authority is an Independent Authority of the Republic of Cyprus and by virtue of the relevant Laws, has the following executive powers, competences and duties in the Energy Field.

POWERS AND COMPETENCES

ELECTRICAL ENERGY

- Issues, controls, enforces, amends and revokes Licences, or grants exemption from the obligation of securing a Licence.
- Advises the Minister of Commerce, Industry & Tourism on all issues relating to electricity.
- Ensures that the “Electricity Transmission and Distribution Rules” and the “Electricity Market Rules” are prepared and approved in accordance with the Law.
- Safeguards adequacy in electrical energy to the satisfaction of all reasonable needs and demands for electricity.
- Regulates the tariffs, charges and other conditions and prerequisites which are implemented by the Licencees for any services offered in accordance with the conditions of their Licences.
- Determines, publishes and enforces quality standards with which the Licencees will comply.
- Determines the rules or the procedures according to which complaints are examined which relate to services offered by the Licencees including, when it considers it appropriate, the carrying out of investigations and the taking of decisions for such complaints.
- Encourages and secures competition with the ultimate target to reduce prices.
- Protects the interests of the Consumers.
- Ensures the Continuation, Quality, Reliability and Security of Electricity Supply.
- Protects the Environment.
- Encourages the use of Renewable Energy Sources (RES)
- Encourages Research and Development in the field.

NATURAL GAS

- Issues, controls, amends, suspends and revokes Licences, or grants exemption from the obligation to secure a Licence.
- Approves the conditions and prerequisites for the connection and access to the network, including the transmission and distribution tariffs as well as the conditions, prerequisites and tariffs for access to the installations of liquified natural gas.
- Determines the rules for the management and the distribution potential of interconnection, in consultation with the appropriate authority or authorities of the Member States with which there is interconnection.
- Sets up or approves mechanisms to face congestion in the natural gas network.
- Protects the natural gas Consumers.

- Regulates the tariff rates, charges and other conditions and prerequisites imposed by the Licencees for any offered service based on the conditions of their Licences.
- Enacts, publishes and enforces Regulations for quality standards with which the Licencees must comply.
- Takes appropriate and effective measures for control and transparency, so as to avoid possible misuse of dominant positions, and in particular of those misuses to the detriment of consumers.
- Creates, keeps and maintain a Licence Register.

OBLIGATIONS OF THE CYPRUS ENERGY REGULATORY AUTHORITY

ELECTRICAL ENERGY

During the execution of the duties assigned to CERA under the Laws of 2003 – 2006 On Regulating the Electricity Market, CERA acts within the framework of the Electricity Market Field in order to:

- Safeguard essential competition in the Electricity Market avoiding discrimination both between the Holders of Licences and the applicants for Licences.
- Protect the interests of the Consumers.
- Ensure that all the reasonable demands and needs relating to electricity are satisfied.
- Ensure that the Licencees operate efficiently and have the ability to finance their business activities for which they are licenced.
- Promote the development of an economically viable and efficient electricity market.
- Secure the safety, continuation, quality and reliability of Electricity supply.
- Take into consideration the Protection of the Environment.
- Encourage the efficient use and generation of Electricity.
- Take into consideration the needs of the consumers of rural areas, the consumers who are in a disadvantageous position and the elderly.
- Encourage the research and development of Generation – Transmission – Distribution and the Use of Electricity.
- Promote the use of Renewable Energy Sources (RES).

NATURAL GAS

According to the Laws of 2004 – 2006 On Regulating the Natural Gas Market, CERA has, inter alia, the following duties:

- Safeguarding observance to the competition rules in the field of import, storage, transmission, distribution and supply of natural gas.
- Protecting the interests of Consumers of natural gas.
- Safeguarding satisfaction of demand for natural gas.

- Ensuring that the Licencees are able to finance the business for which a Licence is obtained.
- Promoting the development of an economically strong and effective natural gas market.
- Safeguarding the safety, continuity, quality and effectiveness in the supply of natural gas.
- Caring for the protection of the environment.
- Encouraging research and development regarding the transmission, supply, storage and use of natural gas.

It is also the duty of CERA to:

- Safeguard and publish measures which may be put into effect in case of unforeseeable crisis in the energy field, or when the safety of people, works, installations or the integrity of the networks, are threatened, and
- Follow up the issue of the security of supply, and especially the balance of supply and demand in the market, the level of the expected future demand and the availability of Supply, as well as the level of competition in the market.

During the performance of its duties, CERA takes all necessary measures for the adherence of all parties involved to the Obligations of Public Service.

CERA's ultimate aim is to protect the interests of the Consumers of Electricity and Natural Gas in the best possible way, as well as to protect the Public Interest.

Furthermore during the execution of its duties, CERA may:

- Take Decisions by which, inter alia, determine the regulation of the Electricity and Natural Gas Market is regulated.
- Take Decisions in accordance with the provisions of the relevant Laws and Regulations.
- Carry out investigations, either following the submission of a complaint or initiated by CERA ex officio.
- Impose administrative fines, in the event of a breach of the terms of the Licence, or a breach of Regulated Decision.

MINISTERIAL DIRECTIVE, REGULATIONS NO.115/06, DATED 17TH OF MARCH 2006 – DETERMINING NATURAL GAS AS THE PRIMARY SOURCE OF ENERGY

Having taken into consideration the Decisions of the Council of Ministers regarding the importation and transportation of Natural Gas for the needs of Cyprus for generation of electricity and the construction of a Terminal for receiving and storing Natural Gas at the Vasilikos area, the Minister of Commerce, Industry Tourism determined natural gas as the primary source of

energy for all sizeable capacity electricity generating Power Plants which will be Licenced by CERA.

The Directive is in effect from the date of its publication on 17th of March 2006.

In accordance with above Directive, CERA decided that any Power Producing Unit over 50MW should be fuelled with Natural Gas.

ELIGIBLE CONSUMERS AND MINISTERIAL DECREE, REGULATION No. 340/04, DATED 30TH OF APRIL 2004

The category of Consumers entitled to select their Supplier in Electrical Energy includes all those whose total consumption for the latter 12 consecutive months was at least 350,000 kWh.

To this category of Consumers, in 2006 consisting of the 726 biggest Electrical Energy consumers, CERA sent relevant letters informing them about their rights to select their Supplier, about the relevant procedure to be followed in order to exercise their free selection and asking them to give their consent to CERA to release their personal data to interested Electrical Energy Suppliers.

The response of the 726 consumers up to now is the following:

CONSENTED	485
DID NOT CONSENT	30
NOT RESPONDED	211

CERA decided that the names of the Eligible Consumers will be given to the Independent Suppliers of Electrical Energy, only when the Eligible Consumers had given their consent to this effect, as provided by the relevant Law on the Protection of Personal Data.

The lists with the names of the Eligible Consumers may be communicated to the Suppliers of Electrical Energy who submitted complete applications to CERA for a Generation of Electricity Licence.

AMENDMENTS OF SEVERAL LAWS AND Enactment OF REGULATIONS

During the year under review, the following amending Law and Regulations were approved by the Council of Ministers and the Parliament and came into force on the 21st of July 2006.

- **THE LAW OF 2006 ON REGULATING THE NATURAL GAS MARKET (AMENDING)**, which mainly provides for issues pertaining to the

Licence Register, fines, determines their highest amount, and provides for the same powers and competences that CERA is vested by virtue of The Law of 2003 on Regulating the Electricity Market 2006.

- **REGULATIONS BY VIRTUE OF THE LAW OF 2006, ON REGULATING THE NATURAL GAS MARKET, INVESTIGATION PROCEDURE, REG.297/2006, ISSUE OF LICENCES, REG 298/2006 AND FEES (REG 299/2006).**

With the enactment of the above Law and Regulations, the legal framework of the natural gas market and, at the same time, the legislative framework of the common internal market, are complete.

Furthermore, the following legislation was enacted:

- The Law of 2006 On the Promotion and Encouragement of the Use of Renewable Energy Sources (RES) and Energy Conservation, **L.162(I)/2006**, and
- The Law of 2006 On the Promotion of Cogeneration of Electricity and Heat **L.174(I)/2006**.

Law 162(I)/2006, which was published on the 22nd of December 2006, incorporates Articles 2 and 5 of the Directive 2001/77/EC of the European Parliament, and amended the Laws in force “On the Promotion and Encouragement of the Use of RES and Energy Conservation “, L.33(I)/2003, L.234A(I)/2004 and L.139(I)/2005.

Law 174(I)/2006, which was published on the 29th of December 2006, incorporates Directive 2004/8/EC of the European Parliament and the Council, of the 11th of February 2004 “On the Promotion of Cogeneration of Electricity and Heat on the basis of the demand of useful heat and on amendment of Directive 92/42/EEC”.

Directives 2001/77/EC and 2004/8/EC of the European Parliament and of the Council have on the whole similar provisions, taking into consideration, of course, the technical particularities of cogeneration.

The main purpose of both Laws is to regulate certification of electrical energy generated by Renewable Sources and Cogeneration of high efficiency by issuing the so called guarantee of origin of electrical energy by renewable sources and cogeneration, and by taking measures to ensure such electrical energy’s priority of access to the network system.

GUARANTEE OF ORIGIN OF ELECTRICAL ENERGY

The certification, “Guarantee of Origin of Electrical Energy” is done on the basis of objective, transparent and non-discriminatory criteria by the issuing authorities, the Transmission System Operator and /or the Owner of the Distribution System acting in his capacity as the Distribution System Operator in accordance with the authorization given by CERA. The Supervision of the Guarantees procedures is effected by CERA, within the competence of which

falls the resolution of any disputes that may arise between the Issuing Authorities and the Applicants for certification.

The Guarantee of Origin of Electrical Energy certifies certain particular information such as the location of production, the commencement and the ending of the production time period, the quantity of electrical energy to which the certification refers, the name and details of the producer, and the installed capacity of the Power Station.

The Guarantee of Origin of Electrical Energy is transferable.

CERA cooperates with the competent Authorities of other Member States and deals with issues of mutual acceptance of the Guarantees, which are issued by other Member States.

PRIORITY ACCESS TO THE NETWORK SYSTEM OF ELECTRICAL ENERGY PRODUCED BY RENEWABLE ENERGY SOURCES

Both the above-mentioned Directives, apart from the issue of the Guarantee of Origin of Electricity Energy, provide for the priority access of the energy produced by Renewable Energy Sources and Cogeneration to the Network System.

The priority of access to the network System of the electricity produced by renewable sources of energy and cogeneration was regulated by amending the Transmission and Distribution Rules. The said amendment together with other amendments were approved by CERA on the 9th of June, 2006 and came into force on the date of their publication by CERA on the 19th of June, 2006.

The Transmission Systems Operator and / or the Owner of the Distribution System in his capacity as the Distribution System Operator, guarantees the transmission and distribution of the energy produced by Renewable Energy Sources and Cogeneration of high efficiency, subject only to maintaining the safety and efficiency of the Transmission and Distribution Systems.

The priority of access to the network System of the electricity produced by cogeneration was regulated by virtue of the Law 174(I)/2006.

AMENDMENTS OF THE TRANSMISSION AND DISTRIBUTION RULES

In the first half of the year under review, following appropriate studies by the Consultative Committees of the Transmission and Distribution Rules, a proposal to amend the Transmission and Distribution Rules was submitted to CERA by the Manager of the Transmission System Operator. CERA after detailed examination of the said suggestions, approved, and published the amendments after applying certain modifications.

The revised Transmission and Distribution Rules came into force as from the date of their publication on 19th of June 2006.

PROPOSED LAWS AND REGULATIONS

Apart from the legislation enacted during the year 2006, CERA deliberated and elaborated with the Ministry of Industry, Commerce and Tourism, The Legal Department of the Government, the Transmissions System Operator, the Distribution System Operator and the Electricity Authority of Cyprus the proposed Laws and Regulations, listed below:

- Measures to safeguard the Security of Natural Gas Supply
- Amendments to the Laws On Regulating the Electricity and Natural Gas Market concerning transfer of a Licence.

MEASURES TO SAFEGUARD SECURITY OF NATURAL GAS SUPPLY

The amendments were proposed in order to harmonise national legislation with the Directive 2004/67/EC of the Council of the 26th April, 2004 concerning measures to safeguard security of natural gas supply.

The Directive establishes measures to safeguard an adequate level of security of natural gas supply. These measures also contribute to the proper functioning of the internal gas market. It establishes a common framework, within which Member States shall define security of supply policies that are general, transparent, non-discriminatory, and compatible with the requirements of a competitive internal natural gas market. The Directive also clarifies the general roles and responsibilities of the different market players and introduces specific non-discriminatory procedures in order to safeguard security of gas supply.

Also specified are adequate minimum standards of security of supply that must be complied with by the players in the gas market of each Member State.

Security of supply for household customers is protected to an appropriate extent at least in the event of:

- A partial disruption of national gas supplies during a specific period taking into account national circumstances
- Extremely cold weather during a nationally determined peak period
- Periods of exceptionally high gas demand during the coldest weather periods, which statistically occur every 20 years.

Furthermore, the Directive provides that national emergency measures are prepared in advance and that they are published. If appropriate, the said measures are updated and are communicated to the Commission. The emergency measures also ensure that, where appropriate, the market players are given sufficient opportunity to provide an initial response to the emergency situation.

AMENDMENTS TO THE LAWS ON REGULATING THE ELECTRICITY AND NATURAL GAS MARKET AND THE REGULATIONS EMANATING FROM THEM

CONCERNING TRANSFER OF A LICENCE FOR THE CONSTRUCTION AND OPERATION OF A POWER STATION

The purpose of the amendments to the Laws on Regulating the Electricity and Natural Gas Market and their Regulations was the necessity which arose during the execution of CERA's competences to regulate the situations where part or all of the granted licence is transferred to another natural or legal entity other than the Licencee.

The proposed regulation is effected by additional provisions to the Laws and Regulations through which, firstly, a substantial fee is imposed in the event that a transfer of licence is effected, including cases where a change of the status of Ownership of the Licencee takes place and, secondly, it is necessary to secure CERA's approval for the transfer of the Licence and that the transfer is subject to the same procedure of Licencing and the same criteria as those set in the relevant Laws and the Regulations for the initial Licencing of any natural person or legal entity which proposes to have any activity in the energy sector.

As the regulations stand now, in the event that a transfer of Licence takes place, a fee of only 100 CY POUNDS is payable within 30 days from the date of the recording of the transfer in the Register. The proposed amendments provide that a substantial fee is payable upon the approval by CERA of the transfer of the Licence. The said fee is reduced proportionately depending on the time lapsed between the issue of the Licence and the transfer of Licence. The amount is payable at the time of the approval of the transfer by CERA.

COMMON TASK FORCE CONSISTING OF STAFF MEMBERS FROM CERA AND FROM THE COMMITTEE FOR THE PROTECTION OF COMPETITION

A meeting took place at CERA offices on the 9th of March 2006 between the Members of CERA and the Committee for the Protection of Competition, where it was decided that a common task force shall be appointed in order to promote close cooperation between the Authority and the Committee on issues of common interest.

At the meeting, information exchange took place on the activities of each Body and discussion on their respective roles as determined by the Laws for the protection of Competition in the of Electricity and Natural Gas sectors.

NATURAL GAS

DEVELOPMENTS, REGULATIONS, SECURITY OF SUPPLY

The turn towards the use of Natural Gas is a world-wide trend chiefly because it constitutes an economic and, most importantly, an environmentally friendly fuel. The arrival and use of Natural Gas will contribute to the reduction of atmospheric pollution and therefore to the protection of the environment. In addition it will be of substantial benefit to the Cypriot Electricity consumer in terms of lower price due to the prospect of the reduced cost of electricity generation. Similar benefits are expected to result for Cypriot consumers of Natural Gas for uses other than that of electricity generation.

The arrival and use of Natural Gas in the Energy Balance of Cyprus is expected to affect seriously certain important sectors of the economic and social life of the country, since such an action promotes and secures the differentiation of the energy sources in the country, particularly so since this fuel is of high quality and can be utilised in many sectors (Industry, Electricity Generation, Transport and others). Moreover, the arrival and use of Natural Gas is expected to increase competition, improve quality of life and to create new work positions.

The Natural Gas Sector has been harmonized with the relevant European Directive 2003 / 55 / EC in relation to the common rules for the internal Natural Gas market of the Member States. To this end the Law, of 2004 on Regulating the Natural Gas Market, L.183(I)/2004, has been enacted and came into force.

Within the framework of CERA's competences and in order to further harmonise with the provisions of Directive 2003/55/EC of the European Parliament and the Council of the 26th June 2003, CERA prepared an amendment to the Law with the purpose of including in the basic Law, provisions authorizing CERA to impose administrative fines in the event of breach of the terms and conditions of a Licence, to issue Regulatory Decisions, to set up, keep and manage a Register, to issue Regulations regarding the Licence fees and, the carrying out of Investigations.

Within the framework of its responsibilities CERA prepared Regulations regulating essential issues regarding the organisation and operation of the Natural Gas Sector, the access to the market, the criteria and procedures for granting Licences for the transportation, supply and storage of Natural Gas. These Regulations include those concerning issuing Licences for the construction and operation of Natural Gas installations, the payable fees for Licences covering the activities relating to Natural Gas and the investigations procedure for submitted complaints.

The amendment to the Law and the above mentioned Regulations were approved by Parliament and came into effect on 21st of July 2006.

Following the enactment of the amendment to the Law and of the Regulations, the company GOLAR ENERGY LTD submitted the necessary Licence applications for the Construction and Operation of an Off-Shore facility for Import/Storage/Regasification of Liquefied Natural Gas for Own Use in an

Electricity Generating Power Station at the Vasilikos area. It should be noted that previously, on the 28th December, 2006, CERA had decided to grant a Licence to Golar Energy Ltd for the Construction of a Floating Electricity Generating Power Station of combined cycle.

At the same time other investors approached CERA declaring their interest in the construction and operation of an off-shore Floating Storage Station and Regasification of Liquefied Natural Gas near Vasilikos.

The application of the provisions of the Directive so far demonstrates the essential benefits which may result from the internal market of the Natural Gas with respect to gains in efficiency, lower prices, higher quality levels of services and increased competitiveness. For the purpose of securing the operation of a competitive market and eliminating any obstacles and weaknesses which may occur in the application of the provisions of the Directive, CERA studies and promotes, in close cooperation with the Government, the selection of the most appropriate technology /approach in this sector with regard to cost, the level of the investment risk as well as the issues of security of supply and operation.

Necessary prerequisites for the creation of a healthy Model Market of Natural Gas are, to avoid the creation of monopolistic conditions, minimising the risk of creating dominant positions in the market or aggressive behaviours as well as securing transparency and equal conditions of competition.

Furthermore, CERA prepares the necessary Legislation in order to secure an adequate level of security in the supply of Natural Gas and to attain the smooth operation of the domestic Gas market, as provided in the relevant European Directive, 2004/67/EC of the Council, of the 26th of April, 2004, concerning measures to safeguard security of Natural Gas supply.

DECLARATION OF REGULATORY PRACTICE AND METHODOLOGY OF ELECTRICITY TARIFFS

REGULATORY DECISIONS:

01/2006, REGULATIONS 177/2006, 14TH OF APRIL 2006
02/2006, REGULATIONS 404/2006, 23RD OF OCTOBER 2006

During the year under review, in discharging its obligation to regulate the tariffs and charges levied by the Licencees for the services they offer according to the terms and conditions of their Licences, CERA, after deliberations with all parties involved, published on 14th of April 2006 and 23rd of October 2006 the Declaration of Regulatory Practice and Methodology of Electricity Tariffs.

A summary of the principles of the Methodology of Electricity Tariffs is given below:

- All tariffs and charges for the services provided by the Licencees must reflect the cost of providing those services, and
- Tariffs and charges should not discriminate among the purchasers of those services.

In other words, CERA ensures that a Licencee or holder of an exemption may recover all costs reasonably incurred by efficiently operating the business in accordance with the Law, including, inter alia, the following:

- The cost of fuel, wages and salaries, and other operating and maintenance costs
- A reasonable percentage for capital depreciation provision;
- A reasonable return on the capital employed;
- The cost arising out of the Public Service Obligations imposed on the Licencee in accordance with the legislation, and
- The cost arising out of offering ancillary services.

In addition to the above, when deciding on the appropriate level of tariffs or other charges, CERA also considers the following:

- The protection of consumers against monopolistic prices; and
- The encouragement of the efficiency and quality of the services offered by the Licencees.

The charges for the connection and use of the Transmission and Distribution Systems, are determined in accordance with CERA' s Decisions in order that the Transmission System Operator and / or the Owner of the Distribution System respectively recover the following:

- Justified and reasonable expenses incurred directly or indirectly in the operation of the necessary tasks of the enterprise
- A reasonable rate of return on the capital employed representing these expenses..

CERA is exclusively competent to determine what constitutes reasonable percentage of the above expenses and capital return.

The drafting of the Methodology of Tariffs was based on the above mentioned principles firstly, in order that these principles are applied and, secondly, in order to reach the following aims through the application of the tariffs and charges:

- To encourage conservation of electrical energy
- To give adequate incentives to the participants in the electricity market to minimize the cost of the services offered
- To ensure that the factors affecting the tariffs appear in the electricity bills in a transparent and clear way

- To ensure that the bills are presented in a clear and understandable format
- To ensure that the setting of prices is predictable and that abrupt fluctuations are avoided
- To ensure equal treatment of all consumers
- To ensure a smooth transition from the old tariffs to the new ones.

It was also taken into consideration that the regulation of the electricity bills is an ongoing process in which market developments as well as the cost of the services rendered are investigated and assessed and that for this reason the process includes periodical reviews.

The following Table shows a typical structure of the final tariff to be charged to consumers of Low Voltage.

DESCRIPTION OF TARIFF	UNIT CHARGE
Cost of production (C)	(C) = (A)+(B)
Energy (Day) (A)	CY P (Euro) / MWh
Energy (Night) (B)	
Charge for the use of the Transmission System	(D) CY P (Euro) / MWh
Charge for the use of the Medium Voltage of the Distribution System	(E) CY P (Euro) / MWh
Charge for the use of the Low Voltage of the Distribution System	(F) CY P (Euro) / MWh
Charge for Billing Administrative Expenses	(G) CY P (Euro) / consumer
Fees for Public Obligations Services and universal Services	(H) CY P (Euro) / MWh
Fees for the promotion of Renewable Energy Sources and Cogeneration	(I) CY P (Euro) / MWh
Fees for ancillary Services	(J) CY P (Euro) / MWh
Fees for additional charges (e.g. Operation expenses of the Transmission System Operator)	(K) CY P (Euro) / MWh
Final Tariff of Consumers of Low Voltage	(C)+(D)+(E)+(F)+(G)+(H)+(I)+(K) CY P (Euro) /MWh

In addition to the above, the consumers' bills will include tax and other charges, which may be imposed (V.A.T. charges, etc). From time to time CERA will determine what information and in what format such information will be shown in the final bill reaching the consumer.

During the first five years of the application of the present Regulations regarding the setting of the tariffs, the following parameters will be assessed for the purpose of determining the final level of each tariff:

- The historic computation of tariffs by the Electricity Authority of Cyprus.
- The provision of incentives for speedy attainment of the cost levels in line with the international and the best European practice.
- The smooth and gradual transition from the monopolistic system, which existed until now, to the state of a liberalized competitive market.

PUBLICATION OF DECISIONS AND INFORMATION

PUBLICATION IN THE GOVERNMENT GAZETTE OF 28TH APRIL 2006

ENERGY GENERATING UNITS

According to the provisions of the Laws ON REGULATING THE ELECTRICITY MARKET and specifically articles 15, 26 and 85, the following Decisions / information are published for the information of all interested parties.

A. GENERAL

1. LICENCING

- 1.1 Already in force are the terms and conditions for licencing Independent Producers of electrical energy, including producers from RES. These terms and conditions have been published in the enacted Regulations of 2004, On Regulating the Electricity Market (Issue of Licences), REG.538/2004, which came into force upon their publication in the Government Gazette on 30/04/2004 and can be found also in CERA's web page.
- 1.2 In order to secure a licence for the Construction and Operation of generating Units for the purpose of supplying electrical energy to Eligible Consumers or for Own Use or for production from RES, a specific application has to be submitted as provided by Law 122(I)/2003 and the relevant Regulations. The application should be accompanied by the appropriate Application Fee and by all the necessary supporting documents that will enable CERA to carry out a detail examination of the application and make its decision.
- 1.3 The official "Application Form", Part I of the relevant Regulations should be completed and submitted accompanied by all documents provided by Part II of the same Regulations.
- 1.4 The application Fee covers the registration, examination,

assessment and decision on the application and is not refundable.

1.5 In addition, the following are important and necessary parts of the application:

- ✚ Definition of the specific construction site (plot of land), which should be accompanied by the written consent of the Owner of the land
- ✚ General Lay Out Plan of the location of the Units
- ✚ Feasibility Study of the project
- ✚ Environmental study by an Independent Consultant in which it should be clearly concluded that all criteria for the protection of the Environment are met. (The obligation on the applicant to see that the criteria are observed during the construction and operation of the units shall be part of the conditions under which the Licence will be issued.)
- ✚ Analytical and binding time schedule with an indication of the monthly progress of realizing the project.

1.6 Applications will be examined in the same sequence as the date they are considered to be complete (i.e. that all the required data have been submitted)

1.7 Cyprus is not considered to be “a large market” in electrical energy. It follows, therefore, that in order to serve the best interests of the consumers and for the smooth operation of the market, CERA does not intend to issue an unlimited number of Production Licences

1.8 In deciding the number of Licences and the capacity of new Units to be licenced, in addition to other criteria, CERA will take into serious account the following:

- The adequacy , reliability and security of production in years to come
- The safety of the electricity network, the installations and the associated equipment
- Environmental protection
- Public health and safety protection
- The energy efficiency
- The creation and maintenance of healthy competition for the benefit of the consumers
- The viability of the project
- The type of fuel to be used
- The impact on the price per kilowatt- hour.

The time schedule for the completion of the project.

1.9 CERA reserves the right to cancel a licence it has issued if the agreed time schedule for the project is delayed at any stage by more than three months.

- 1.10 According to the Laws of 2003-2006 On Regulating the Electricity Market, Article 34(3), the mere fact that a licence for the construction and Operation of Generating Stations for electrical energy has been issued does not absolve the holder of the Licence from the obligation to secure any other approval and or licences required by any other Law (e.g. Town Planning Permit, or Building Permit).
- 1.11 The relevant Law stipulates the obligation on the applicant to be a citizen of the E U and, if a natural person to reside in a Member State or, if a legal entity to be established and to have formed a Company in a Member State of the EU.
- 1.12 Article 6(2) of the Regulation on Issuing Licences, Reg.358/2004 provides that *“information should be submitted to CERA according to this Regulation, in writing, within the time period prescribed in the publication according to the Regulation 5 (2). Any information submitted after this date will not be considered by CERA”*.
- 1.13 Article 39 of the Laws of 2003-2006 On Regulating the Electricity Market provides for notification to EU in the event that an application for licence is rejected, i.e *“in the case where CERA rejects any application for granting a Licence:*
- *CERA informs the applicant in writing of the reasons for the rejection, and*
 - *Within 28 days from the rejection of the application, CERA advises the Commission in writing of the reasons for the rejection of the application”*.

2. EXEMPTIONS FROM HOLDING A LICENCE

- 2.1 Electricity Generating Units from RES of capacity up to 10KW are exempt from the obligatory submission of an application in order to secure an exemption from CERA. For such Units of installed capacity between 10KW to 5MW an application is required for granting an exemption (for Units using RES, of capacity 5MW and over, an application for a normal licence is required).
- 2.2 Users of small electricity generating Units with capacity up to 10KW are exempt from the obligation to apply and secure an exemption from CERA on condition that their operation is not permanent, the electrical energy produced is for own use, they do not cause any problems to the environment, or noise pollution when operating and that the users undertake the responsibility for the safe installation, connection and operation complying with any other relevant Law or Regulation of the Republic of Cyprus.

- 2.3 For the construction and operation of new electricity generating Units for Own Use of capacity greater than 10KW and up to 1MW, an exemption from holding a licence to construct and operate such a Unit must be secured from CERA in advance. The validity period of the issued exemptions varies from 1 to 20 years at CERA's discretion and, if required it can be revoked at any time.
- 2.4 Applications for exemption from holding a Licence for the construction of an Electricity Generating Unit for Own Use greater than 50KW and up to 500KW should be accompanied by an environmental study, which should focus on the atmospheric/noise pollution and the safety of the fuel used. Units of capacity greater than 500KW up to 1MW should submit an environmental study whose extent and nature will be determined by CERA.
- 2.5 For Stand-By Units of capacity up to 1MW there is no obligation to submit an environmental study.
- 2.6 Annual Fees are paid only for Units for Own Use with capacity greater than 100KW. Stand-By Units are exempt from the annual fees.
- 2.7 A necessary precondition for a Unit for Own Use, whether Stand-By or not, to commence operating is the securing of an Inspection Certificate, Check and Approval by the competent Body

B. CONNECTION OF GENERATING UNITS TO THE TRANSMISSION/ DISTRIBUTION SYSTEMS

1. GENERAL

- 1.1 Groups of generating Units of total capacity up to 6MW, as a rule, shall be connected to the Distribution System, whereas generating groups over 6MW shall be connected to the Transmission System.
- 1.2 The study on the manner Units of production are to be connected shall be carried out by the TSO, the Owner of the Transmission System or the Distribution System Operator or the Owner of the Distribution System depending on the generated capacity and/ or the manner of connection to the Transmission or Distribution System.
- 1.3 A producer shall not have the right to undertake the connection himself, unless CERA considers that EAC is delaying the task. The connection, however, will be according to specifications determined by EAC.
- 1.4 In the case where the Owner of the Transmission System

undertakes an upgrade of his installations which is not related to the application for connection by the Producer, the cost of adaptation to the producers installations shall be undertaken by the Owner of the Transmission / Distribution System unless the upgrade relates to a decision previously taken and of which the producer was aware.

- 1.5 Measurements of the energy shall be taken at the point of connection to the Transmission / Distribution System.

2. CONVENTIONAL UNITS OF GENERATION

In addition to what is mentioned

- I. in B1, and
- II. the provisions of the Regulation, REG.177/2006, entitled "Statement of Practice, Methodology of Electricity Tariffs", published in the Government Gazette on 14/04/2006, the following also apply:

- 2.1 The connection fee shall be based on the estimated cost of the simplest technical solution. The new connection installations shall be the property of the Owner of the Transmission or Distribution System.
- 2.2 The connection installations may at all times serve other users or producers.

3. GENERATING UNITS FROM RES

In addition to what is mentioned in B 2 (I) and (II) the following apply:

- 3.1 RES Systems should have priority of access and connection to the Transmission and Distribution Systems.
- 3.2 The connection fee shall be based on the estimated costs of the simplest technical solution and shall be apportioned 50% to the RES producer and the remainder to the Owner of the Transmission and Distribution System.
- 3.3 The connection installations may at any time serve other users or producers without any refund of the contribution to the cost of the initial connection.
- 3.4 As security against early termination of the RES project, delay in its completion, non completion, or minimal operation of the project, a Bank Guarantee shall be provided for an amount equal to 50% of the capital cost of connection and the Bank Guarantee may be cashed in order to cover any real costs, including the cost of dismantling the connection installation and reinstating of the site to its state prior to the creation of the connection. The Bank Guarantee will be managed by the

Transmission System Operator (TSO). Subject to CERA's approval, an additional amount of up to 10% of the capital cost may be imposed as compensation for breach of the terms of the connection contract or for the causes mentioned above, irrespective of any of the real costs to be paid. This compensation shall be credited to the TSO and shall return indirectly to the consumer through the process of charging for the use of the system. Any surplus from either the 50% contribution of the Producer or from cashing his Bank Guarantee shall be refunded to the producer.

- 3.5 In the case of RES, any system losses or other TSO charges will not be born by the Producers, and the cost of the connection line losses shall be recovered through the wider scheme which applies to losses of the whole system.
- 3.6 The cost of RES installations on Stand-By shall be examined by CERA at regular intervals and the appropriate decisions will be taken.

C. THE FRAMEWORK OF THE AGREEMENT TO PURCHASE ELECTRICAL ENERGY PRODUCED FROM RES

Taking into consideration the provisions of Law 33(I)/2003 "On the promotion and encouragement of the use of RES and Energy Savings in general, the creation of a special fund for issuing grants or subsidies towards these as well as other related subjects" as amended and, the "Plan for subsidies for energy saving and the encouragement of the use of RES" and the various interpretations of their provisions as expressed during discussions that took place, the following particular decisions were taken

1. Buying and selling Electrical Energy produced from RES is effected by means of an agreement between two contracting parties, that is, the Buyer (EAC or in the future perhaps an additional supplier) and the Producer, and the payments shall be made directly from the Buyer to the Producer.
2. The amount of subsidy from the Special Fund for RES for all approved installations for the generation of electricity from RES shall be paid by EAC (the Buyer) using part of its income from the fee for RES , which is imposed on electricity consumption, a process which already applies to the purchase of energy from RES units of small capacity, since the Management Committee of the Fund has consented to this.
3. The agreements between TSO and DSO and Producers from RES for connection and use of the Transmission or Distribution Systems according to the capacity generated may include subjects as:

-  Operating Load Planning
-  Metering arrangement and readings

- ✚ Collection of data for production and the wind
 - ✚ The power generation coefficient
 - ✚ Dealing with emergencies to the system of generation/Transmission and intervention to the operation of Wind Farms.
4. Such subjects may at the same time be dealt with through the Transmission and Distribution Rules and the Market Rules.
 5. No charges for the use of the Transmission and/or Distribution System shall be levied on the RES Producer.

IMPORTANT DECISIONS

During the year under review, CERA took a number of important decisions, shown below:

- **EXEMPTION FROM HAVING TO SUBMIT AN ENVIRONMENTAL STUDY**

Applications for exemption from the obligation of holding a licence for the Construction of electricity generating Stations of capacity up to 1MW and the need to submit an environmental study fall into the following categories:

- A. All Stand-By Units are exempt from the obligation to submit an environmental study. These Stand-By Units operate only in case of a power cut due to a grid fault or inability to maintain supply.
- B. Units with capacity up to 50KW are exempt from the obligation to submit an environmental study as long as they do not cause any environmental problem or noise pollution by the use of the generator, always at CERA's discretion.
- C. Units of capacity between 50kW and 500kW should submit an Environmental report, if deemed necessary by CERA, and the report should focus on the following:
 1. Atmospheric Pollution and Polluting Emissions.
 2. Noise Pollution and Noise Levels
 3. Security for the fuel used and fire prevention provisions.
- D. Units of capacity between 500kW and 1000kW should submit an Environmental Study whose extent and nature shall be determined by CERA, at its discretion, depending on the particulars of each case.

CERA reserves the right to request any additional information with regard to the Environmental Report that CERA considers necessary for the proper examination of each individual application.

- **NOTICE ON REGULATORY PRACTICE AND DRAFT METHODOLOGY FOR ELECTRICITY TARIFFS**

CERA approved and decided to publish the Notice on Regulating Practice and Draft Methodology for Electricity Tariffs, inviting all interested parties to submit any likely objections or comments within 30 days from the publication of the Draft.

CERA ensured that all interested parties were informed.

- **GRANTING EXEMPTION FROM LICENCE FOR STAND- BY UNITS FOR OWN USE OF MAXIMUM 1MW INSTALLED CAPACITY**
- **GRANTING EXEMPTION FROM LICENCE FOR OWN USE OF MAXIMUM 1MW INSTALLED CAPACITY**

CERA Members decided on the criteria to be applied when examining applications for exemption form License and, after taking into account:

The Laws N.122(I)/2003, N.239(I)/2004 and, N.143(I)/2005 On Regulating The Electricity Market.

The 2004 Regulations On Regulating The Electricity Market (Issue of Licenses)

The 2004 Regulations On Regulating The Electricity Market (Application Fees)

Decided on the content of the tables shown below:

MANNER OF USE OF THE UNIT	GENERATION FOR OWN USE	
NUMBER OF ELECTRICAL GENERATORS AND MANNER INSTALLED	The Unit consists of one or more Electrical Generators installed in the same vicinity, connected to one or more Distribution Panels and the total installed capacity does not exceed 1MW.	The Unit consists of two groups of Elec. Generators installed in the same vicinity, connected to one or more Distribution Panels but one group acts as stand-by for the other, with no possibility of both groups of Electrical Generators operating at the same time. The total installed capacity of each of the two groups of Electrical Generators does not exceed 1MW.
OBLIGATION TO SUBMIT AN ENVIRONMENTAL STUDY	An Environmental Study should be submitted at CERA's discretion. For Units between 50kW and 500kW an Environmental Study is submitted which focuses on the Atmospheric Pollution, Noise Pollution and Fuel Safety. For Units between 500kW and 1000kW an environmental Study should be submitted as determined by CERA.	

NUMBER AND TYPE OF APPLICATIONS TO BE SUBMITTED TO CERA	One application for exemption from the Licence for construction and another application for exemption from the Licence for generation for Own Use.	One application for exemption from the Licence for construction and another application for exemption from the Licence for generation for Own Use for each group of Electrical Generators.	
RECORD OF GENERATED ELECTRICAL ENERGY	Those qualified for exemption from License for capacity greater than 100kW should notify CERA, at three-month intervals, of the energy generated.		
FEES PAYABLE	APPLICATION FEE	£200,00	£400,00
	ANNUAL FEE	Does not apply to Units up to 100kW. For Units greater than 100kW the fee payable is 40 cent per kW of installed capacity.	Does not apply to Units up to 100kW. For Units greater than 100kW the fee payable is 40 cent per kW of installed capacity.
	FEE FOR RES	The amount of 0,13 cent per kW-hour is paid into the special fund for R.E.S. as a fee on Consumed Energy.	
<p>NOTE: Obtaining a Certificate of Inspection, Check and Approval is necessary before any Unit is put in to operation. Approved Certificates are those issued by the Electro-Mechanical Department, the E A C or, an electrical engineer who is a registered member of The Cyprus Scientific and Technical Chambers.</p>			

MANNER OF USE OF THE UNIT	STAND-BY USE	
NUMBER OF ELECTRICAL GENERATORS AND MANNER INSTALLED	The Unit consists of one or more Electrical Generators installed in the same vicinity, connected to one or more Distribution Panels and the total installed capacity does not exceed 1MW.	The Unit consists of two groups of Electrical Generators installed in the same vicinity, connected to one or more Distribution Panels but one group acts as stand-by for the other, with no possibility of both groups of Electrical Generators operating at the same time. The total installed capacity of each of the two groups of Electrical Generators does not exceed 1MW.
OBLIGATION TO SUBMIT AN ENVIRONMENTAL STUDY	STAND-BY Units are exempt from the obligation to submit an Environmental Study.	

NUMBER AND TYPE OF APPLICATIONS TO BE SUBMITTED TO CERA	One application for exemption from the Licence for construction and another application for exemption from the Licence for generation for Own Use as Stand-By.	One application for exemption from the Licence for construction and another application for exemption from the Licence for generation for Own Use as a Stand-By, for each group of Elec. Generators	
RECORD OF GENERATED ELECTRICAL ENERGY	Those qualified for exemption from Licence for generation for Own-Use as a Stand-By are exempt from the obligation to record the quantity of generated energy		
FEES PAYABLE	APPLICATION FEE	£200,00	£400,00
	ANNUAL FEE	DOES NOT APPLY	
	FEE FOR RES	DOES NOT APPLY	
NOTE: Obtaining a Certificate of Inspection, Check and Approval is necessary before any Unit is put in to operation. Approved Certificates are those issued by the Electro-Mechanical Department, the EAC or, an electrical engineer who is a registered member of The Cyprus Scientific and Technical Chambers.			

- **IMPOSITION OF PUBLIC SERVICE OBLIGATION - TARIFF FOR LARGE AND DISADVANTAGED FAMILIES**

CERA Members studied the letter sent by the Minister of Commerce, Industry & Tourism, dated 5th of April 2006, and the one sent by EAC dated 6th of April 2006 on the above subject and they decided to approve the introduction and application of the special tariff for large and disadvantaged families.

The question of recovery of any loss of income to EAC through the application of the Special Tariff will be examined by CERA within the general framework of the Public Service Obligations and the anticipated suggestions from EAC regarding the review of all EAC tariffs.

The 1st of May 2006 was set as the date as from which the special tariff shall apply.

- **THE TARIFF FOR CHARGES FOR THE VALUE OF ELECTRICAL ENERGY PROVIDED TO, BUT NOT PAID FOR, THE TURKISH OCCUPIED AREAS**

CERA Members studied the letter sent by EAC dated 10th of April 2006, on the above subject and they decided that because of the special circumstances that prevail, they should approve the suggested tariff/charge on the rest of the

consumers for the above unpaid electricity consumption in the Turkish occupied areas. This approval was granted on a temporary basis.

- **MEASUREMENT OF WIND POTENTIAL**

CERA Members dealt with the above subject and decided that criteria that would be acceptable by CERA for the purposes of evaluating applications shall be at least one of the following:

- Analytical measurements using anemometers at the proposed piece of land, carried out by the applicants, for a confirmed period of at least 6 months. The measurements to be submitted, along with all data of the data logger of the anemometer, taken at the proposed height of the rotor of the wind turbine or shall be simulated for this height.
- Analytical measurements of the nearest Weather Station of the Meteorological Office of the Republic of Cyprus for a period of at least one year, simulated for the specific piece of land upon which the Wind Farm is to be constructed and at the proposed height of the rotor of the wind turbine.
- The measurements taken by the Meteorological Office, upon which the simulation is to be based, should be certified by the Meteorological Office.
- Analytical measurements from Wind Maps approved by CERA, covering a period of at least one year. These measurements should be confirmed by the publisher of the Map and should refer to the height of the rotor of the wind turbine.

NOTE: Measurements of wind potential should be presented as separate information in the technical and financial study submitted by the applicant.

- **REVISED EDITION OF THE TRANSMISSION AND DISTRIBUTION RULES**

On the 8th of May 2006, CERA dealt with the subject of the Transmission & Distribution Rules-Edition 2.0.0 May 2006 - T.16.6-Guarantee of Production of Electrical Energy from RES.

CERA Members approved the Part of the Revised Edition of the Transmission & Distribution Rules, paragraph T.16.6, Certificate of Guarantee of Production of Electrical Energy from RES, Edition 2.0.0 as submitted by the TSO.

- **TRANSMISSION & DISTRIBUTION RULES- EDITION 2.0.0 JUNE 2006 - REVISED**

CERA Members approved the revised Transmission & Distribution Rules according to the revised edition 2.0.0 dated 9th of June 2006 as those were sent by the TSO via e-mail on the 9th of June 2006.

- **CONNECTION CHARGES FOR ELECTRICITY GENERATING UNITS FROM RES WITH THE EAC DISTRIBUTION NETWORK**

CERA Members approved the Policy Plan of EAC in its capacity as the Distribution System Operator, concerning charges for the connection of electricity generating Units from RES to the Distribution Network.

- **EXTENSION OF THE RETIREMENT AGE OF CIVIL SERVANTS – PENSIONS - RETIREMENTS**

CERA Members studied the content of the following Law amendments:

- i. On Pensions (Amendment) Law of 2005, L.69(I)/2005
- ii. On Civil Service (Amendment) Law of 2005, L.68(I)/2005

and decided to recommend to the permanent CERA Office staff their full acceptance and adoption (as from 1st August 2006) since they secure the improvement of their personal benefits and prevent future difficulties likely to be faced by the State Social Security Fund for the employees in the Government and semi- government Sector.

- **TRANSMISSION SYSTEM PROTOCOL- JULY 2006 EDITION**

CERA Members approved the Transmission System Protocol - July 2006 Edition as signed by all contracting Parties on the 17th of July 2006.

COUNCIL OF EUROPEAN ENERGY REGULATORS (CEER)

The Council of European Energy Regulators is a coordinating body to which the Energy Regulatory Authorities of the Members States of the EU and of other European countries take part.

The basic aim of this Council is the promotion and development of a healthy competitive market in Electricity and Natural Gas through appropriate and efficient mechanisms. All the Regulatory Authorities cooperate via this Council for the establishment of a common policy on matters of Electrical Energy and Natural Gas and advise the European Commission on these matters.

The Council meets at regular intervals, usually in Brussels. Cyprus is represented by the Chairman of CERA, Mr Costas Ioannou. During the year 2005 Cyprus was represented at four Meetings of the Council.

TABLE OF MEMBERS STATES OF THE COUNCIL

1	Austria	14	Italy
2	Belgium	15	Latvia
3	Cyprus	16	Lithuania
4	Czech Republic	17	Luxembourg
5	Denmark	18	Malta
6	Estonia	19	Holland
7	Finland	20	Norway
8	France	21	Poland
9	Germany	22	Portugal
10	Greece	23	Slovakia
11	Hungary	24	Slovenia
12	Iceland	25	Spain
13	Ireland	26	Sweden
		27	United Kingdom

EUROPEAN REGULATORS GROUP FOR ELECTRICITY AND GAS (EREGG)

The EREGG acts as an advisory Group to the European Commission in consolidating the internal market for electricity and gas. Its members are the heads of the national energy regulatory authorities from the 25 EU Member States. The European Commission is represented at a high level at the meetings of the EREGG and it also provides the Secretariat to the EREGG.

The EREGG was set up on 11th of November 2003 by a European Commission Decision 2003/796 to “give regulatory cooperation and coordination a more formal status, in order to facilitate the completion of the internal energy market”.

The EREGG was established to facilitate consultation, coordination and cooperation between regulatory authorities, and between those regulatory authorities and the European Commission so as to ensure a consistent application in all Member States of the new legislative framework.

The European Regulators Group for Electricity and Gas (EREGG) is the focal point for interaction between EU Energy Regulators, EU institutions and all interested parties in the development of a well functioning European energy market. The EREGG is the factory where technical solutions to the old and new problems of integrating 25 electricity and gas markets are designed, tested and built within the complex EU legal and institutional framework.

ENERGY COMMUNITY REGULATORY BOARD (ECRB)

On the 1st of July 2006, the Energy Community Treaty entered into by the countries of Southeast Europe, came into effect. Participants in the Treaty are the **signatories**:

1	European Union	5	Rep. of Macedonia
2.	Albania	6.	Montenegro
3.	Bosnia & Herzegovina	7.	Serbia
4.	Croatia	8.	Kosovo

By terms of the Treaty, any Member State of the EU may be represented in the Ministerial Council, the Permanent High Level Group and the Regulatory Board and participate in the discussions in these Bodies and the Fora. This privilege is used by:

1	Austria	6	Greece
2	Bulgaria	7	Hungary
3	Cyprus	8	Italy
4	Czech Republic	9	Romania
5	Germany	10	Slovenia
		11	UK

Any other neighbouring third country can participate if a reasoned request is approved by the Ministerial Council. The parties granted **Observer status** at the ministerial meeting of 17th November 2006 to four applicant countries.

1.	Moldova	3.	Turkey
2.	Norway	4.	Ukraine

By virtue of the said Treaty the Energy Community Regulatory Board (ECRB) was established.

The first inaugural meeting of the Board took place in Athens on the 14th of December 2006.

During the said meeting, the ECRB, having been formed, nominated three Working Groups, which will deal with the following issues:

- Electricity
- Natural Gas
- Consumers Issues

Preliminary views were exchanged regarding the Work Plan of the Regulatory Board and the next meeting was set for the 1st of March 2007.

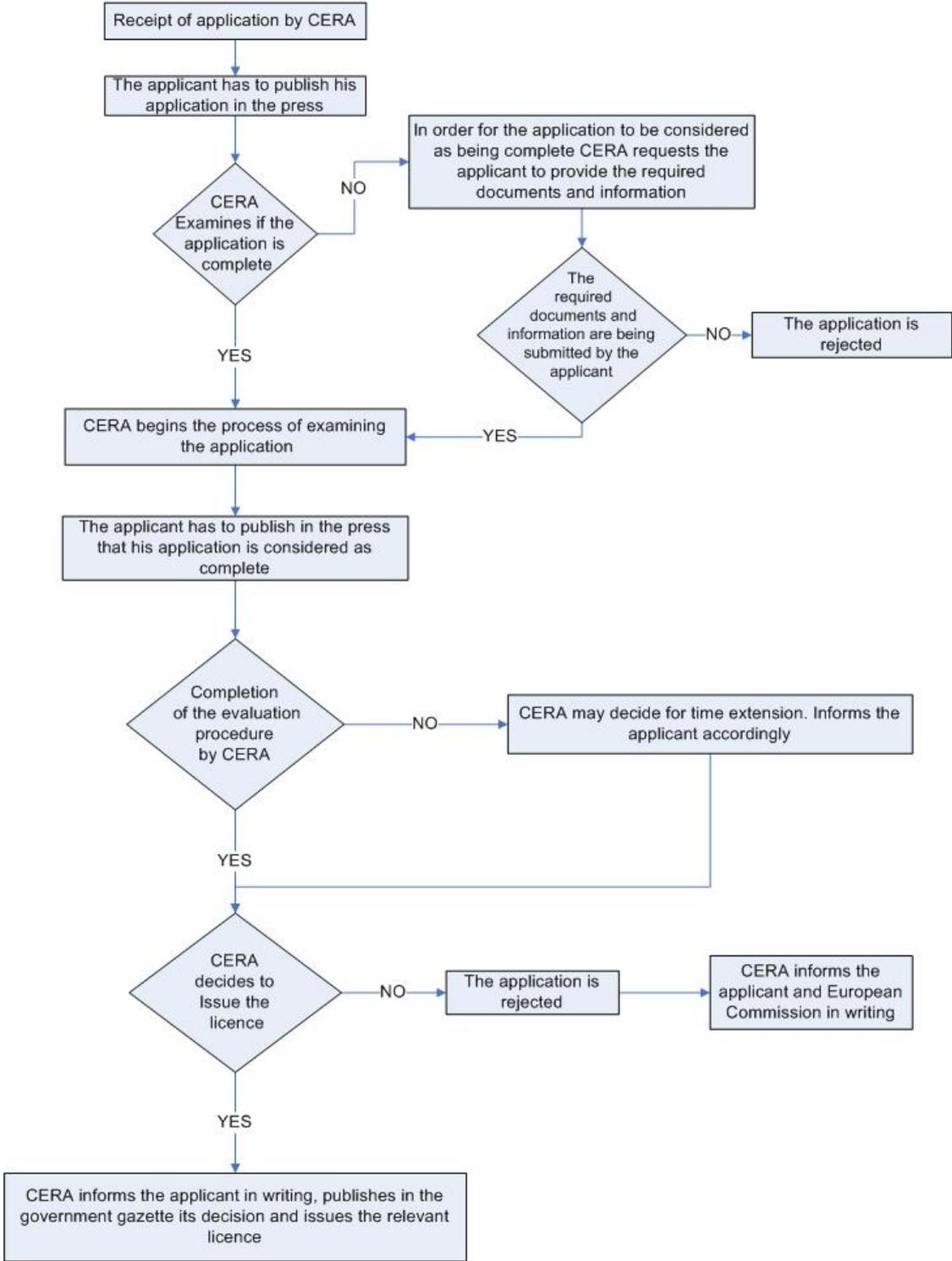
Cyprus is represented by the President of CERA. During the year 2006, Cyprus was represented at two Board Meetings.

REPORT TO THE EUROPEAN COMMISSION

In July 2006, CERA finalized its Report pertaining to the period from July 2005 to July 2006, and forwarded it to the European Commission in accordance with the provisions of the Directives 2003/54/EC and 2003/55/EC concerning the common rules for the internal market in Electricity and in Natural Gas.

The said report contains CERA'S activities in the electricity and natural gas markets, as well as the activities of the TSO.

Flowchart process for examination of application towards granting a licence .



DOCUMENTS AND INFORMATION WHICH MUST ACCOMPANY AN APPLICATION FOR A LICENCE FOR A WIND FARM IN ORDER FOR THE APPLICATION TO BE CONSIDERED AS "COMPLETE" PRIMA FACIE

The necessary documents and information which must accompany an application for obtaining a Construction and Operation Licence for an electricity generating Power Plant (Wind Farm) have been set by CERA to be the following:

- **Availability Certificate for the land on which the Wind Farm will be constructed.** Specifically, the applicant must submit to CERA the written preliminary consent of the owner of the land.
- **Lease agreement for land owned by the Government for the purpose of installing wind – gauges.**
- **Technical Study on the wind capacity measurements for the specific area, incorporating supported calculations, where:**
 - a) The analytical measurements will be taken by the Applicants themselves through a wind-gauge installed on the proposed land for the Wind Farm for a period of at least 6 months. The measurements will be submitted with all the data logger of the wind gauge at the height of the proposed rotor of the wind turbine or simulated to that height.
 - b) Analytical measurements from the nearest Meteorological station of the Meteorological Department of the Cypriot Government for a period of 1 year at least, simulated to the plots of land on which the Wind Farm will be constructed and at the proposed height of the rotor of the wind turbine. The measurements on which the simulation will be based must be confirmed by the Meteorological Department.
 - c) Analytical measurements from Satellite Wind Maps that have been approved by CERA and cover a period of at least 1 year. These measurements must be confirmed by the publisher of the Map and must be referring to the height of the rotor of the wind turbine.
- **Economic study incorporating provisions and income allocated to the main categories with regard to cash inflows and outflows.**
- **Environmental Impact Study by an independent Specialist.**
- **General layout Plan.**
- **Details of Applicant, Partners and Subcontractors**

- **Balance Sheets for the last three financial years, if the Company is not newly incorporated.**
- **The programme of the enterprise for the next 5 years.**
- **Timetable of Construction.**
- **The Company's Articles of Association (Company Registration Number and Certificate of Registration by the Registrar of Companies).**

GRANTING OF NEW LICENCES FOR THE CONSTRUCTION AND OPERATION OF ELECTRICAL POWER STATIONS

The year 2006 justifiably may be characterized as a landmark in the development of the Energy Sector in our Country.

Particular interest was shown for the Renewable Energy Sources sector. In the year 2006, eleven (11) new applications were submitted to CERA for the Construction of Electrical Power Stations (Wind Farms) and one (1) application for a Licence for Operation and Generation of Electrical Energy for own Use from an existing Power Unit.

CERA having taken into consideration:

- a) The provisions of the Laws of 2003 to 2006 On Regulating the Electricity Market, and in particular articles 34, 36, 37 and 38.
- b) The provisions of two Regulations of 2004 on Regulating the Electricity Market (Issue of Licences) (Regulations 538/2004) and (Licence Fees) (Regulations 467/2044)
- c) The provisions of the Laws of 2004 to 2006 On Regulating the Natural Gas Market,
- d) The provisions of the Regulations of 2006 On Regulating the Natural Gas Market (Issue to Licence), (Regulations 298/2006).
- e) The applications for Licences for Construction and Operation of Electrical Generating Power Stations.
- f) The obligations on Cyprus to discharge its commitments towards the European Union, for 6% of consumed electrical energy in Cyprus to be generated by RES by the year 2010 with a very likely increase thereafter, since the EU target is to reach 20% by the year 2020.
- g) The last letter of the European Commission dated 10/4/2006 reprimanding the Cyprus Government and urging it to further promote,

facilitate and simplify the procedures for licensing the construction and operation of electricity generating power stations by RES.

- h) "The Protocol of Kyoto" regarding RES and a cleaner environment.
- i) The continuous increase of the price of oil and the cost of Electrical Energy in general.
- j) The non-dependence on petroleum products as an issue of national strategy and security.
- k) The promotion of the use of Renewable Energy Sources, the promotion of new investments and the creation of places of employment.
- l) The healthy and non-discriminatory competition in the Electricity Market, the protection of consumers' interests and the promotion of a financially viable and efficient Electricity Market.
- m) The known capacity of the Transmission – Distribution Systems.
- n) The financial investment parameters and the factors affecting economic viability.

CERA having examined in detail the documents, information and the studies accompanying the applications, considered that those meeting the criteria should be approved. Therefore, in 2006 CERA issued eighteen (18) licences for the construction of Electricity Power Stations (Wind Farms) of immediate capacity of 362,8MW with the prospect of increasing the capacity by an additional 411,85MW if the prevailing conditions allow.

In the terms and conditions included in most Licences, it is explicitly stated to the Licencees that at present the Electricity Market and Network conditions do not permit the construction of Wind Farms of capacity greater than that specified in the Construction Licence issued to them for a specified installed capacity.

If and when such conditions exist in future, if all other prerequisites and parameters which CERA may set are met, if the operation of the already licenced, built and operational Wind farms is assessed by CERA to be satisfactory then, and only then, will CERA examine the gradual phased expansion of the installed capacity.

It should be noted that as the Laws of 2003-2006 On Regulating the Electricity Market, provide, CERA subjected the Licences to the following condition:

"The Licence issued by CERA does not in any way release the Licencee from the obligation to secure any and all other approvals or licences required by the Laws and Regulations of the Cyprus Republic."

The additional licences, which are necessary to be secured from Government Departments, are numerous and include, among others, Environmental Approval, Town Planning Permit, Construction Permit, Approval by the

Renewable Energy Sources Fund of the Ministry of Industry, Commerce and Tourism, etc.

When receiving the Licence issued by CERA, the Licencee signs the following declaration commitment:

“The Company:..... Holder of Licence No:..... hereby confirms that in the course of the construction and operation of the Wind Farm, shall observe all the criteria for the protection of the environment as they are stipulated in the Laws of the Republic of Cyprus, the Directives of the European Union as well as any terms imposed by the competent Authority, the Environmental Service of the Ministry of Agriculture”.

Particularly in 2006, CERA granted the following Licences for WIND FARMS:

- The first Licence was granted to **AEOLIKI AKTI** for the construction and operation of a wind farm of 10MW capacity at Sanidas area, Limassol.
- There followed another two Licences , one to **D.K.WINDSUPPLY Ltd** at the “Orites” area in the vicinity of Archimandrita, Kouklia and Alektoros villages for an immediate capacity of 61,5MW and one to **TSP AEOLIAN DYNAMICS Ltd** in the vicinity of Pyrga, Kalo Chorio, Agia Anna and Psevdas villages, in the Larnaca District for an immediate capacity of 30MW, for the construction and operation of Wind Farms, with the prospect of maximum expansion capacity by 82MW and 19,5MW respectively , if the prevailing market conditions so allow.
- The 10th of November 2006 could be said to be a landmark in the promotion and development of generation of electricity from Renewable Energy Sources (Wind Farms) since CERA, by a Decision of the same date, proceeded to issue 15 Licences for construction of Wind Farms and 7 Licences for Operation of Wind Farms. The said Licences are the following :
 - ✚ Licence to **Maseru Ltd** for the construction and operation of a Wind Farm at the Vavatsinia area in the Larnaca District of 12MW capacity with the prospect of maximum expansion by a further 18MW, depending on the conditions of the market.
 - ✚ Licence to **Trebi Trading Ltd** for the construction and operation of a Wind Farm at the Avdelero area in the Larnaca District of 12MW capacity with the prospect of maximum expansion by a further 18MW, depending on the conditions of the market.
 - ✚ Licence to **VorimaTrading Ltd** for the construction and operation of a Wind Farm at the Stavrovouni area in the Larnaca District of 12MW capacity with the prospect of maximum expansion by a further 18MW, depending on the conditions of the market.
 - ✚ Licence to **Rokas Aeoliki (Cyprus) Ltd** for the construction of a Wind Farm at the Kivisili area in the Larnaca District of 11,5MW capacity with the prospect of maximum expansion by a further 9,2MW, depending on the conditions of the market.

- ✚ Licence to **Medwind Ltd** for the construction of a Wind Farm at the Agia Napa area in the Famagusta District of 11,5MW capacity.
- ✚ Licence to **Moglia Trading Ltd** for the construction and operation of a Wind Farm at the Agia Anna area in the Larnaca District of 12MW capacity with the prospect of maximum expansion by a further 37,5MW, depending on the conditions of the market.
- ✚ Licence to **StivoTrading Ltd** for the construction and operation of a Wind Farm at the Pyrga, Klavdia, Alethrico area in the Larnaca District of 49,5MW capacity with the prospect of maximum expansion by a further 49,5,5MW, depending on the conditions of the market.
- ✚ Licence to **K.E.Aerodynamics Ltd** for the construction and operation of a Wind Farm at the Agios Theodoros area in the Larnaca District of 12,35MW capacity with the prospect of maximum expansion by a further 38,95MW depending on the conditions of the market.
- ✚ Licence to **K.E.Aerodynamics Ltd** for the construction and operation of a Wind Farm at the Agios Theodoros / Psematismenos area in the Larnaca District of 12,3MW capacity with the prospect of maximum expansion by a further 28,7MW depending on the conditions of the market.
- ✚ Licence to **Rokas Aeoliki (Cyprus) Ltd** for the construction of a Wind Farm at the Aegis Theodoros / Psematismenos / Maroni / Chirokitias area in the Larnaca District of 13,8MW capacity with the prospect of maximum expansion by a further 39,1MW depending on the conditions of the market.
- ✚ Licence to **Rokas Aeoliki (Cyprus) Ltd** for the construction of a Wind Farm at the Klavdia, Alethrico, and Pyrga area in the Larnaca District of 50,6MW capacity with the prospect of maximum expansion by a further 29,9MW depending on the conditions of the market.
- ✚ Licence to **Rokas Aeoliki (Cyprus) Ltd** for the construction of a Wind Farm at the Klavdia, Agia Anna, and Koshi area in the Larnaca District of 13,8MW capacity with the prospect of maximum expansion by a further 11,5MW depending on the conditions of the market.
- ✚ Licence to **Windpower Ltd** for the construction of a Wind Farm at the “Orites Forest” area of the Limassol / Paphos Districts of 14MW capacity with the prospect of maximum expansion by a further 4MW depending on the conditions of the market.
- ✚ Licence to **Medwind Ltd** for the construction of a Wind Farm at the “Shinomoutis” area in the vicinity of Psevdas, Agias Anna, Pyrga villages in the Larnaca District of 12MW capacity with the prospect of maximum expansion by a further 4MW depending on the conditions of the market.
- ✚ Licence to **Medwind Ltd** for the construction of a Wind Farm at the “Papalia” area in the vicinity of, Pyrga village in the Larnaca District of 12MW capacity with the prospect of maximum expansion by a further 4MW depending on the conditions of the market.

Since its establishment CERA has granted two Licences for Biomass and 22 Licences for the Construction of Wind Farms for generation of electricity from RES of capacity 427,15MW (see Chart Figure 3) with the prospect of a capacity expansion by a maximum of further 411,85MW, if the prevailing conditions of the market allow such an expansion.

One Licence of 6MW capacity has been granted to the Electricity Authority of Cyprus and twenty (21) other Licences totaling 421,15MW capacity have been issued to private organizations (see Chart 2, Figure 2).

In 2006, three applications (3) for the construction of Wind Farms for generating electricity by R E S were rejected by CERA. CERA's decisions were published in the Government Gazette and communicated to the European Commission in accordance with the Laws and Regulations On Regulating the Electricity Market.

In particular, two applications by Messrs Vouros Power Industries Ltd for the construction of Wind Farms at the Alexigros and Tsada areas of 12MW capacity each were rejected because they were not considered as being "COMPLETE", due to the non-submission by the applicant of the necessary documentation and information. CERA's rejection Decisions for the two projects were advised to the Managing Director of the said Company.

A third application by Messrs Medwind for the construction of a Wind Farm at the "Appidaki" area in the vicinity of Pyrga village of 12MW capacity was also rejected, even though the application was "complete", since the location of the proposed project was exactly the same as that of an already Licenced Wind Farm whose Site location Plan had already been approved by CERA and submitted to the Ministry of Interior, Land Registry Department and Town Planning. CERA's Decision was advised to the Managing Director of the Company.

Further to the above, during the year under review, CERA has issued three (3) Licences for the construction of electricity generating Power Stations by conventional means also, two (2) Licences for the construction and operation of electricity generating Power Stations by conventional means for Own Use Generation, of a total installed capacity of 689,7MW, to the following:

- The Electricity Authority of Cyprus for the construction and operation of the 5th and 6th Units of combined cycle of the Vasilikos Power Station of 440MW (2 x 220MW)
- The Vasilikos Cement Works Ltd. for the construction and operation of a Power Plant with Internal Combustion Engines, of 5MW for Own Use Generation
- The Elmeni Quarries Ltd for the construction and operation of a Power Plant with Internal Combustion Engines, of 4,7MW for Own Use Generation
- To Golar Energy Ltd for the construction of a Power Station of combined cycle by the use of Natural Gas at the Vasilikos Sea Area, of 240MW capacity.

Granting these Licences for Generation of Electrical Energy creates a solid base for the liberalization of the national energy market with healthy competition benefiting the Cypriot consumers by offering them the option to select their electricity supplier.

Regarding Power Stations by conventional means, the total installed capacity licenced since the establishment of CERA has reached 2320 ,6MW (see [Chart Figure 3](#)) of which 1778MW (see [Chart Figure 2](#)) have been licenced to EAC and 542,6MW to other private organizations.

Following the enactment of the Laws of 2004-2006 On Regulating the Natural Gas Market, various applications were submitted to CERA by the Company Golar Energy Ltd, one (1) for the Construction, one (1) for the Operation and Exploitation, and one (1) for Own Use of the installations of Import, Storage and Regasification of Natural Gas.

Within the scope of promoting RES, on the initiative of CERA a series of meetings were held with Government Departments and Authorities closely involved in the assessment process of applications and licencing of electricity generating stations by RES. A significant meeting was held 25th May, 2006, when the procedure to be followed by all Departments involved was established for the Licencing of Wind Farms. The procedure decided upon is shown in [page 48](#) of the present Report and may also be found in CERA' s web site

Of great importance were also the meetings held with Applicants for Licences and Licencees for the Construction of Electricity Generating Stations by R E S. A significant meeting was that of the 4th May, 2006, when the criteria acceptable to CERA were decided for the measurements of the Wind capacity. These criteria are shown [on page 37 of the present Report](#) and may also to be found in CERA' s web site.

LICENCE PROCEDURE OF WIND FARMS

1. Submission to CERA of an application for the construction of a generating Electrical Energy Plant by Renewable Energy Sources. Among other documents, the application must be accompanied by a statement by the land owner that the land is available and is not committed for any other use.
2. CERA's instructions to the applicant for him to contact the appropriate District Town Planning Department immediately and submit the application requesting their preliminary views and its the immediate (within 2 days) dispatch by them to the Central Offices of the Town Planning Department. Any delay by the applicant in contacting the appropriate District Town Planning Department will be to his detriment.
3. Dispatch (within 8 days) by the Town Planning Department of the application that was submitted to them for their preliminary views, to all Authorities and Departments stipulated in Directive No. 2 of 2006 of the

Minister of Interior, requesting them to submit their preliminary views within 30 days.

4. Assessment by the Town Planning Department of the preliminary views of all Authorities and Departments that responded to the request.

The Town Planning Department expresses its own preliminary views, and prepares a report incorporating all other views. The report is forwarded to the applicant and to CERA within a prescribed time and certainly not later than 45 days from the date of receipt of the application by the District Town Planning Department. Authorities and Departments not responding within the prescribed time period are deemed not to object to the granting of the Town Planning Licence.

5. Assessment of the application by CERA and decision on whether to grant or not a licence, taking into serious consideration Directive No. 2 of 2006, dated 19th of April 2006, issued by the Minister of Interior, which is relevant to the subject.
6. Commencement by the applicant of all other procedures for obtaining all other licences and approvals required by the Legislation, while CERA is assessing the application.
7. The Licencee, having been granted a Licence by CERA, addresses the Land Owner to obtain the land lease. In the terms of the lease contract, in addition to the normal terms requiring that a Permit is issued from the Town Planning Department, a term is included stipulating that the terms and conditions of the Licence issued by CERA are adhered to.
8. The Licencee, having obtained the Lease contract, applies to the Town Planning Department in order to obtain the relevant Permit. The application must be accompanied by all necessary documents as well as an Environmental Impact Study, in accordance with the Town Planning legislation.
9. The assessment of the application for a Town Planning Permit for the construction of an Electricity Generating Plant by RES is given priority by the Town Planning Department. Necessary prerequisites are the cooperation of the interested applicant, the submission of all documents along with the application and, the applicant's prompt response to any amendments or explanations requested during the investigation/assessment process of the application.

(a) Licenses Issued for the Generation of Electrical Energy –
Conventional Units of Generation

S/N	Name of Company	Type of License	MW
1	Electricity Authority of Cyprus	Operation of Power Plant at Vasilikos (Existing Units)	298
2	Electricity Authority of Cyprus	Operation of Power Plant at Dhekelia (Existing Units)	360
3	Electricity Authority of Cyprus	Operation of Power Plant at Moni (Existing Unite)	330
4	Electricity Authority of Cyprus	Construction and Operation of Power Plant at Vasilikos (Unit 3 under construction)	130
5	Electricity Authority of Cyprus	Construction and Operation of Power Plant at Vasilikos (CCGT) – Unit No. 4	220
6	Vassilikos Cement Works Ltd	Operation of Power Plant (Existing Unit – for own use generation)	6
7	Hellenic Copper Mines	Operation of Power Plant at Skouriotissa (Existing Unit – for own use generation)	7
8	Vouros Power Industries Ltd	Construction and Operation of Power Plant (ICE – Larnaka Free Industrial Zone)	49,9

(a) Licenses Issued for the Generation of Electrical Energy – *Conventional Units of Generation*

S/N	Name of Company	Type of License	MW
9	Unenes Ltd *	Construction and Operation of Power Plant at Vassilikos (CCGT)	230
10	Electricity Authority of Cyprus	Construction and Operation – Unit No. 5 at Vasilikos (CCGT)	220
11	Electricity Authority of Cyprus	Construction and Operation – Unit No. 6 at Vasilikos (CCGT)	220
12	Vassilikos Cement Works Ltd	Construction and Operation (ICE – for own use generation)	5
13	Elmeni Quarries Ltd	Construction and Operation – Agios Sozomenos (ICE – for own use generation)	4,7
14	Golar Energy Ltd	Construction and Operation of a Floating Power Plant – Vassilikos (CCGT) – Natural Gas	240
		TOTAL (100%)	2320,6
		EAC (82%)	1778
		OTHERS (18%)	542,6

ICE: Internal Combustion Engine

CCGT: Combined Cycle Gas Turbine

(b) Licenses Issued for the Generation of Electrical Energy – *Renewable Energy Sources (RES) from WIND & BIOMASS*

S/N	Name of Company	Type of License	MW
1	Electricity Authority of Cyprus	Construction and Operation of Wind Farm (Kourris - Limassol Area)	6*
2	Ketonis Developments Ltd	Construction and Operation of Wind Farm (Mari - Larnaka Area)	12*
3	Aerotricity Ltd	Construction and Operation of Wind Farm (Kambi – Nicosia Area)	10,1*
4	Ketonis Developments Ltd	Construction and Operation of Wind Farm (Klavdia – Tersefanou – Alethriko – Larnaka Area)	34,5*
5	Aeoliki Akti Ltd	Construction and Operation of Wind Farm (Sanida – Limassol Area)	10*
6	D. K. Windsupply Ltd	Construction and Operation of Wind Farm (Pano Archimandritas, Kouklia and Alektoras – Limassol and Paphos Area)	61,6* (82**)
7	TSP Aeolian Dynamics Ltd	Construction, Operation and Generation of Wind Farm (Pyrga - Larnaka Area)	30* (19,5**)
8	Maseru Ltd	Construction and Operation of Wind Farm (Vavatsinia - Larnaka Area)	12* (18**)
9	Trebi Trading Ltd	Construction and Operation of Wind Farm (Avdelero - Larnaka Area)	12* (18**)

(b) Licenses Issued for the Generation of Electrical Energy – *Renewable Energy Sources (RES) from WIND & BIOMASS*

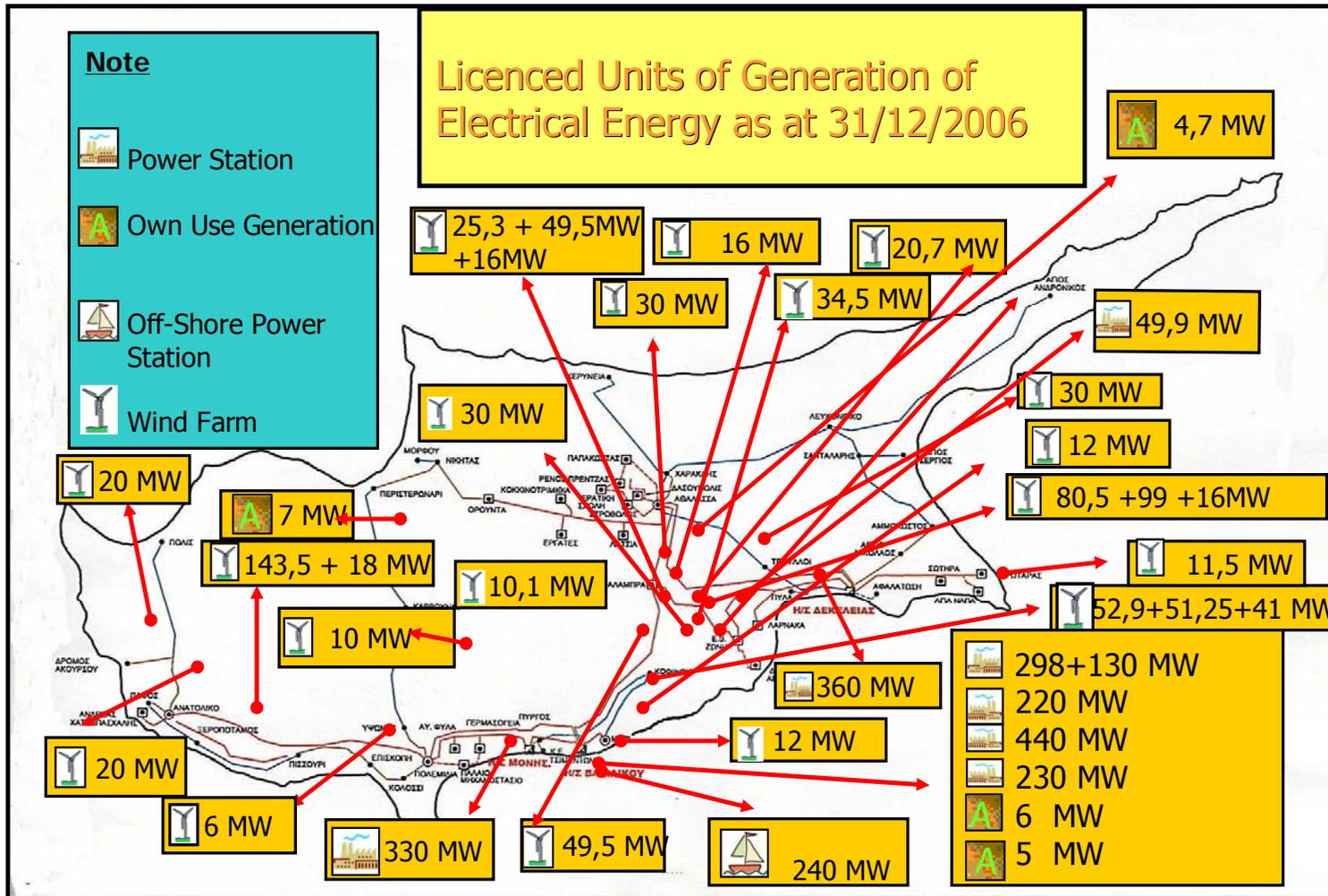
S/N	Name of Company	Type of License	MW
10	Vorima Trading Ltd	Construction and Operation of Wind Farm (Stavrovouni - Larnaka Area)	12* (18**)
11	Rokas Aeoliki (Cyprus) Ltd	Construction of Wind Farm (Kivisili – Larnaka Area)	11,5* (9,2**)
12	MedWind Ltd	Construction of Wind Farm (Ag. Napa - Famagusta Area)	11,5*
13	Moglia Trading Ltd	Construction and Operation of Wind Farm (Agia Anna - Larnaka Area)	12* (37,5**)
14	Stivo Trading Ltd	Construction and Operation of Wind Farm (Pyrga - Larnaca Area)	49,5* (49,5**)
15	K. E. Aerodynamics Ltd	Construction and Operation of Wind Farm (Agios Theodoros – Larnaka Area)	12,3* (38,95**)
16	K. E. Aerodynamics Ltd	Construction and Operation of Wind Farm (Ag. Theodoros – Psematismenos - Larnaka Area)	12,3* (28,7**)
17	Rokas Aeoliki (Cyprus) Ltd	Construction of Wind Farm (Agios Theodoros & Maroni – Larnaka Area)	13,8* (31,1**)
18	Rokas Aeoliki (Cyprus) Ltd	Construction and Operation of Wind Farm (Klavdia, Alethriko, Pyrga – Larnaka Area)	50,6* (29,9**)

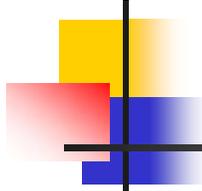
(b) Licenses Issued for the Generation of Electrical Energy – *Renewable Energy Sources (RES) from WIND & BIOMASS*

S/N	Name of Company	Type of License	MW
19	Rokas Aeoliki (Cyprus) Ltd	Construction of Wind Farm (Agia Anna – Larnaka Area)	13,8* (11,5**)
20	WindPower Ltd	Construction of Wind Farm (Orites Forest – Limassol and Paphos Area)	14* (4**)
21	MedWind Ltd	Construction of Wind Farm («Schinomoutis» Psevdas - Larnaka Area)	12* (4**)
22	MedWind Ltd	Construction of Wind Farm («Papalia» Pyrga, - Larnaka Area)	12* (4**)
23	Cypra Ltd	Construction of Power Station from Biomass ("Ay. Eliofoti" - Nicosia Area)	1,5*
24	Nicos Armenis & Sons Ltd	Construction of Power Station from Biomass ("Monagroulli" – Limassol Area)	0,25*
		TOTAL (100%)	427,15* (411,18**)
		EAC (1,4%)	6*
		OTHERS/ (98,6%)	421,15* (411,85**)

* Licenses issued with immediate effect.

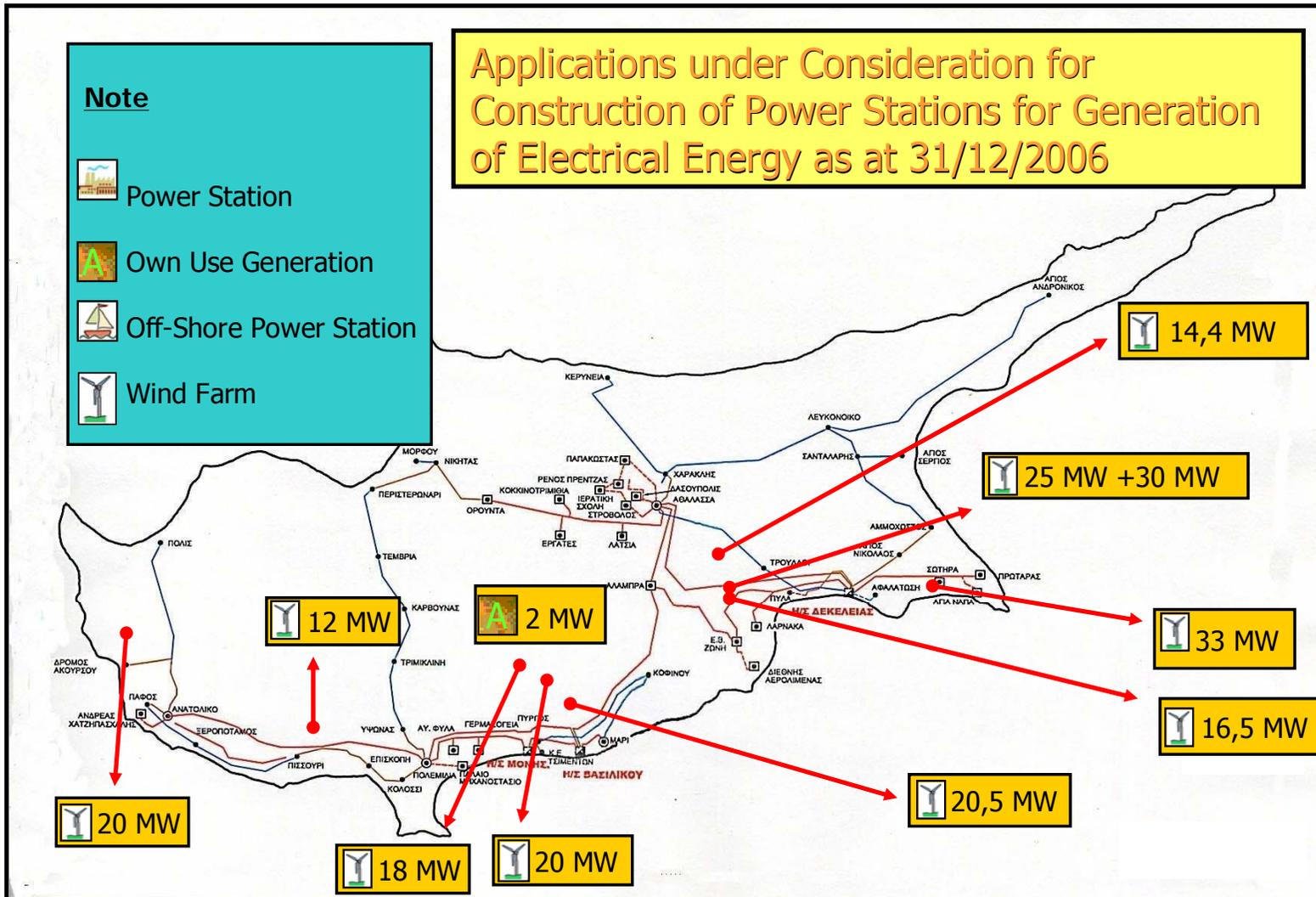
** Possible future extension of Licenses issued.





(c) Applications Under Review for New Plant
for Generation of Electrical Energy–
Conventional Units of Generation

S/N	Name of Company	Type of License	MW
1	Latomia Farmakas Ltd	Operation & Generation of Electrical Energy (Existing Unit – for own use generation)	2
TOTAL (100%)			2
EAC (0%)			0
OTHERS (100%)			2



(d) Applications Under Review for New Plant
for Generation of Electrical Energy –
Renewable Energy Sources (RES) from WIND

S/N	Name of Company	Type of License	MW
1	M. P. Aerosupply Ltd	Construction and Operation of Wind Farm (Vavla, Ora, Hirokitia, Kato Dris, Kalavastos – Limassol Area)	20,5
2	Med Wind Ltd	Construction of Wind Farm (Agios Amvrosios, Xylokaastro - Limassol Area)	12
3	Med Wind Ltd	Construction of Wind Farm (Sanida - Limassol Area)	18
4	Med Wind Ltd	Construction of Wind Farm (Asgata - Limassol Area)	20
5	Med Wind Ltd	Construction of Wind Farm (Kathikas, Ag. Georgios - Paphos Area)	20
6	Ketonis Developments Ltd	Construction of Wind Farm (Sotera – Famagusta Area)	33
7	Ketonis Developments Ltd	Construction of Wind Farm (Kelia - Larnaka Area)	16,5
8	Aerotriciy Ltd	Construction and Operation of Wind Farm (Lymbia – Nicosia Area)	14,4

(d) Applications Under Review for New Plant
for Generation of Electrical Energy –
Renewable Energy Sources (RES) from WIND

S/N	Name of Company	Type of License	MW
9	Stelios Kounna & Brothers Ltd	Construction of Wind Farm (Aradhippou – Larnaka Area)	25
10	Ketonis Developments Ltd	Construction of Wind Farm (Aradhippou – Larnaka Area)	30
		TOTAL (100%)	209,4
		EAC (0%)	0
		OTHERS (100%)	209,4

NATURAL GAS LICENCES

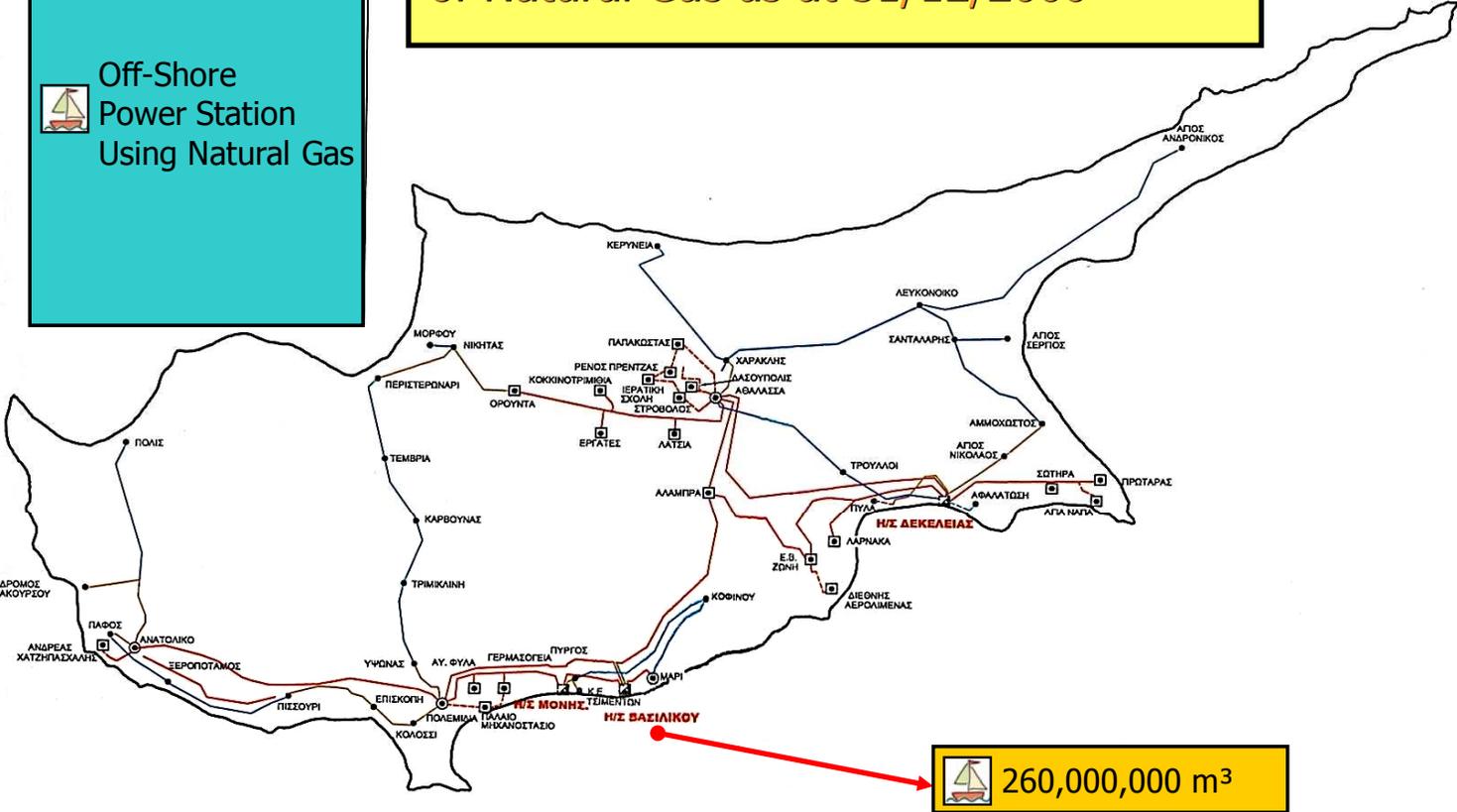
Applications Under Review for Natural Gas

S/N	Name of Company	Type of License	Capacity of Storage Tanks m ³ x 10 ³	Annual Capability of Supply Gasified and Depressurised Natural Gas under Usual Conditions ISO m ³ x 10 ⁶
1	Golar Energy Ltd	Construction, Operation and Exploitation of Installations of Import/ Storage/ Gasification facilities of Natural Gas for OWN USE - Floating Unit, Vasilikos Sea Area (Larnaka Area)	125	260
		TOTAL (100%)	125	260
		EAC (0%)	0	0
		OTHERS (100%)	125	260

Note

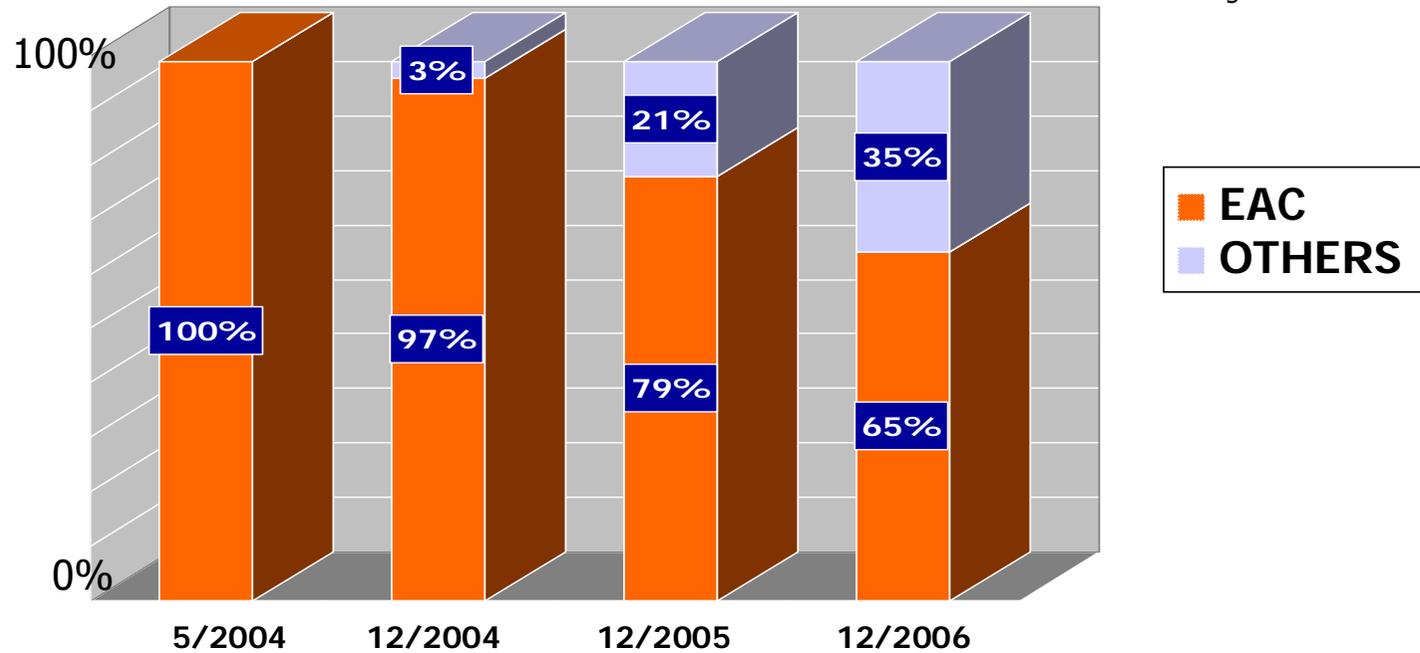
 Off-Shore Power Station Using Natural Gas

Applications under Consideration for Construction of Installations for Import of Natural Gas as at 31/12/2006



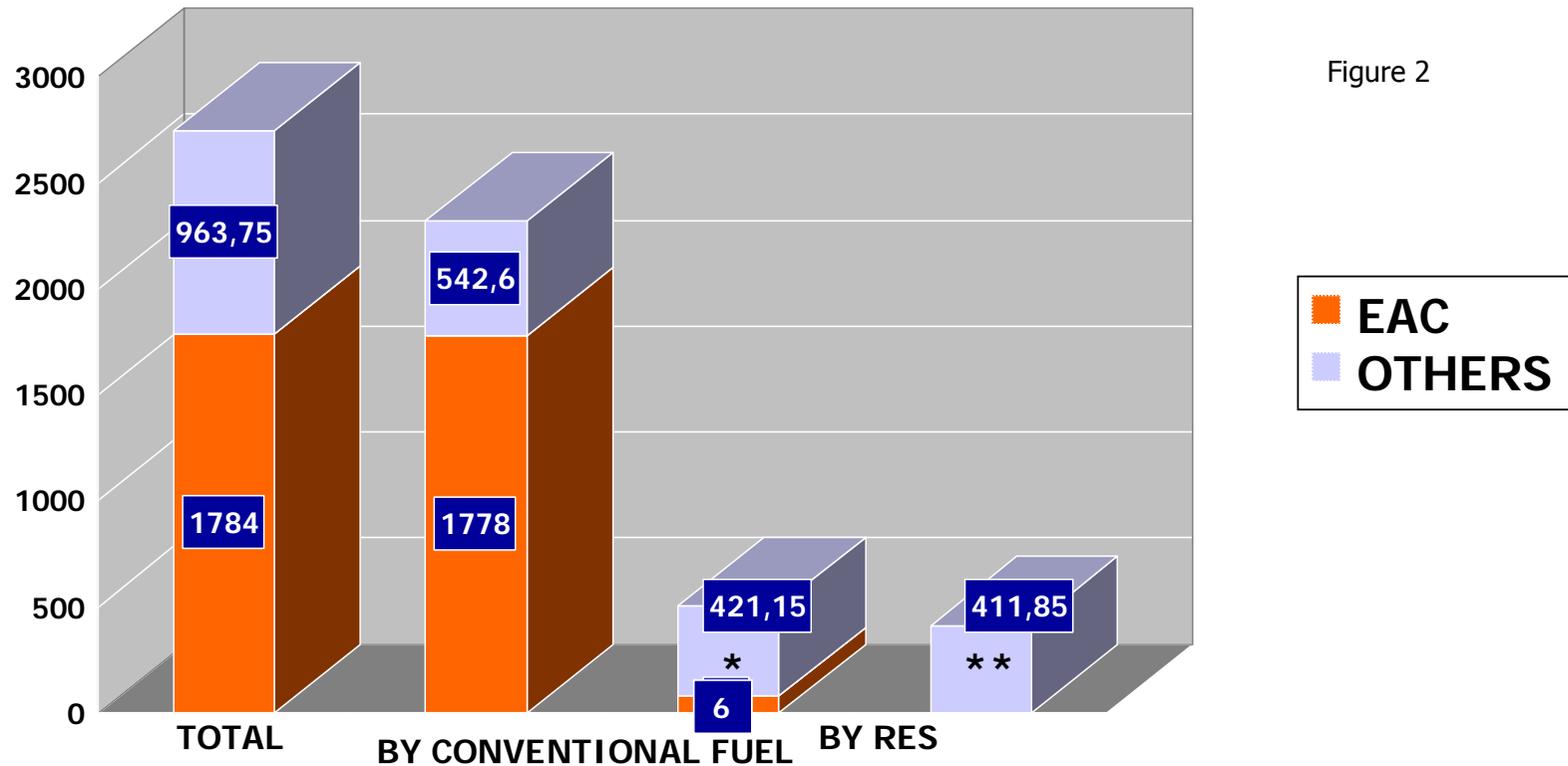
EAC Contribution to Total Licenced Capacity (MW) for period 01/05/2004 – 31/12/2006

Figure 1



	MW	MW	MW	MW
	5/2004	12/2004	12/2005	12/2006
EAC	988	1118	1344	1784
OTHERS	0	35.1	349.5	963.75

Total Licenced Capacity (MW) as at 31/12/2006

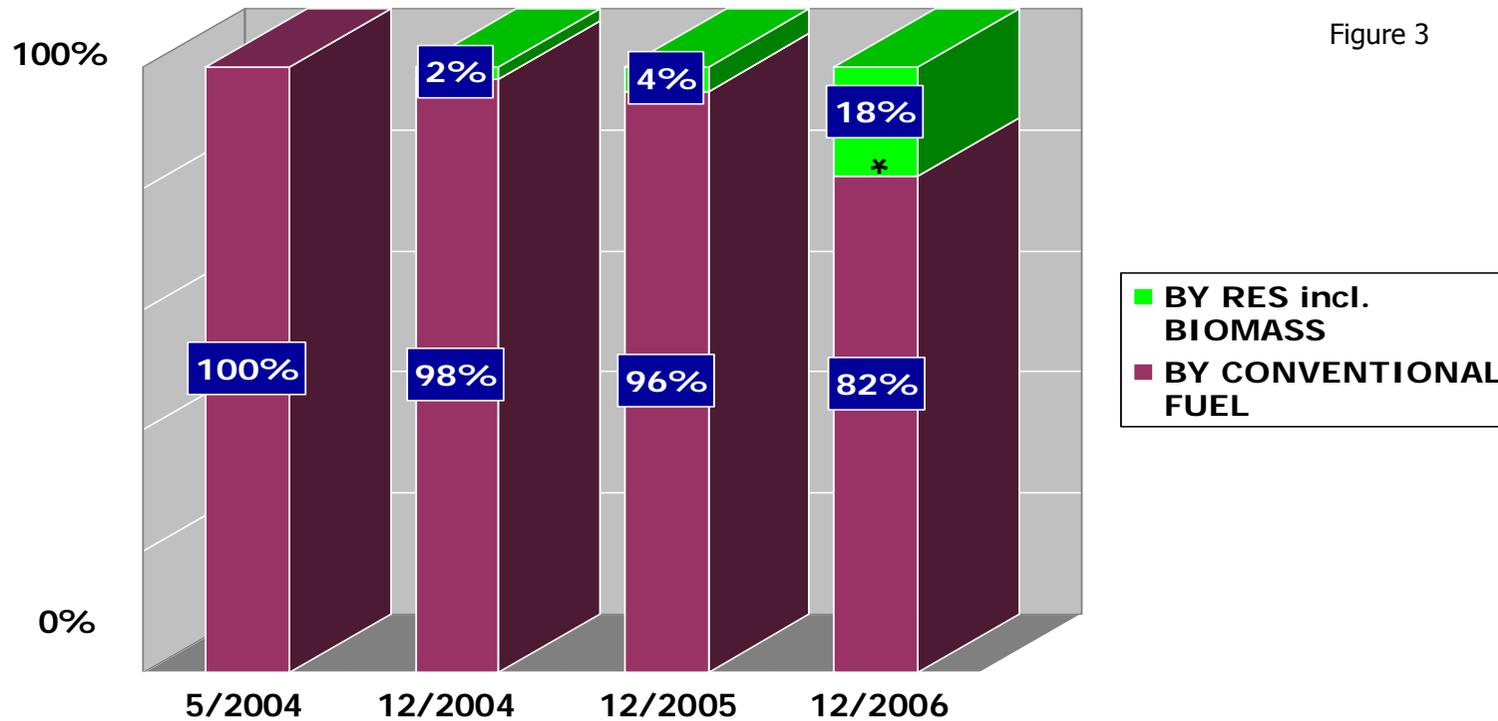


	MW	MW	MW	
	TOTAL	BY CONVENTIONAL FUEL	RES incl. BIOMASS	
EAC	1784	1778	6*	0**
OTHERS	963,75	542,6	421,15*	411,85**

* For Immediate Installation

** For Future Installation

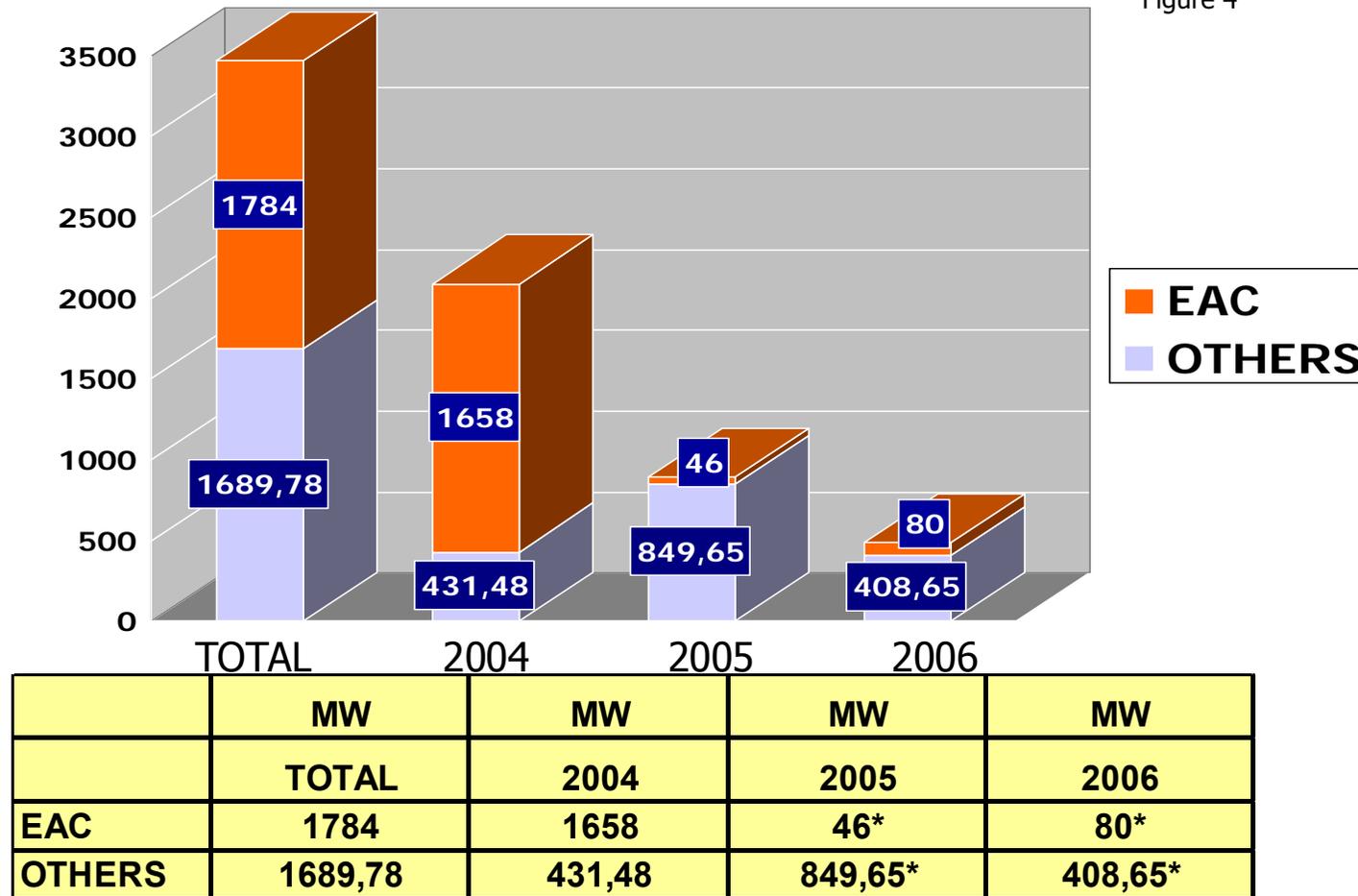
Contribution of Capacity of power units by conventional means and By Res incl. Biomass to the total Licenced Capacity for period 01/5/2004 – 31/12/2006



	MW	MW	MW	MW	
	5/2004	12/2004	12/2005	12/2006	
BY RES & BIOMASS	0	22,1	62,6	427,15*	411,85**
BY CONVENTIONAL FUEL	988	1131	1630,9	2320,6	

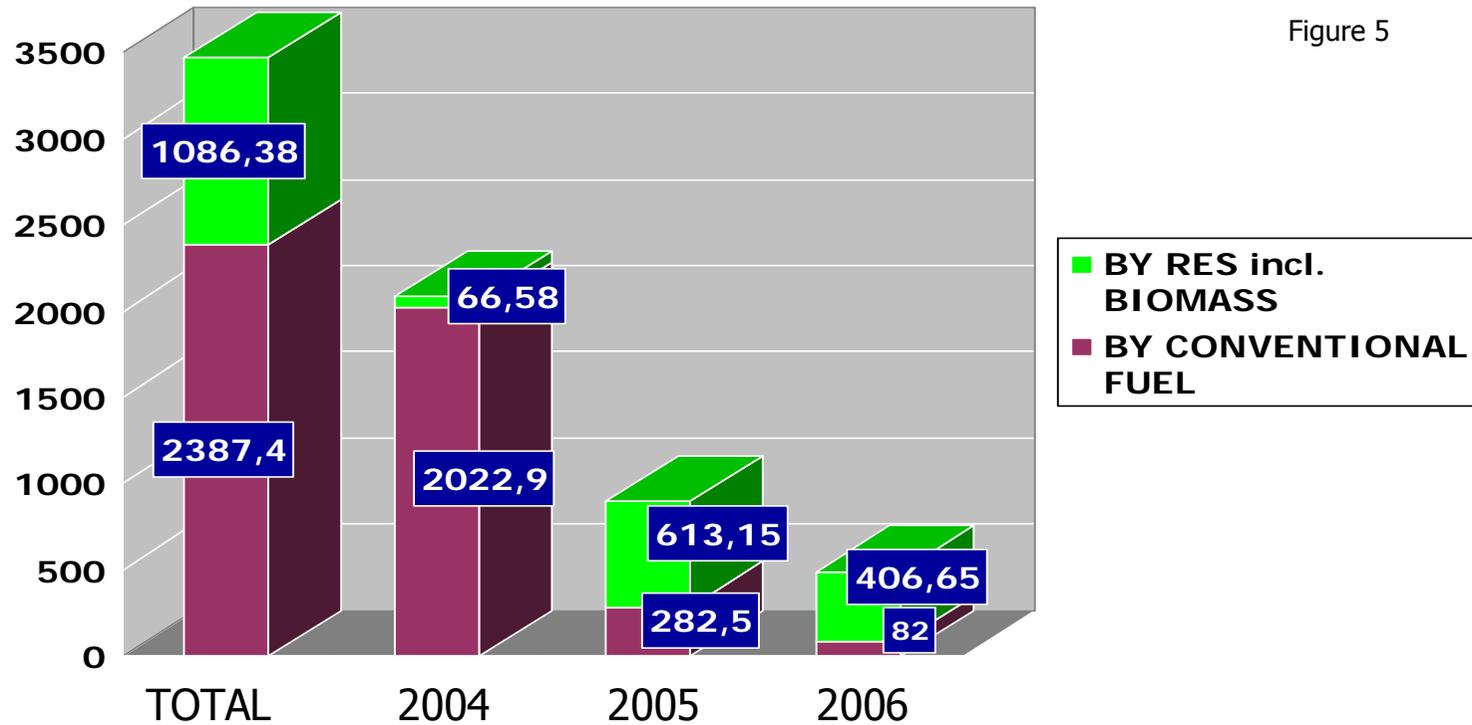
Applications Submitted to CERA for Licences for Electricity Generation for period 2004-2006

Figure 4



*Amendments of Licences are included in the figures

Applications Submitted to CERA for Licences for Electricity Generation for period 2004-2006



	MW	MW	MW	MW
	TOTAL	2004	2005	2006
BY RES incl. BIOMASS	1086,38	66,58	613,15*	406,65*
BY CONVENTIONAL FUEL	2387,4	2022,9	282,5*	82*

*Amendments of Licences are included in the figures

EXEMPTIONS FROM THE OBLIGATION TO HOLD A LICENCE FOR THE CONSTRUCTION AND OPERATION OF AN ELECTRICITY GENERATING UNIT

Three times in the year 2006, in April, May and November, CERA published in the daily Newspapers and the Government Gazette an announcement informing all involved that a Licence from CERA or an exemption from the obligation to hold such a licence granted by CERA must be obtained for the installation and operation of an electricity generator.

In the year under review, CERA investigated and assessed two hundred and nine (209) applications for obtaining an exemption from the obligation either to hold a Licence for Construction or to hold a Licence for Operation of units for generating electricity for own use or for reserve capacity purposes and has issued the corresponding exemption to hold a Licence, for a total capacity of 29,762.8KW.

Furthermore during the year 2006, three applications were submitted for exemption from the obligation to hold a licence for the construction and operation of a Power Plant by Renewable Energy Sources, including by Biomass. Two of the applications totalling an electrical capacity of 500KW pertain to processing of pig manure and electricity generation from the derived biogases. The third application pertains mainly to processing animal waste from the Kofinou slaughter-house and electricity generation also from biogas. CERA has granted two (2) exemptions from the obligation to hold a construction and operation Licence for electricity generating plants by Renewable Sources, including Biomass, for a capacity totalling 1,750KW.

CYPRUS ENERGY RESOURCES MAP

Since the early stages of its formation, CERA realized the necessity of establishing an “Energy Resources Map” of the Island.

To this effect, in September 2006, in accordance with the State Subsidies Plan, CERA re-submitted to the Planning Bureau of the Cyprus Government, an Application for the project “Overall Supporting Actions for an Energy Plan and the development of an Energy Resources Map of Cyprus” for inclusion among other projects for funding from the European Union and the Cyprus Government Funds during the years 2007-2013.

GOALS TO BE ACHIEVED VIA THE ENERGY RECOURSES MAP

The Cyprus Energy Resources Map, apart from constituting the framework for an Energy Plan, could also serve as a basic source of information to the public of Cyprus and to any citizen of any other member state of the European Union. It will also be useful for investment opportunities in the Energy Sector, and for the management of natural resources and the environment. Based on these priorities, the proposed work will include actions towards launching a

campaign to inform the public on matters of Environmental Protection, Energy Resource Conservation and Renewable Energy Sources (RES).

The designing of the Cyprus Energy Resources Map entails the geographic, quantitative and qualitative recording of the Energy Resources in fossil and RES of Cyprus as well as methods for their proper utilization and management. The proposed project is of essence and would be characterized as a crucial one among the measures taken by CERA in discharging her obligation of promoting the use of RES.

To this effect, data in connection with the exploitation of all of the country's Energy Resources will be recorded including City Refuse, Industrial Waste, Wind and Solar Energy, as well as the contribution of the country in the Energy generation in Europe.

For the purposes of the proposed project, procedures will be developed for collecting, recording and managing the information and data relevant to the energy resources. Therefore, CERA will be in a position to collect data not simply on the available energy quantities, but also data regarding peak demand, shortage of energy etc.

At the same time, together with the data recording system, a system of imparting information to the wider specialized public (engineers, researchers, investors, analysts,) will be developed. Special effort will be given to information relevant to the consumption of energy, as well as to alternative sources of energy, since these objectives and challenges coincide with the environmental protection principle.

The proposed Project will constitute the necessary foundation for the general planning of Energy Resources of Cyprus to be based on data from the appropriate map with the aim to make best use of Resources.

FUEL COST ADJUSTMENT INDEX

On the 1st of November 2005, CERA approved the proposal submitted by EAC for reduction of the fuel cost adjustment index from 0.0015 to 0.00133 cent with effect from the 1st of January 2006

The calculation of the fuel cost adjustment upon which the price of 1KWh is determined for all Tariffs, will be reviewed every six (6) months, at which time EAC should submit the relevant proposal for approval by CERA.

This revision resulted in a general reduction in tariffs of the order of 3.5%. EAC published the new Fuel Cost Adjustment Index (Announcement No. 8756) in the Gazette of the Republic on the 23rd of December 2005.

The published announcement was as follows:

Quote

With the recent operation of the 3rd Unit at Vasilikos Power Station the efficiency of operation of the Power Stations of EAC has improved considerably.

As a result, EAC has proposed to CERA and CERA has approved, that the fuel cost adjustment index with which consumers will be charged according to current legislation on EAC tariffs, will be reduced from 0.0015 cent to 0.00133 cent as from the 1st of January 2006.

The relevant paragraphs which are included in the published bi-monthly and monthly tariffs are altered correspondingly as follows:

Fuel Cost Adjustment Index

For every 5 cents variance from the fuel basic price of CY£50/mt, the price of Electricity billed will be varied by 0.00133 per Unit (KWh).

Unquote

POWER MAXIMUM DEMAND AND DEMAND FORECAST

In the year under review the Power Maximum Demand recorded was on the 22nd of August 2006 at 14.15 p.m. and reached a level of 907MW, (vis -à-vis a Demand Forecast of 910MW), 3MW of which were derived from “OWN USE” installations.

The total Energy generated for the whole of the year was of the order of 4.650GWh (vis-à-vis a forecast of 4.640GWh) 32.17GWh of which were the result of “OWN USE” Generation, while 40.59GWh, were consumed for the needs of the island’s occupied areas.

The Average Annual Load Factor was of the order of 0.585.

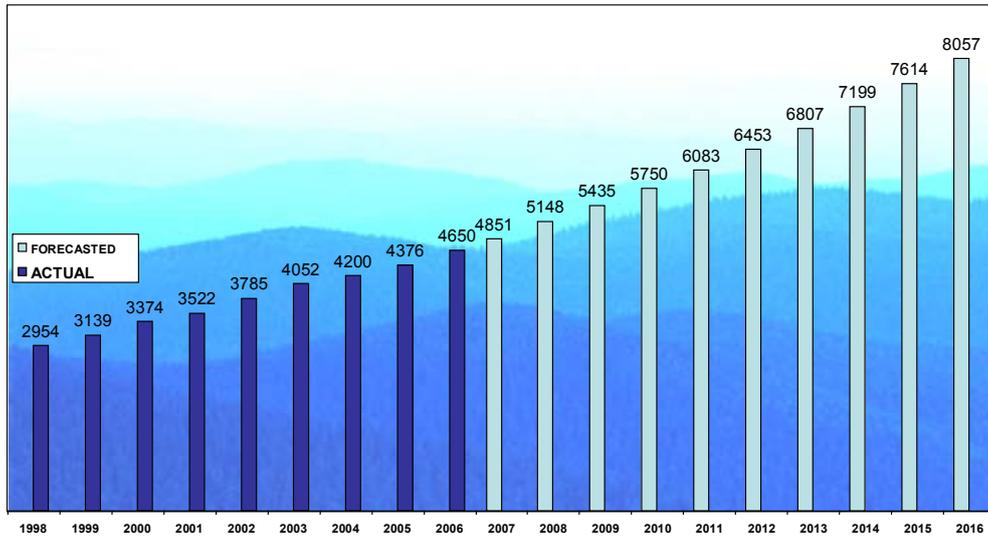
In recent years the average annual rate of increase in Power Maximum Demand was of the order of 5.85% and the average annual rate of increase in generated energy was of the order of 5.65%.

The levels of annual maximum demand as well as the annual energy generated are expected to continue a similar increasing trend.

Graphs, fig. 1 and fig. 2 present historical data for the period 1998–2006 and the forecasted quantities for the period 2007 to 2016.

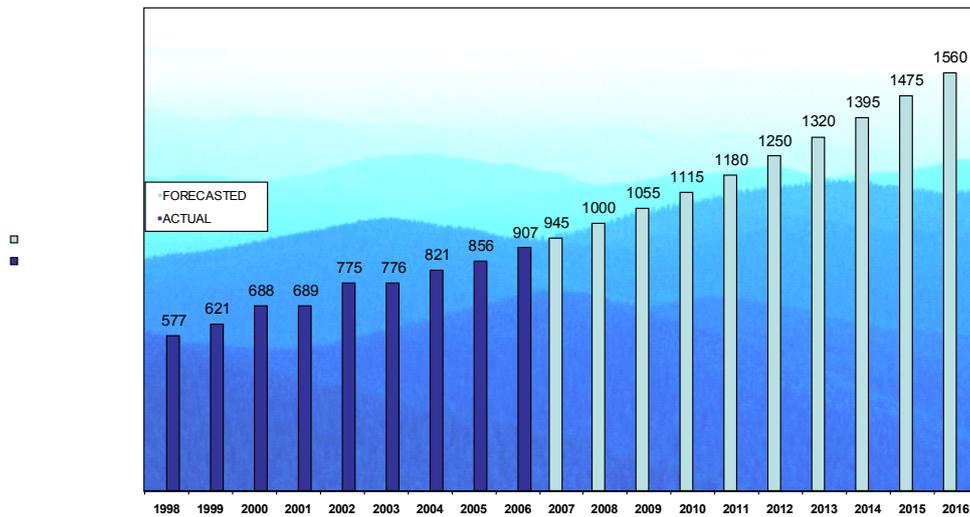
TOTAL ANNUAL GENERATION OF ELECTRICAL ENERGY IN GWh UNTIL THE YEAR 2016

Figure 1



ANNUAL MAXIMUM DEMAND IN MW UNTIL THE YEAR 2016

Figure 2



CERA'S INFORMATIVE AND MISCELLANEOUS ACTIVITIES

As every year, so during 2006 CERA had an active participation and activity in the dissemination of information on energy matters. Every officer or Member of CERA is always ready to inform any and all interested parties. Listed below are some of the more important events in which CERA participated.

- **WIND ENERGY AND THE DEVELOPMENT OF WIND FARMS**

CERA was represented at the seminar held for any interested party, entitled "Wind Energy and Development of Wind Farms" organized by DIAMOND FOG LTD and took place in Nicosia on the 23rd of February 2006. The seminar was under the auspices of CERA.

- **RES AND ECONOMIES TO THE INDUSTRIAL SECTOR**

CERA was represented at the seminar held on the in Limassol on the 9th of March 2006 by Kypros Kyprianides, CERA Member, who delivered a presentation.

- **WORKING MEETING ON ENERGY MATTERS**

CERA was represented at the above meeting, which was organized by the Center of Economic Studies of the University of Cyprus and took place in Nicosia on the 23rd of May 2006. During the meeting the Economics Research Unit (ERU) of the University of Cyprus presented the first results of their research specifically, their projections for electricity consumption up to 2030 assuming different scenarios on oil prices. ERU also presented planned activities towards a long-term energy plan.

- **AQUIS COMMUNITAIRE REGARDING THE ENVIRONMENT**

CERA was represented in the Programme " The Creation of Active Citizens Through Environmental Awareness" an one-day meeting initiated by the Federation of Environmental and Ecological Organisations in cooperation with the Unit of Environmental Studies of the Research Center took place on the 17th of June 2006. The discussion topic was "Aquis Communautaire a critical review".

- **ENERGY CONSUMPTION – ENERGY SAVINGS – THE ENVIRONMENT AND THE ROLE OF RES**

The Association of Graduates of Secondary Technical Education of Cyprus as part of its support to Cyprus Industry organized a seminar on the above subject. The purpose of the Seminar was to supply information on RES on the essence of the Energy Policy, on the role of RES, on the legal framework and the subsidy scheme, on energy consumption, on thermal insulation and finally on the connection of RES units to the EAC network. CERA was represented by Kypros

Kyprianides who explained the role of CERA in promoting competition and holding down energy costs, energy savings, and grants for RES. The seminar, which was under the auspices of CERA, was held on the 21st of June 2006.

- **INTELLIGENT ENERGY FOR EUROPE**

CERA was represented at the above Seminar for the Programme, which was organized by the Energy Services of the Ministry of Commerce, Industry & Tourism, as the as the National Focal Point for the co-funded (E U and Government) Programme “Intelligent Energy for Europe” and the Cyprus Institute of Energy in cooperation with the European Commission. The Programme took place in Nicosia and was held on the 7th of July 2006

- **SOFTWARE FOR THE OPTIMISATION OF GENERATING UNITS OPERATION**

CERA was represented at the above seminar, which was organized by the Business Development Unit of E A C and took place at the Head Office of the Electricity Authority of Cyprus on the 12th July 2006.

- **QUALITY AWARDS**

On the 25th of September 2006 ECO-Q Magazine on quality organised an event for the Quality Awards “CYPRUS 2005”. CERA took part in the event by means of a presentation on “CERA’s role and activities / Energy- Environment”

- **ENERGY PERFORMANCE OF BUILDING**

CERA was represented at the above one-day seminar, entitled “The Impact of Directive 2002/91/EU on the Design and Construction of Buildings concerning the Energy Performance of Buildings”. The seminar was organised by the Frederick Institute of Technology and the Cyprus Scientific and Technical Chambers and took place in Nicosia on the 25th September 2006.

INTERNATIONAL ACTIVITY AND PARTICIPATION

As every year so during 2006, CERA was invited to or participated in important events abroad concerning the Energy Sector and the use of natural gas.

During the year under review CERA was represented in the following events:

- European Wind Energy Conference 2006 - 26/2-01/03/2006, Athens.
- European Forum Gas 3 - 02/05/04/06, Berlin.
- Project with the acronym “EXPLORER” 15-17/04/06, Athens

- 5th ERRA (Energy Regulators Regional Association) Energy Regulation & Investment Conference - 14-17/05/06, Hungary, Budapest.
- The Energy Regulators Community in the Mediterranean Basin - Workshop, Italy, Rome.
- Role and Benefits of Electricity to Society - Eurelectric Annual Convention and Conference 11-14/06/06, Norway, Oslo.
- Seminar on the Programme "INTERREG" - 12-17/09/06, Athens.
- Eolica Expo Mediterranean - 29/09-01/10/2006, Italy, Rome.
- Proposed Programmes of the 2nd Regulation on Funding for the allocation of Euro amounts for Turkish Cypriots, 08-10/10/06, Brussels
- Conventional Energies Unit Electricity and Gas Energy Community Meetings, 22-26/10/06, Athens.
- Renewable Energy in Central & Eastern Europe - 14-17/11/06, Vienna
- Joint Research Center - IE Workshop - 22-25/11/06, Holland
- Energy Day 29/11-01/12/06, Brussels.

PARTICIPATION IN EUROPEAN PROGRAMMES

CERA acts within the framework of the strategic targets of the Energy Policy adhering to the provisions of the legislation in force. Amongst other, emphasis is given by CERA on the promotion of the efficient use of energy, on measures for conserving energy, on the use of RES and, on the encouragement of research and development in energy matters.

Towards attaining these goals and in order to discharge its legal obligations, CERA promotes close international cooperation within the framework of European programmes concerning the energy sector. In particular, CERA is participating and has been approved for funding by the European Union in the programmes indicated below.

CERA has also applied for participation and funding for other European Programmes for the period 2007-2008 either directly or through the Government. These have yet to be approved by the appropriate Committees however, it is believed that assessment of these applications will be finalised within the first half of 2007.

	TITLE OF PROJECT	EUROPEAN PROGRAMME
1.	"DISTRESS"- PROMOTION AND CONSOLIDATION OF ALL RTD ACTIVITIES FOR RENEWABLE DISTRIBUTED GENERATION TECHNOLOGIES IN THE MEDITERRANEAN REGION	6 th FRAMEWORK PROGRAMME
2.	"EXPLORER"- ON LINE BENCHMARKING FOR EXPLOITATION OF RENEWABLE ENERGY SOURCES	INTERREG III B ARCHIMED

3.	ELECTRIC LOAD FORECASTING USING NEURAL NETWORKS	RESEARCH PROMOTION FOUNDATION'S FRAMEWORK PROGRAMME FOR RESEARCH AND TECHNOLOGICAL DEVELOPMENT

GRANTS/SPONSORSHIPS

CERA selects with great care the applicants for sponsorship of seminars concerning Energy. CERA was a sponsor of the following seminars:

 **PHOTOVOLTAIC SYSTEMS IN THE EUROPEAN AND NATIONAL ENERGY SECTOR**

Held by the Cyprus Scientific and Technical Chambers took place in Nicosia on 23rd of November 2006 The President of CERA was present and welcomed the participants. Sponsorship of 1000CY Pounds.

 **ENERGY CONSUMPTION- ENERGY CONSERVATION ENVIRONMENT AND THE ROLE OF RENEWABLE ENERGY SOURCES**

Held by the **Association of Technical Education Graduates** Sponsorship of 1300 CY Pounds.

 **PROSPECT OF UNITING DIVIDED CITIES**

Held by the Council of Reconstruction and Rehabilitation, during the 8th-9th of June 2006. Sponsorship of 3000 CY Pounds.

 **RESEARCH ON PHOTOVOLTAIC ENERGY**

In the course of promoting the use of Renewable Energy Sources, CERA sponsored a study undertaken by the Cyprus University on Best Practice Funding Procedures of Photovoltaic Systems and Cost Analysis of Long-term Plan for their propagation in Cyprus. The sponsorship amounted to 8000 CY Pounds.

The team of Photovoltaic Technology, which undertook the study, headed by Dr. G. Georgiou and Dr. Ch. Charalambous, came up with interesting findings and made several proposals, which if adopted, could assist considerably in the attainment of optimistic goals set for installing photovoltaic systems in 10,000 households by the year 2012 and in 50,000 households by the year 2020.

The Study will be submitted to the Minister of Industry, Commerce & Tourism for his consideration and adoption of further measures that could contribute to attaining the targets set.

ENERGY ISSUES

During the year under review, important developments of interest to all citizens, took place in the energy sector. One of these refers to the Energy Performance of Buildings and to the relevant enacted Law, L.142 (I) / 2006, and its Regulations, Reg. 429/2006. The said Law transposed Directive 2002/91/EC of the European Parliament and of the Council of 16th December 2002 into national legislation.

The objective of this Directive and of Law 142(I)/2006 is to promote the improvement of the energy performance of buildings within the Community, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost effectiveness. This is part of number of measures the EU has taken concerned with climatic changes and security of supply.

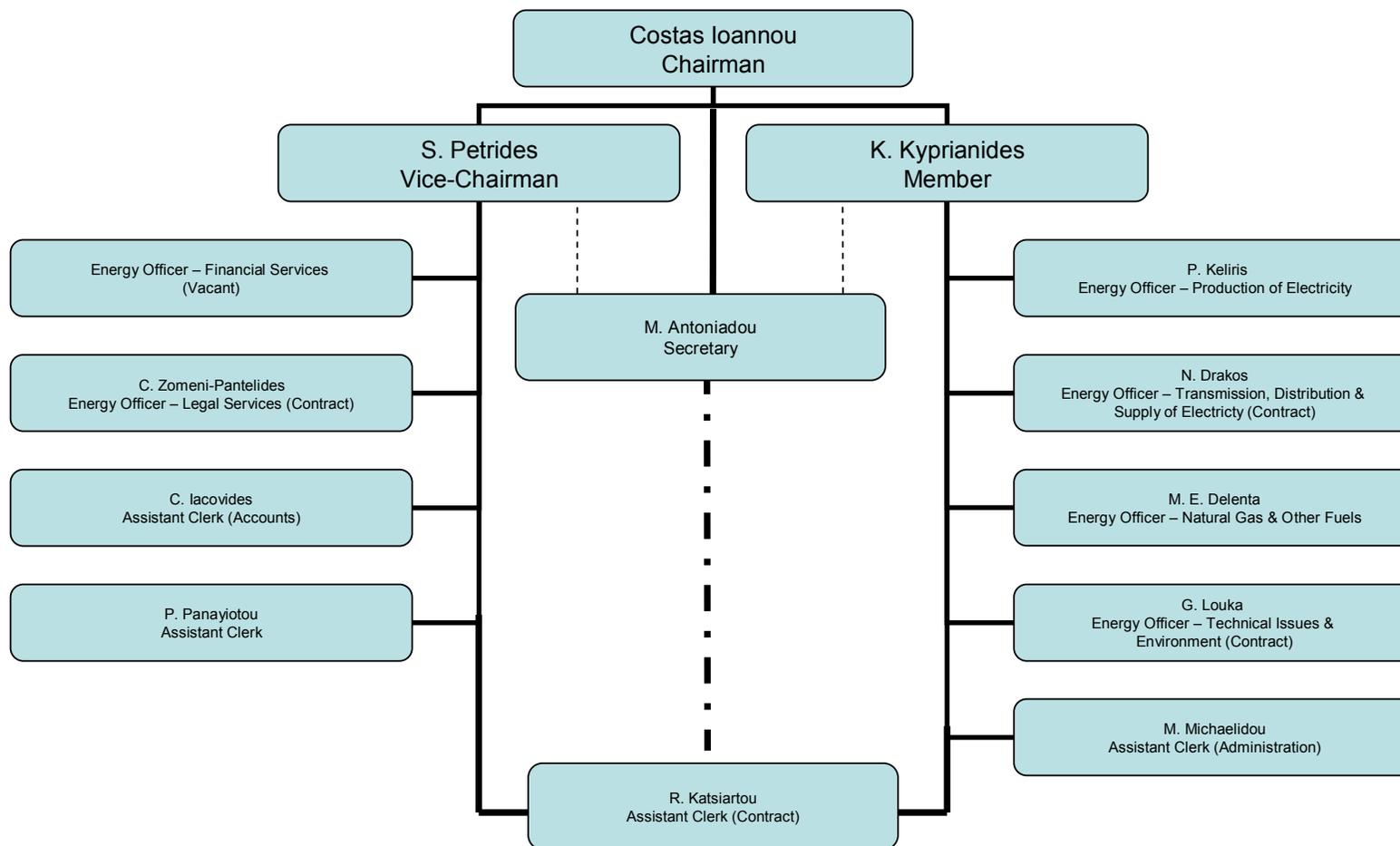
The Directive and the Law lay down requirements as regards to:

- The general framework for the methodology of calculation of the integrated energy performance of buildings.
- The application of minimum requirements on the energy performance of new buildings.
- The application of minimum requirements on the energy performance of large existing buildings that are subject to major renovation.
- Energy certification of buildings.
- Regular inspection of boilers and of air conditioning systems in buildings and, in addition, an assessment of the heating installation in which the boilers are more than 15 years old.

In accordance with the provisions of the Law

- Every new building as well as every existing building with a total useful floor area over 1000m² undergoing major renovation must comply with the minimum energy performance requirements set by a Decree.
- The Consultant for each new building undertakes to perform calculations on the energy performance of the building, which are submitted to the competent authority, the Energy Foundation Center of the Ministry of Industry, Commerce & Tourism.
- The calculations on the energy performance of the building are prepared in accordance with the methodology of calculating the energy performance of the building and by the use of the software given by the competent authority free of charge to interested parties.
- The certificate of the energy performance of a building is issued by independent, experts specializing in this field and the validity period of the certificate is up to a maximum of 10 years. The certificate is handed to the owner of the building, when the building is completed or, is handed by the owner to any prospective buyer or tenant.

Cyprus Energy Regulatory Authority (CERA) – Organogram (2006-2007)



EUROPEAN DIRECTIVES, DECISIONS, RECOMMENDATIONS, AND
REGULATIONS ON ENERGY ISSUES

A/A	DATE	NUMBER	CATEGORY	TITLE
1.	20/12/1968	68/414/EEC	Directive	On imposing an obligation on Member States of EEC to maintain minimum stocks of crude oil and / or petroleum products.
2.	24/07/1973	73/238/EEC	Directive	On measures to mitigate the effects of difficulties in the supply of crude oil and petroleum products.
3.	06/10/1975	75/2677/EEC	Regulation	Concerning the application of Regulation No 3254/74/EEC of the Council of 17 th of December 1974 «on the application of Regulation 1055/72/EEC concerning the announcement issued to the committee of importers of hydrocarbons for the petroleum classes 27.10. A, B, CI and CII of the common charges».
4.	15/06/1979	79/639/EEC	Decision	Laying down detailed rules for the implementation of Council Decision 77/706/EEC.
5.	27/10/1981	81/924/EEC	Recommendation	On Electricity tariff structures in the Community.
6.	24/11/1988	88/609/EEC	Directive	On the limitation of emissions of certain pollutants into the air from large combustion plants.
7.	08/11/1988	88/611/EEC	Recommendation	Promote co-operation between Public Utilities and Auto producers
8.	29/06/1990	90/377/EEC	Directive	Concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users.
9.	29/10/1990	90/547/EEC	Directive	On the transit of electricity through transmission grids.

10.	31/05/1991	91/296/EEC	Directive	On the transit of natural gas through grids.
11.	21/05/1992	92/42/EEC	Directive	On efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels.
12.	13/09/1993	93/76/EEC	Directive	To limit carbon dioxide emissions by improving energy efficiency (SAVE)
13.	30/05/1994	94/22/EC	Directive	On the conditions for granting and using authorisations for the search, exploration and production of hydrocarbons.
14.	24/09/1996	96/61/EC	Directive	Concerning integrated pollution prevention and control.
15.	19/12/1996	96/92/EC	Directive	Concerning common rules for the internal market in Electricity.
16.	22/06/1998	98/30/EC	Directive	Concerning common rules for the internal market of natural gas.
17.	13/10/1998	98/70/EC	Directive	Relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC.
18.	01/10/1998	98/75/EC	Directive	Updating the list of entities covered by Directive 90/547/EEC on the transit of electricity through transmission grids.
19.	14/12/1998	98/93/EC	Directive	Amending Directive 68/414/EEC, imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and /or petroleum products.
20.	23/09/1997	98/181/EC	Decision	On the conclusion by the European Communities of the Energy Charter Treaty and Energy Charter Protocol on Energy efficiency and related environmental aspects.

21.	26/04/1999	99/32/EC	Directive	Relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC.
22.	22/04/1999	1999/280/EC	Decision	Regarding a Community procedure for information and consultation on crude oil supply cost and the consumer prices of petroleum products.
23.	26/07/1999	1999/566/EC	Decision	Implementing Council Decision 1999/280/EC regarding a Community procedure for information and consultation on crude oil supply costs and the consumer prices of petroleum products.
24.	27/09/2001	2001/77/EC	Directive	On the promotion of electricity produced from Renewable Energy Sources in the internal electricity market.
25.	23/10/2001	2001/80/EC	Directive	On the limitation of emissions of certain pollutants into the air from large combustion plants.
26.	16/12/2002	2002/91/EC	Directive	On the energy performance of buildings
27.	08/05/2003	2003/30/EC	Directive	On the promotion of the use of biofuels or other renewable fuels for transport.
28.	26/05/03	2003/35/EC	Directive	Providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC.
29.	26/06/2003	2003/54/EC	Directive	Concerning common rules for the internal market in electricity and repealing Directive 96/92/EC.

30.	26/06/2003	2003/55/EC	Directive	Concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC.
31.	13/10/2003	2003/87/EC	Directive	Establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.
32.	07/10/2003	2003/92/EC	Directive	As regards the rules of the place of supply of gas and electricity.
33.	27/10/2003	2003/96/EC	Directive	Restructuring the Community framework for the taxation of energy products and electricity.
34.	11/11/2003	2003/796/EC	Decision	On establishing the European Regulators Group for Electricity and Gas.
35.	26/06/2003	1228/2003/EC	Regulation	On conditions for access to the network for cross-border exchanges in electricity.
36.	26/06/2003	1229/2003/EC	Decision	Laying down a series of guidelines for trans European Energy Networks and repealing Decision No 1254/96/EC
37.	11/02/2004	2004/8/EC	Directive	On the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC.
38.	26/04/2004	2004/67/EC	Directive	Concerning measures to safeguard security of natural gas supply.
39.	29/01/2004	2004/156/EC	Decision	Establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC.
40.	28/09/2005	2005/1775/EC	Regulation	On conditions for access to the natural gas transmission networks.

STATUTORY AND OTHER REGULATION

The following Laws and Regulations have been enacted and are in force:

LAWS				
No.	TITLE OF LAW	NUMBER OF LAW	NUMBER OF GAZETTE	DATE OF PUBLICATION
ELECTRICITY				
THE LAWS OF 2003 - 2006 ON REGULATING THE ELECTRICITY MARKET				
1.	The Law of 2003 On Regulating the Electricity Market	L.122(I)/2003	3742	25/07/03
2.	The Law of 2004 On Regulating the Electricity Market- AMENDMENT	L.239(I)/2004	3918	05/11/04
3.	The Law of 2005 On Regulating the Electricity Market- AMENDMENT	L.143(I)/2005	4057	09/12/05
4.	The Law of 2006 On Regulating the Electricity Market - AMENDMENT	L.173(I)/2005	4105	29/12/06
NATURAL GAS				
THE LAWS OF 2004 – 2006 ON REGULATING THE NATURAL GAS MARKET				
1.	The Law of 2004 On Regulating the Natural Gas Market	L.183(I)/2004	3852	30/04/04
2.	The Law of 2006 On Regulating the Natural Gas Market - AMENDMENT	L.103(I)/2006	4088	21/07/06

THE LAWS OF 2003-2006 ON THE PROMOTION OF ELECTRICITY PRODUCED FROM RENEWABLE ENERGY SOURCES
THE LAW OF 2006 ON THE PROMOTION OF COGENERATION
AND OTHER LAWS

RENEWABLE ENERGY SOURCES.

1.	The Law of 2003.On the Promotion and Encouragement of the Use of Renewable Energy Sources (RES) and Energy Conservation	N.33(I)/2003	3706	18/04/03
2.	The Law of 2004 On the Promotion and Encouragement of the Use of Renewable Energy Sources (RES) and Energy Conservation - AMENDMENT	N.234A(I)/2004	3915A	02/11/04
3.	The Law of 2005 On the Promotion and Encouragement of the Use of Renewable Energy Sources (RES) and Energy Conservation - AMENDMENT	N.139(I)/2005	4055	02/12/05
4.	The Law of 2006 On the Promotion and Encouragement of the Use of Renewable Energy Sources (RES) and Energy Conservation-AMENDMENT	N.162(I)/2006	4103	22/12/06

COGENERATION

1.	The Law of 2006 On the Promotion of Cogeneration of Electricity and Heat	N.174(I)/2006	4105	29/12/06
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OTHER LAWS				
1.	The Law of 2004 On the Implementation of European Regulations relevant to the Energy Sector.	N.278(I)/2004	3940	31/12/04
REGULATIONS				
No.	TITLE	NUMBER OF REGULATION	NUMBER OF GAZETTE	DATE OF PUBLICATION
REGULATIONS ISSUED BY VIRTUE OF THE PROVISIONS OF THE LAWS OF 2003 – 2006 ON REGULATING THE ELECTRICITY MARKET				
ELECTRICITY				
1.	The Regulations of 2004 On Regulating the Electricity Market (INVESTIGATIONS PROCEDURE)	Reg. 465/2004	3851	30/04/04
2.	The Regulations of 2004 On Regulating the Electricity (LICENCE REGISTER)	Reg. 466/2004	3851	30/04/04
3.	The Regulations of 2004 On Regulating the Electricity Market (LICENCE FEES)	Reg. 467/2004	3851	30/04/04
4.	The Regulations of 2004 On Regulating the Electricity Market (ADMINISTRATIVE FINES)	Reg. 468/2004	3851	30/04/04
5.	The Regulations of 2004 On Regulating the Electricity Market (ELECTRICITY TARIFFS)	Reg. 472/2004	3851	30/04/04
6.	The CERA STAFF Regulations of 2004 (APPOINTMENT, PROMOTION, SERVICE AND DISCIPLINARY CODE)	Reg. 528/2004	3853	30/04/04

7.	The Regulations of 2004 On Regulating the Electricity Market (ISSUE OF LICENCES)	Reg. 538/2004	3853	30/04/04
8.	The Regulations of 2005 On Regulating the Electricity Market (PROCEDURE FOR SUBMITTING COMPLAINTS)	Reg. 570/2005	4058	16/12/05
9.	The Regulations of 2005 On Regulating the Electricity Market (PERFORMANCE INDICATORS)	Reg. 571/2005	4058	16/12/05
NATURAL GAS				
REGULATIONS ISSUED BY VIRTUE OF THE PROVISIONS OF THE LAWS OF 2004 – 2006 ON REGULATING THE NATURAL GAS MARKET				
1.	The Regulations of 2006 On Regulating the Natural Gas Market (INVESTIGATIONS PROCEDURE)	Reg.297/2006	4122	21/07/06
2.	The Regulations of 2006 On Regulating the Natural Gas Market (ISSUE OF LICENCE)	Reg.298/2006	4122	21/07/06
3.	The Regulations of 2006 On Regulating the Natural Gas Market (FEES)	Reg.299/2006	4122	21/07/06
OTHER REGULATION				
DECREES / DIRECTIVES / DECISIONS				
1.	The Decree of 2004 On Consumers Eligible to Select their Supplier	Reg. 340/2004	3847	30/04/04
2.	The Directive of 2006 stipulating natural gas as the primary source of Energy for sizeable new investments.	Reg. 115/2006	4088	17/03/06
3.	The Decision of 2006	Reg. 200/2006	4098	28/04/06

	imposing a Public Service Obligation regarding the price of electricity supply to multi-member and low-income families.			
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REGULATORY DECISIONS

NO.	TITLE OF DECISIONS	NUMBER OF DECISION	NUMBER OF GAZETTE	DATE OF PUBLICATION
1.	Declaration of Regulatory Practice and Methodology of Electricity Tariffs	Reg.177/2006	4096	14/04/06
2.	Declaration of Regulatory Practice and Methodology of Electricity Tariffs - AMENDMENT	Reg.404/2006	4142	23/10/06

RULES / PROTOCOLS

1.	The "Electricity Transmission/ Distribution Rules"	APPROVAL 07/10/04	IN FORCE FROM 15/10/05
2.	The "Electricity Transmission/ Distribution Rules" – AMENDMENT	09/06/06	19/06/06
3.	The "Electricity Market Rules"	Approval granted in principle in 2005. Requested simplification work to be carried out and be completed in 2007.	

CHARGES

⇒	New Charges for Customer Services by EAC	Approved on 01/11/2005 In force from 01/01/2006
⇒	New EAC Tariff Charges	Approval due in 2007
⇒	Charges for the Use of the Transmission System	Approval due in 2007
⇒	Charges for the Use of the Distribution System	Approval due in 2007
⇒	Charges for the Connection to the Transmission Network	Approval due in 2007
⇒	Charges for the Connection to the Distribution Network	Approval due in 2007

PROPOSED LAWS AND REGULATIONS		
⇒	Proposed Law On the Measures to safeguard Security of Natural Gas Supply.	Approval due in 2007
REGULATION OF ISSUES PERTAINING TO TRANSFER OF LICENCES		
ELECTRICITY		
⇒	The Law On Regulating The Electricity Market – AMENDMENT	Approval due in 2007
⇒	The Regulations of 2004 On Regulating the Electricity Market (LICENCE FEES)	Approval due in 2007
⇒	The Regulations of 2004 On Regulating the Electricity Market (ISSUE OF LICENCES)	Approval due in 2007
NATURAL GAS		
⇒	The Law On Regulating the Natural Gas Market – AMENDMENT	Approval due in 2007
⇒	The Regulations of 2006 On Regulating the Natural Gas Market (FEES)	Approval due in 2007
⇒	The Regulations of 2006 On Regulating the Natural Gas Market (ISSUE OF LICENCE)	Approval due in 2007

FOR EASY COMMUNICATION WITH CERA

The offices of the Cyprus Energy Regulatory Authority are situated at Iacovides Tower in Nicosia.

Its full address is the following:

Griva Digheni Avenue 81-83
Iacovides Tower
3rd Floor
1080 Nicosia

The postal address is :

P. O. Box 24936
1355 Nicosia

FOR QUICK COMMUNICATION:

Tel +357 22 66 63 63

Fax +357 22 66 77 63

Email : info@cera.org.cy

Web page : www.cera.org.cy

WEB SITE BASIC CHAPTERS

• CERA	• Issue of Licences
• Legislation	• List of Licences
• Announcements	• Connections
• Licence Fees	• Communication

CONSULTANTS APPOINTED, FOLLOWING TENDER PROCEDURES

LEGAL ADVISERS

The Law Office of Mr. Christos Triantafyllides was appointed as CERA's Legal Adviser as from the 1st of July 2004.

ACCOUNTANTS

The Accounting Firm Nexia Poyiadjis were appointed as CERA's Accountants as from the 19th of March 2004.

TECHNOECONOMIC ADVISERS

The Consultancy Firm Asprofos Public Company from Greece were appointed as CERA's Technoeconomic Advisers as from the 12th of October 2004.

**CYPRUS ENERGY REGULATORY
AUTHORITY**
REPORT AND FINANCIAL STATEMENTS
31 December 2006

MEMBERS OF THE AUTHORITY AND OTHER OFFICERS

Members of the Authority:	Costas Ioannou - President Stelios Petrides - Vice-President Kypros Kyprianides - Member
Auditors	Auditor General of the Republic of Cyprus 6 Deligeorgi 1406 Nicosia
Legal Advisers	Christos M. Triantafillides Lawyer 27 Evagorou Avenue Irene Building, 3rd Floor, Office 35 Nicosia - Cyprus
Accountants:	NEXIA POYIADJIS CHARTERED ACCOUNTANTS 2 Sophouli Street Chanteclair Building, 8th Floor P. O. .Box 21814 1096 Nicosia, Cyprus
Registered Office:	81-83 Griva Digheni Avenue Iakovides Building, 3rd Floor P. O. Box 24936 1355 Nicosia, Cyprus

Report of the Auditor General of the Republic
To the Cyprus Energy Regulatory Authority

Rough Translation

Quote

Republic of Cyprus

AUDITOR GENERAL
OF THE REPUBLIC
1406 NICOSIA

**REPORT OF THE AUDITOR GENERAL OF THE REPUBLIC
TO THE CYPRUS ENERGY REGULATORY AUTHORITY**

I have audited the financial statements on pages 3 to 15 and have received all the information and explanations which I considered necessary. The preparation of these financial statements is the responsibility of the Authority. My responsibility is to express my opinion on them, based on the audit carried out.

Auditing was performed in accordance with the International Auditing Standards. These Standards demand that I program and exercise my audit in order to obtain reasonable assurances as to whether the financial statements do not have substantial mistakes. Auditing includes the examination, on a sample basis, of evidence supporting the sums of money and other information in the financial statements. Auditing also includes an evaluation of the accounting principles used, the important calculations made by the Authority, as well as the evaluation of the overall presentation of the financial statements. I believe that the auditing carried out offers a reasonable basis for my opinion.

In my opinion, suitable Accounting Books have been kept and the financial statements which agree with these give a true and fair picture of the financial condition of the Cyprus Energy Regulatory Authority on 31st December 2006 and of the surplus and cash flow for the year ended on this date in accordance with the International Standards of Financial Reporting and are consistent with the provisions of the Electricity Market Regulatory Law.

George Kyriakides, FCCA
Assistant Auditor General
of the Republic

Nicosia, 28 March 2007

Unquote

REPORT OF THE MEMBERS OF THE AUTHORITY

The Members of the Cyprus Energy Regulatory Authority (CERA) present their financial report together with the financial statements of CERA for the year ending on 31st December 2006.

MAIN ACTIVITIES

The financial review and report aims at showing the results of the activities developed by CERA since the 1st of January 2006, in accordance with the provisions of the Laws on Regulating the Electricity Market of 2003 to 2006.

RESULTS

CERA's results for the period are presented on page 84. The Members of CERA have decided to transfer the surplus of income over the expenses for the year to the reserve fund.

MEMBERS

The Members of CERA as at 31 December 2006 and at the date of this report are shown on page 81. All of them were members of CERA during the whole period of the year ending on the 31st December 2006.

According to the CERA's establishment Law, L.122(I) of 2003 to 2005, all the current members of CERA have been appointed for a period of six years.

By authorisation of CERA's Members
Chairman

Costas Ioannou

Nicosia, Cyprus, 5th March 2007

INCOME STATEMENT

Year ended 31 December 2006

	Note	2006 CY£	2005 CY£
Revenue	4	925,976	1,168,653
Other income	5	46,123	27,077
Administration		(538,463)	(327,016)
Other expenses	6	(737)	-
Operating surplus	7	432,899	868,714
Finance costs	9	(949)	(329)
Surplus before tax		431,950	868,385
Tax	10	(4,612)	(2,688)
Surplus for the year		427,338	865,697

BALANCE SHEET
31 December 2006

	Note	2006 CY£	2005 CY£
ASSETS			
Non-current assets			
Property, plant and equipment	11	46,707	50,901
Intangible assets	12	707	2,147
		<u>47,414</u>	<u>53,048</u>
Current assets			
Duties receivable and other receivables	13	8,872	12,889
Cash at bank and in hand		1,757,167	1,360,464
		<u>1,766,039</u>	<u>1,373,353</u>
Total assets		<u>1,813,453</u>	<u>1,426,401</u>
EQUITY AND LIABILITIES			
Capital and reserves			
Retained surpluses		1,478,198	1,050,860
		<u>1,478,198</u>	<u>1,050,860</u>
Non-current liabilities			
Borrowings	14	280,000	350,000
		<u>280,000</u>	<u>350,000</u>
Current liabilities			
Creditors and other payables	15	55,255	25,541
		<u>55,255</u>	<u>25,541</u>
Total liabilities		<u>335,255</u>	<u>375,541</u>
Total equity and liabilities		<u>1,813,453</u>	<u>1,426,401</u>

On 5th of March 2007, the Board of Directors of CYPRUS ENERGY REGULATORY AUTHORITY authorised these financial statements for issue.

.....
Costas Ioannou
President

.....
Stelios Petrides
Vice-President

.....
Kypros Kyprianides
Member



TSO Cyprus
Transmission System Operator – Cyprus

ANNUAL REPORT 2006

ANNUAL REPORT OF THE TRANSMISSION SYSTEM OPERATOR FOR 2006

The Transmission System Operator (TSO) was established in 2003 by virtue of the Cyprus *Law On Regulating The Electricity Market, L.122(I)/2003*. The Director of the Transmission System Operator was appointed on the 14th of April 2004 by Decision of the Council of Ministers and, on the 13th of September 2004, he gave his assurance before the President of the Republic to execute his assigned duties faithfully.

This Annual Report covers the activities of the TSO for the whole of the year 2006.

According to Article 61, clause 3 of the above mentioned Law, the TSO prepares the Annual Report for its activities and the Report forms part of the Annual Report of the Cyprus Energy Regulator Authority (CERA).

FOREWORD BY THE DIRECTOR OF THE TSO

The end of 2006 sees the completion of two whole years of operation of the Transmission System Operator.

During 2006, important decisions concerning the organisation and operation of the TSO were put into effect. Also, a number of important projects were completed and new activities undertaken.

Specifically,

- All the Technical Studies were completed regarding the ability of the Transmission and Generation Systems to cope with large production of electrical energy from wind generators.
- The method in which wind generators are to operate in Cyprus isolated system was investigated and the preparation of TSO's Tender for the cost of connection as well as the terms of the Connection Agreement for all Independent Producers who applied were completed.
- The Transmission and Distribution Rules were reviewed in order to improve the response to the demand for connection and operation of Wind Farms.
- Work was completed on the simultaneous remote reading of all electricity meters installed at transmission substations and generating stations. In future this project will also cover telemetering of Independent Producers.
- Progress was made on the extensive review of the Market Rules which are to be discussed during 2007.
- The infrastructure was laid for the preparation of TSO's autonomous forecasts of the total generated power for the period 2007-2016, through the use of suitable software.

On the organisational aspect, the TSO and the Owner of the Transmission System signed a Protocol defining precisely the role of each party at technical level. Unfortunately however, the matter of suitable staffing of TSO by EAC personnel is still pending and this impedes TSO's task to achieve its objectives. It is anticipated that 2007 will be the last year with these difficulties since it is expected that all the agreed important established posts will be filled.

In addition, the accounting software was installed and part of the framework for the operation of the electricity market was put into effect. At the same time, a suitable website was established, providing all the information of interest to users of the Transmission System in a clear manner. The website was constructed in such a way so as to be a user friendly and at the same time to

serve as a means for contacting the TSO for the purpose of currying out tasks and exchanging information and notifications, all of which are necessary for a modern system intended to serve the electricity market.

During the year a number of important training programmes were organised and Officers of the TSO participated in a large number of conferences or seminars held in Cyprus and abroad.

The TSO operated the Transmission / Generation System maintaining a high standard of reliability and safety. In the part of Cyprus where the Government of Cyprus exercises effective control, the highest demand of 907MW, representing an increase of 5.6% over the previous year, was recorded in the summer of 2006. It needs to be said, however, that the Transmission System presented some problems due to many years of delay, of vital upgrading of the Transmission System. A case in point is the commissioning of "Tseri" substation and the construction of the Transmission Line to connect Vasilikos Power Station with this pivotal substation. During the summer months the System was operated beyond safe limits with the danger of extensive and prolonged power-cuts affecting the greater Nicosia area, and perhaps the whole of Cyprus. The threat stems from a possible fault on either of the two circuits on the pylons of the line connecting Vasilikos Power Station with the "Alambra" substation. Fortunately, the worst was avoided but the threat may appear again in the summer of 2007. On the positive side, work to alleviate the problem has already begun and is progressing at a fast pace.

During 2006, with the help of a firm of experienced International Consultants, the TSO undertook studies aimed at further improvements to our already high level of safety and response to fault repairs. These studies will be completed within 2007.

The above describe in general terms the many aspects of activity of the TSO as well as the work undertaken in order to meet the goals set at the beginning of the year. With the anticipated 2007 successful resolution of the TSO office staffing issue we expect improvement to our performance even further.

Andreas L. Theophanous
Director Transmission System Operator

GENERAL DESCRIPTION OF TSO'S ACTIVITIES

During the year under review the TSO operated and executed the duties within its competency as provided by the Laws of 2003 to 2006 *On Regulating the Electricity Market*.

Specifically, among other, the TSO

- Operated the transmission System maintaining its reliability, safety and optimum financial management.
- Drafted new chapters to be included in the Transmission and Distribution Rules, which were published in the revised edition (2.0.0.) with the participation of the Consultative Committee on Transmission and Distribution Rules.
- On CERA's recommendation, undertook a study, along with the Consultative Committee on Market Rules, for the revision of the Market Rules.
- Prepared and signed the Transmission System Protocol between the TSO and the EAC, as the Owner of the Transmission System.
- Prepared tenders and the terms for the connection of Independent Producers to the Transmission System.
- Prepared and submitted to CERA a changing study for the usage of the Transmission System.
- Prepared a 10year projection for the maximum demand of electricity consumption.
- Prepared plans for dealing with emergencies along with other technical instructions for the reliable operation of the System.
- Prepared studies and contributed to the promotion of RES and Co-generation.
- Promoted TSO's image and informed the competent Bodies and the Media effectively whenever faults developed in the Generation-Transmission and Distribution System.

Organisation of the TSO

Basic provisions of the Law that relate to the TSO

The basic provisions of the Law that relate to the establishment of the TSO are the following:

- The EAC unit managing the Transmission System, by virtue of the Licence issued by CERA became the **Transmission System Operator (TSO)**.
- The TSO is the **sole** competent body for the operation of the Transmission System and has the responsibility for its reliability, its safety and its optimum financial management. In order that it may operate objectively, the TSO drafts Transmission and Distribution Rules, which regulate the Technical Specifications and the basic methods of operation of the Transmission System.

- Within the framework of operating and managing the buying and selling of electricity, the TSO drafts and applies Market Rules on the basis of which all transactions of electrical energy are effected.
- The TSO prepares studies which determine the charges to be levied on users for the connection and use of the Transmission System. Users of the Transmission System need to enter into Protocols or Contracts with the TSO.
- The TSO is responsible for the preparation of electricity demand forecasts, total consumption and forecasts on the future behaviour of the Transmission System.
- The TSO is responsible for securing the development and maintenance of the Transmission System on the basis of its 10-year forecasts for the behaviour of the System. To this end, the TSO studies and prepares the TSO's 10-year Development Programme for the Transmission System.

The TSO's Office Staff

The year 2006 saw a continuation of the problems faced in the effort to secure transitional staffing of the TSO. The problems arose firstly, from the decision of the Ministry of Commerce, Industry & Tourism for the TSO to be manned by EAC personnel coming from existing posts and secondly, from EAC's inability for immediate implementation of the decisions and directives of the Ministry.

The unanimous decision taken on the transitional manning of the TSO was for a total of twenty- eight (28) persons. Sixteen (16) persons were transferred from EAC's Operations Section to TSO, while a further six (6) persons were placed temporarily, pending the creation of permanent posts within the TSO organisational structure.

The matter of staffing the Office was also complicated due to the Regulations on Personnel, which should provide the TSO with the necessary administrative independence. After many discussions, there was an agreement on 07/04/2006 between the TSO-EAC-CERA-The Ministry-Trade Unions of EAC, for the content of the *Protocol On Personnel Matters*, which determines the placement procedure and management of the TSO staff.

In order to implement the agreement arrived at the above meeting, the Minister decided that the necessary steps are:

- The creation of the new post of Operations and Personnel Manager of the TSO.
- The creation of two (2) posts of Senior Technician with the abolition of 2 posts of EAC Electrical Technicians.
- The transfer and re-naming of the remaining 9 posts from the existing ones at EAC.

EAC undertook to implement the above agreement by means of submitting a supplementary budget for 2006. The situation was further complicated by the negative position taken on this matter by the Ministry of Finance. Due to these delays, the above staffing needs of the TSO will be included in the 2007 budget.

Training

The TSO is a new organisation and its success depends on the calibre of its staff. Motivation through rewards and through continuous training was considered to be the method by which the best utilisation of staff capabilities could be achieved.

Concern for training resulted in an increase in staff participation in various events during 2006. In addition to the numerous in-house briefings, a number of training programs were organised and the participation of TSO staff members in international conferences was encouraged. Some important ones are listed below:

- The “European Wind Energy Conference”, Athens, 26 FEB - 02 MAR 2006, organised by the European Wind Energy Association. The conference dealt with the development and operation of Wind Farms. There were 2,800 participants from all European countries, including a TSO officer from Cyprus who, upon his return, made a presentation to all TSO staff on the subjects of particular interest to Cyprus.
- “Automatic Energy Metering System”, Nicosia, 21-25 AUG 2006, a TSO in-house training program given by the German supplier. The software for the operation of the system was explained in detail as well as the system programming and transfer of historical data to the system. Affected TSO staff members attended the training program.
- A 3-day conference on recent SCADA developments and their telecommunications infrastructure, organised by the company supplying the system, was held in Germany on 26-28 SEP 2006. A TSO officer attended the conference.
- “Increased Reliability of the Transmission and Distribution System”, Prague, 28-29 SEP 2006, organised by Marcus Evans. The 2-day conference was attended by the TSO Director and another Officer. The TSO Director was an invited speaker and his presentation was entitled “Management of Transmission Systems to ensure a safe and reliable Transmission System”. The conference was attended by representatives from various European TSOs as well as from companies involved in the generation, transmission and distribution of electrical energy.
- “European Transmission Grid: Interoperability in potential risk scenarios”, 23-24 October 2006. The seminar dealt with measures that should be taken in the European Union for the protection of important electrical

systems and equipment in order to avoid the danger of interruption of electrical energy to consumers due to terrorist action, faults and acts of God. The seminar was attended by a TSO Representative.

- “New Challenges of Island Electricity Companies-Renewables and New Fuels”, 24 October, 2006, in Cyprus. The seminar was organised by EURELECTRIC and dealt with subjects concerning the development of RES systems in small isolated systems. The seminar was attended by 6 members of TSO’s professional staff. The TSO Director made a presentation on “Requirements for Quality and Security of Supply - Ensuring Reliability”.
- “Red Electrica’s Experience in Design and Construction of 132kW and 220kW Substations”, 6-8 November 2006, Nicosia. The training programme was given by Spanish trainers from the Company, Red Electrica (the TSO in Spain), and the following topics were covered in detail:
 - Fundamentals and specifications of Electrical Energy Systems.
 - Selection of the Location of Transmission Substations.
 - Types of Transmission Substations.
 - Systems and equipment of Transmission Substations.
 - Design concerns and detail configuration of Transmission Substations.
 - Construction and commissioning of Transmission Substations.
 - New solutions.

All of the above were analysed in depth and there was an interesting exchange of ideas on all the topics with the participants. Special reference was made to the way the Electricity Market operates in Spain as well as the matter of costing transmission substations on the basis of the unit price of the equipment.

The training programme was attended by TSO staff as well as other invited guests.

TSO’s Technical and Financial Instructions

After the establishment of the TSO and the definition of responsibilities assigned by Law, it was considered necessary to gradually prepare Technical and Financial Instructions so as to enable the TSO, through proper procedures to perform the duties provided by the Law. One of the priorities of the TSO during 2006 was the preparation of new Instructions and the revision of existing Instructions, which now fall within its responsibilities. This will assist in defining the powers as well as the procedures to be followed so as to establish uniform practice that will assist the TSO to achieve its goals.

The Transmission System Protocol

According to Article 66 of the Law *On Regulating the Electricity Market*, the Transmission System Protocol defines TSO's duties and enables him to exercise his powers fully and effectively at the same time ensuring that the Owner of the Transmission System exercises his powers and discharges his duties.

After protracted discussions, the Protocol was signed on the 17th of July 2006 between the TSO and EAC, in its capacity as Owner of the Transmission System, and it came into effect after its approval by the Cyprus Energy Regulatory Authority CERA. Amongst other things, it deals with matters on staffing, appointing TSO staff, the operation, the maintenance and development of the Transmission System, the exchange of information, as well as means for monitoring and revising the provisions of the Protocol.

The part of the Protocol that deals with technical matters has already been put into effect, while the part that deals with of TSO staff placement is expected to be fully implemented during 2007, after TSO's 2007 budget is approved.

Institutional Identity and Legal Status

All necessary measures were taken to generate the required institutional identity of the TSO both in Cyprus and abroad. TSO's upgraded Website and the provision of all important information in the English language have been of great help in establishing TSO's institutional identity. TSO's joining the European Transmission System Operators, ETSO, in September 2005, reinforced the recognition of TSO's legal status. At the 2006 General Assembly and meetings of ETSO's Organising Committees, Cyprus was represented by the TSO Director or other TSO Officers.

Participation in the European Transmission System Operators (ETSO)

TSO staff attended the monthly meetings of the Steering Committee and the Annual General Assembly of ETSO in London. ETSO deals with matters relating to the operation of an electrical energy market with common standards according to the EU Directives. The basic issues that concern Member States are:

- The smooth operation of the electricity market in European countries.
- The cross-border trade in electrical energy
- Congestion Management of transmission lines
- Transparency and exchange of Market information
- The reliable operation of the Generation and Transmission System.
- The operation of Wind Farms and its effect on the Transmission System
- The implementation of a transparent policy on charges for the use of the Transmission System.

- The implementation of a common European Code for the Transmission System.
- The security of the installations.

The TSO took part in the special Committees on Tariffs and equipment costing and also participated in the formulation of ETSO Policy.

The TSO's Website

According to the provisions of the Transmission and Distribution Rules as well as the Market Rules, the TSO must publish on its website information on the Electrical Energy Market and on the state of the Generation-Transmission Systems. This information includes:

- Explanation of the Transmission and Distribution Rules
- Accurate information on the state of the Transmission System. This is achieved by means of publishing information on any works planned on the Generation-Transmission System that requires disconnection of the equipment involved.
- Accurate information on the condition of the Generation System and therefore on the current as well as the future generating capacity.
- Daily record of the actual as well as the projected total Electrical Energy generated.
- Provision of information in real time, and updated at half hour intervals, on the offers for the sale and purchase of Electrical Energy required to balance the Electricity Market.

Part of the stated policy of the TSO is the provision of clear and instant information to all interested parties and so, priority was given to the creation of a flexible website to satisfy future needs. Therefore, specifications were drawn and tenders were invited in 2006 for the website design and the installation of management software for managing its content. The website commenced operation in early August 2006 and its content was uploaded by the TSO in both the Greek and English languages soon after.

The new Website includes:

- Real time display of the total generated and available capacity of EAC's generation System. In the future, and when available, the total generation from Independent Producers will also be added.
- Reserved space for special announcements
- Control Access System to specific websites for authorised visitors.
- By the end of 2006 the Website content was enhanced by means of the provision of information on the development of the new Generating Stations and Wind Farms as well as further information and statistical data on the Generation and Transmission System of Cyprus.

During 2006 two applications were developed and incorporated into the TSO's website relating to the operation of the Transmission System.

The first is aimed at computer management of all applications sent to the TSO for approval to work on the Transmission System. This enables applications received for work to be carried out, either scheduled or emergency, for the maintenance of Generation and Transmission System equipment, to be entered electronically through TSO's website. After examination by TSO Officers, the applications are either approved or returned to the applicants for revision. Upon approval, the relevant notices are posted on TSO's website and entered into a special diary.

The second application enables the preparation of notifications of emergency interruptions to the Electricity Supply, issued by the National Energy Control Centre, the immediate posting of these notifications on the TSO's website and their automatic transmission by fax to all the media.

Installation and Operation of the Computerised Accounting System

The TSO invited tenders for the purchase and installation of an accounting system. After adjudication of the received tenders, the TSO accepted the proposal of the development and owners of the [Yi@tis-ERP](#) System. The System was installed and put into operation in 2006. Special attention was given to monitoring TSO's budget, the automation of the accounts and the provision of instant financial information to Management. The system meets the specifications for future connection with the system for operating the Electrical Energy Market.

Legal and Accounting Consultants

The Law Firm of Kousios and Korfiotis continued to supply legal services to the TSO, as part of its two-year contract signed in 2004.

In July 2005 the TSO invited tenders for the appointment of accounting Consultants. After adjudication of the tenders received the TSO accepted the tender of Auditors Kyprianides, Nikolaou and Associates, for the provision of accounting and consulting services initially for a period of one year, with the option to renew the agreement for a further year. The agreement was renewed in September 2006.

TSO Budget

According to the provisions of the Law, the TSO prepared in 2005 a detailed budget for its anticipated capital and operating expenses for the year 2006. The TSO's budget along with EAC's own budget were submitted to the Ministry of Commerce, Industry & Tourism and to the House of Representatives. TSO's budget for 2006 included the expenditure for only sixteen (16) members of staff i.e. those employed at the former EAC the Operations Department, who were transferred to the TSO. The TSO's 2006

budget was approved by the House of Representatives on the 16th of February 2006.

During 2006 an agreement was reached among all parties involved (Ministry of Commerce, Industry & Tourism, CERA, EAC and the TSO) for the TSO staffing. The agreement provides for the creation of a new post, titled “Operations and Personnel Manager” at TSO the creation of two (2) posts of Senior Electrical Technician with the abolition of two (2) posts of Electrical Technician. EAC prepared a Supplementary Budget for 2006 which was sent to the Ministry of Commerce, Industry & Tourism on the 31st May 2006 for forwarding to and approval by the House of Representatives.

The TSO’s Budget for 2007 was sent to EAC on the 7th September 2006 to be sent, along with EAC budget, to the Ministry of Commerce, Industry & Tourism for forwarding to the House of Representatives.

Financial Statements for 2006

This Annual Report includes the Financial Statements for the year ending 31st December, 2006.

Because no Independent Producers operate as yet in Cyprus, the relevant accounts relating to transactions for Electrical Energy appear inactive. However, the processing method of accounts relating to the connection of Independent producers to the Transmission System has already been designed.

OPERATION OF THE ELECTRICAL ENERGY MARKET

Transmission and Distribution Rules

In a meeting held in May 2006, between the TSO and the Consultative Committee on Transmission and Distribution Rules, it was decided that the TSO should proceed with revising the Transmission and Distribution Rules. The new revised edition 2.0.0, after approval from CERA on the 9th of June, 2006, was published in TSO’s page. Copies are available at TSO Offices at a fee.

Electrical Energy Market Rules

After instructions from CERA, the TSO invited tenders in February 2006 from international Consultants to conduct a study to “revise the Cyprus Electrical Energy Market Rules and submit a proposal for their phased implementation”. The invitation for tenders followed the suggestions of CERA and the Consultative Committee on Market Rules.

In May 2006, following the acceptance of a tender, the successful tenderer-Consultant visited the TSO Offices where he held meetings with all interested parties and received a full briefing. He then proceeded with the task, submitting provisional proposals for the Market Rules. At this stage his proposals are being studied in detail and in depth due to the importance of the subject.

The Consultants' work is expected to be completed in 2007.

Charges for the use of the Transmission Network

In August 2006, the TSO submitted to CERA its proposed method for recovering the annual expenses on the Transmission System and for its operating expenses for the system and submitted a comparative study on the charges in various European countries for the use of the Transmission System. The aim of the study was to provide a comparison between the charges submitted by the TSO with those of other countries and the policy employed in the structure of tariffs for the use of the Transmission Network. The study was submitted in order to assist the process of arriving at final decisions on the charges for the use of the Transmission System.

Renewable Sources of Energy

The TSO participated in the Technical Committee set up by the Ministry of Commerce, Industry & Tourism for the purpose of harmonising Cyprus Law with Directive 2001/77/EC of the European Parliament and Council on the promotion of generation of electrical energy from Renewable Sources of Energy.

On the 14th of November 2006 the Technical Committee submitted to the House of Representatives for approval a draft Law entitled "*Revision of the Law the promoting the electricity produced from renewable Energy Sources and Saving Energy, Laws of 2003 and 2005*". According to the said Law the TSO should give priority in terms of access and balancing to generating units from RES and issue Guarantee of Origin Certificates to units connected to the Transmission System.

CONNECTION TO THE TRANSMISSION SYSTEM

Applications for Connection to the Transmission System Received from either Conventional Generating Units or from Renewable Sources of Energy (RES)

In view of the targets and commitments given by the Republic of Cyprus to the European Union for the generation of Electrical Energy from RES, the TSO

paid particular attention to the processing of applications for the connection of Wind Farms.

Due to the characteristics of the Cyprus electrical network and taking into account the targets set by the Republic for the generation of electricity from RES the TSO, in collaboration with the Metsovio National Polytechnic of Athens, undertook a study on the subject. The purpose of this study is firstly, the estimation of the maximum contribution of power originating from wind generators that can be allowed whilst maintaining the safety and reliable operation of Cyprus isolated electrical energy system, and secondly, the investigation of the effects that this large scale penetration of electricity from Wind Farms will have on the stability of the system.

The study concluded that the permissible level of contribution from wind-generated power is 300 MW. A considerable spinning stand-by capacity will need to be employed to cover the eventuality of a sudden decrease in the amount of power generated by the Wind Farms. Also the consequences to the system from a sudden loss of wind-generated capacity were examined and, the problems that any disturbance of the Generation and Transmission Systems may cause to the operation of the wind generators

Part of TSO's responsibilities is also to advise applicants of the possible ways of connection to the Network and the technically acceptable solutions that can be implemented, the criteria always being the reliability of the system and the minimisation of the cost of the connection. In cases where it is necessary to construct a new Substation, the various alternative locations are examined taking into consideration the geographic development of the electrical network.

A number of applications for connection to the Transmission Network of conventional generating stations or from RES are being processed. During 2006 applications submitted from applicants who had secured Licence from CERA to construct Wind Farms were examined. A contract for the connection of a wind Farm was signed in 2006. The appropriate cost of connection was paid by the producer to the TSO and the amount was deposited in a special account. Applications received for the Wind Farms "Alexigros" and "Kambi" were examined and the terms of the connection tender are expected to be issued in 2007.

The table below shows the progress of all applications submitted to the TSO for connection to the network.

	COMPANY	GENERATING STATION NAME/AREA	TYPE OF FUEL	NOMINAL POWER (MW)	STATUS/ APPLICATION PROGRESS
1.	Ketonis Developments Ltd	Mari Wind Farm / Mari	-----	12	Connection Contract Signed
2.	Ketonis Developments Ltd.	Alexigros Wind Farm / Klavdia,	-----	31.5	Issue of term and Connection Tender in

		Alethrico, Tersephanou			Progress.
3.	Vouros Power Industries Ltd	Vouros 49.9.MW Power Plant in Larnaca / Aradippou	Mazout	49.9	Issue of Terms and Connection Tenders in Progress.
4.	Aerotricity Ltd	Kambi Wind Farm/ Kambi Farmakas	-----	9.6	Issue of Terms and Connection Tender in Progress.

In accordance with Article 85 of the *Law On Regulating the Electricity Market* the TSO prepared a draft proposal for the charges for the connection to the transmission System. The proposal covers cases of Users with installed capacity from 6MW to 150MW who apply for connection to the high or medium voltage Network. Also included in the proposal are the basic principles and the methodology for determining the charges to be used in the costing of new connections and issue to new producers the terms of connection. Also included are the annually revisable unit prices of high and medium voltage equipment.

According to the provision of the Law, the proposal was discussed with EAC, as the Owner of the Transmission System and sent to CERA for approval. The methodology and the 2006 unit prices for the equipment and installations were approved by CERA.

Energy Cogeneration

For the purposes of harmonisation with Directive 2004/8/EC of the European Union for the promotion of cogeneration of Energy, depending on the demand for useful heat energy in the domestic energy market, a Technical Committee was set up with terms of reference the transposition of the European Directive into national Law and the implementation of its provisions. The TSO participated in this Technical Committee.

TSO's participation was considered necessary since the Directive deals with matters such as the Guarantee of Origin of Energy from cogeneration, and the connection and operation of electrical energy producers.

The technical Committee prepared a draft Law entitled "*On the Promotion of Cogeneration of Electricity and Heat Law of 2006*" which was submitted to the House of Representatives for approval. According to the above draft Law the TSO shall be the Issuing Authority of the Certificates of the Origin of Energy from Cogeneration. This gives the TSO a leading role in the cogeneration sector.

THE SYSTEM OPERATION

Commissioning of new Generation Units

The Third Steam Turbine Generating Unit of 139MW capacity at EAC Vasilikos Power Station has been in operation since January 2006, but, with limited availability due to the non-commissioning of the Boiler of the Unit for commercial use. Certificates of temporary commissioning have been issued to the Contractors for the remaining parts of the Unit. Issuing a temporary commissioning for the Boiler will be postponed for 2007 and the exact date cannot be determined since this depends on the Contractors' response to resolving outstanding matters.

Due to the increased probability of the Unit being decommissioned, the TSO on a number of occasions performed load flow studies and voltage studies and carried out other investigations to verify the reliability and safety of the system and it has drawn a contingency plan for dealing with possible shortages in generation.

In addition to EAC, "Vasilikos Cement Works Ltd" obtained a Licence from CERA on the 30th of June 2006 for the Construction and Operation of two (2) additional Internal Combustion Generating Units of 5MW total capacity (2x2.5MW each). These Units are now at the testing stage and it is expected that they will come into commercial operation during the 1st quarter of 2007. The total capacity of auto production by the Vasilikos Cement Works will then be 11MW.

Scheduled Interruptions

The TSO dealt on a daily basis with applications from the EAC Area Offices and Power stations for scheduled work and operations on the Transmission System for maintenance purposes on high voltage equipment and for work to upgrade the equipment as well as the connection of new substations. The approval process requires the performance of load flow studies, alternative options for maintaining the security of the system and the coordination of the work of the EAC Power Stations and Area Offices.

According to the new procedure, the responsible Officer having entered his password in the TSO's Website, completes and submits for approval the application form for the work to be carried out on the Transmission System. When the application is approved the applicant is notified in order to proceed with carrying out the work. All works are published through the Website and coordinated keeping integrated records.

Maintenance of Generating Units

The schedule for the annual maintenance work on EAC's Generating Units prepared by EAC Corporate Generation Unit and submitted to the TSO for consideration and approval. In addition, the TSO examined applications for

emergency maintenance work on the generating units. It was necessary for the TSO to approve the maintenance work and commit generating units to the system in order to secure the required generating availability while maintaining the required short-term stand-by capacity.

The provisions of the Transmission and Distribution Rules relating to scheduling maintenance work on generating units have been put into force.

Short Term Forecast of the Total Generated Power

The short term forecast of the total generated power for the following day is carried out on a daily basis for the purpose of optimising the commitment of generating units. The forecast takes into account all the parameters affecting load demand such as the anticipated temperatures, humidity, sunshine, holidays, seasonality etc. In order to improve the forecast of the anticipated temperatures and cloud coverage, both of which are determining factors affecting load demand, the TSO on a trial basis cooperated with the Cyprus Metereological Service and an overseas company in order to obtain hourly updated weather forecast data, and the results of the trial are currently being evaluated.

SYSTEM OPERATION STUDIES

Technoeconomic Study on System Operation Aspects

During 2006 specifications were prepared and tenders were invited worldwide for the supply of consulting services and the preparation of a Technoeconomic study for improving System behaviour during and immediately after a serious disruption. A well known Firm of Consultants was selected on the 16th of October 2006.

This very important study is expected to be completed in June 2007.

Short Term Sufficiency of the Generation System

The continued increase in demand for electrical energy has also increased appreciably the danger of a shortfall in generation especially in the event of a fault developing in one of the large Units at Vasilikos Power Station. In order to prevent, or in the worse case to minimise the consequences of this shortfall, the TSO continuously load sufficiency studies during the critical months.

When considered necessary, plans are drawn for dealing with a probable shortfall in generation. In order to best predict possible problems the TSO performs load flow studies, and load duration studies, taking into account the available generation, as this is affected by the short term maintenance

program of generating units, as well as those units out of commission due to faults.

SYSTEM DEVELOPMENT

Short Term and Long Term Forecast of the Load and of the Energy

In the past two years the long term forecast for the load over the next 10 year period had been prepared in cooperation with the Metsovio National Polytechnic of Athens. In order that the TSO should be able to prepare independently on an annual basis these long term forecasts the Metsovio National Polytechnic of Athens undertook to transfer the software of “Systems Europe” for load and energy forecasts to a PC Platform for the purpose of investigating their suitability to meet TSO’s needs. The software had been used over a long period in the past on a weekly basis by EAC’s Operations Department and is considered to be reliable.

The transfer of the software to a PC was successful and the Metsovio National Polytechnic of Athens, along with the TSO, prepared the long-term load forecast for the period of 2007-2016, which included a number of alternative parameters. EAC’s long-term forecasts for load were taken into account in choosing the most relevant parameters.

Figure 1 shows the actual annual maximum demand for the years 1998-2006 and the forecast annual maximum demand for the year 2007-2016.

In addition, the TSO prepared a long term forecast of generated energy over the period 2007-2016 which was based on historical monthly load factors and the forecasted monthly peak values shown by the above study.

Figure 2 shows the actual total generated energy for the years 1998-2006 and the forecast for the years 2007-2016.

The forecast for maximum demand as well as the forecast for the total generated energy were submitted to CERA for approval.

PROJECTS AND ACTIVITIES OF THE TSO

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

The SCADA system is a modern tool in the hands of control centre staff in developed countries. It is based on real time telemetry, telecommunications and telecontrol. Data is processed for achieving the most reliable, safe and economic operation of the electrical energy generation and transmission of Cyprus.

The upgraded SCADA /EMS which was commissioned in March 2004 operated with a high degree of reliability and functionality during 2006. The improved features and the increased capabilities offered by the SCADA system were utilised to a great extent during 2006 in, for example supporting the new international telecommunication standards and in compiling special reports on the status of the Generation and the Transmission Systems. Specifically, during 2006 six new remote terminal units were connected to the system via the new international protocol.

Year 2006 saw the completion of the transfer of the telecommunications node of the SCADA System to a specially arranged space in the basement of the new Head Offices of EAC at Dasoupoli. After the relocation, a problem appeared in the telecommunications link with the telemetry units but it was promptly dealt with, with the assistance of the supplier of the equipment by means of visits from their engineers on site. The investigation revealed that the problem was not caused by the transfer of the node but that it was due to a defective code in the software of the supplier, which showed up due to the new environment conditions. The transfer of the telecommunications node from the National Energy Control Centre now permits the transfer of the centre to other locations if and when necessary.

During 2006 the two-year warranty of the upgraded system expired and, as provided by the initial contract, the TSO signed a 12-month maintenance contract with the supplier. The contract, with starting date the 8th of November 2006, includes the following services:

- The investigation and repair of problems and faults found and reported by TSO, in the software or hardware of the SCADA System.
- Provision of support outside normal working hours, during weekends and public holidays in emergencies.
- Ability to connect to the SCADA System via the Internet for the remote investigation and resolution of problems that may arise.
- The supplier to maintain stand-by stock of spare parts.
- An annual inspection visit by personnel of the supplier in order to check the system for the purpose of submitting proposals for the improvement of its performance.

SCADA Extensions

The use of the SCADA System was extended during 2006 for the monitoring, control and data collection for the “new generation” Transmission Substations at “Larnaca Commercial Centre”, “Aphrodite” and the “Nicosia District Office”. In addition, the SCADA system was extended by means of new generation equipment at the existing transmission Substations of “Tembria”, “Kophinou” and “Karvounas” in order to upgrade these Substations. In collaboration with EAC the telemetry units for a further 35 transmission Substations were extended with the addition of terminal equipment for the transmission of

additional readings, alarm signals and readings to the National Energy Control Centre.

Digital Display at the National Energy Control Centre

During 2006 the projection System of the digital screen at the National Energy Control Centre was upgraded in collaboration with the manufacturers. The latest technology equipment installed employing twin lamps enables automatic change of lamp in use in case one is lost. In addition, the software control of the digital display was upgraded. The new software offers improved operations for adjustment with high precision and controls the various projection parameters so that maximum image clarity is achieved. This system ensures the continuous operation of the digital display, which is the source of immediate and clear information to National Energy Control Centre staff for day-to-day operations but most importantly it is the source of immediate information for better perception of the situation and the prevailing condition of the Transmission System in cases of serious disruption.

Emergency Energy Control Centre

The continuous and unimpeded operation of the National Energy Control Centre is of great importance in maintaining uninterrupted supply of electrical energy in Cyprus. However, loss of its operation cannot be precluded. This may be the result of a fire in the building where it is located, of an earthquake or of enemy action. It was decided therefore, to create an Emergency Energy Control Centre from which it would be possible to monitor and control the Transmission Network. Work for its establishment began in 2004 and was completed in 2006, in a specially arranged space in Nicosia. All the technical equipment is fully operational.

In drawing the plans for the transfer of the National Energy Control Centre to the Emergency Energy Centre, the staffing and the operation of the Emergency Energy Centre, advice and information was sought from the Fire Service and the Civil Defence and their views were included in the Technical Instructions which specify the procedures for the use of the Emergency Centre in cases of emergency.

The Security System of the National Energy Control Centre

The National Energy Control Centre and the Emergency Energy Centre are both installations of vital importance for the uninterrupted electrical supply to all consumers. It was decided therefore to install an access control system, which would permit the entry only to authorised persons.

The work commenced in October 2006 and was completed in early December 2006.

Staff Attendance Recording System

The TSO decided to install a system for recording staff attendance for introducing flexible working hours for its staff after an agreement reached between EAC and the Trade Unions.

The TSO installed simple software in order to speed up the introduction of the flexitime scheme. The system for recording staff attendance was put in operation in October 2006.

TRANSMISSION SYSTEM PROJECTS

Telemetry of the Power Factor of Medium Voltage Feeders in Transmission Substations

During 2006 work continued and was completed for the transfer of remote power factor measurements of every Medium Voltage feeder to the SCADA System. The work was completed by the TSO in collaboration with EAC for 35 out of 37 Transmission Substations that had the facility for the installation and transmission of the above remote measurements to TSO's SCADA System. The remaining two Substations are due to be upgraded soon. The purpose of the project is to facilitate the accurate calculation of the flow of active and reactive power in every Medium Voltage feeder. The data will be used by software that optimises the disconnection of feeders to deal with serious disruptions in Power Stations. The data will also be used by software simulating the dynamic performance of the system since, to enable the correct simulation of the plan for disconnecting the feeders.

Automatic recording of Energy in the Generation/Transmission Systems

For control purposes and for the reduction of thermal losses in the Transmission and to meet the needs of the liberalised Electrical Energy Market, a Remote Meter Recording system for the load of the transmission System was installed. This system offers financial benefits resulting from the reduction in the time required for making a record of the measurements whilst also reducing the number of recording errors. The measurements are used for the preparation of the monthly statistical records for the generation and transmission also, in the calculation of thermal losses during the transfer of electrical energy.

In 2005, specifications were drawn and tenders were invited for the supply of suitable software to support a large number of meters of various manufacturers in order to meet future needs of the Electrical Energy Market. This project will enable accurate recording and distribution of the energy at all points, the recording of monthly readings from each Power Station and Transmission Substation and, the preparation of statistical reports on Generation and the distributed demand on a half-hourly basis.

In the future, it will be used by the TSO in fulfilling his obligation under the Market Rules to prepare monthly accounts for the Independent Producers. The contract for the project was signed in 2006. The contractors supplied the software for the remote reading of the meters and for displaying the results. The contractor organised a training program on operating the system to TSO personnel at TSO's Offices. The TSO, with EAC's contribution, completed the installation of meters at all metering points in Power Stations and Transmission Substations.

A trial operation of the system showed satisfactory results. The project is expected to be completed during the first months of 2007.

EXTENSION OF THE TRANSMISSION AND GENERATION SYSTEM

1. Power Station Units

On the 8th of November 2006 the 3rd Generating Unit of 130 MW capacity, at EAC Vasilico Power station was incorporated into the Generation System with an availability of 110 MW, however, it has not as yet been put into commercial use.

2. Transmission Substations

During 2006 the following 132/22/11 kV Transmission Substations were connected to the system: "Larnaca Commercial Centre" (2X 31.5MW) in Larnaca, "Aphroditi" (2X10/16 MVA) in Paphos and "EAC's Nicosia District Office" (3X31.5/40 MW) in Nicosia.

3. Power Transformers

During 2006, one 66/11 kV Power Transformer was added to the system at the transmission Substation "Kophinou" (10.5/15 MVA) as well as two new 132/11 kV Power Transformers at the transmission Substation at "Polemídia 132 kV" (31.5/ 40 MVA). At the same time, the two 66/11 kV Power Transformers, No2 (7.5/15 MVA) and No3 (10.5/15 MVA) at "Polemídia 66 kV" were dismantled.

4. Overhead Lines / Underground Cables

During 2006, work was completed on connecting the 66/11 kV Transmission Substations "Anatolico 66 kV" and "Xeropotamos 66 kV" by commissioning the 66 kV Overhead line "Anatolico-Xeropotamos" of 8.8 km length. An additional significant overhead circuit was also completed during 2006 is the 66 kV overhead double circuit line of single stringing "Tembria- Karvounas" of 16 Km length interconnecting the 66 kV system of Nicosia district to the 66 kV system of the Limassol district, so offering an alternative supply to several 66 kV Transmission Substations in the Troodos area. During 2006, the 66 kV

overhead line “Polemida-Episkopi” was dismantled from the transmission system after the 132 kV alternative arrangements were created.

5. Relocation of the 132 kV Overhead Transmission Line at Vasiliko

Following a written request from the Ministry of Commerce, Industry & Tourism to the TSO for the relocation of a section of the 132 kV Overhead line “Vasilikos-Mari” to a new position, the relevant study was carried out, the cost was estimated and a tender was prepared and submitted to the Ministry.

The purpose of this relocation is to bypass the area intended for the construction of Vasiliko Energy Centre, so as to enable the unhindered erection and operation of its buildings and electromechanical installations.

The work involves the construction of a new section of overhead transmission line and the dismantling of the original section of the existing line.

TRANSMISSION SYSTEM OPERATION DATA

Total Electrical Energy in Cyprus

The total production of Electrical Energy in the territory of the Republic of Cyprus, with the exception of the areas occupied by the Turkish army north of the cease-fire line where the Government does not have effective control, consists of:

- 1) The total electrical energy produced by EAC’s three Power stations.
- 2) The electrical energy produced by Autoproducers.
- 3) The electrical energy produced by Independent Producers using
 - A) Renewable Sources of Energy
 - B) Conventional generating Units.

During 2006, only Power stations of the above categories 1) and 2) operated. The total generated energy in 2006 amounted to 4,650,254,000 kWh. The total energy that was injected in through the Transmission System, after allowing for losses in Power Stations and the Transmission System itself, amounted to 4,362,707,00 kWh.

Figure 2 shows graphically the electricity production and also demand and, the Transmission losses during 2006.

Total Electrical Energy from EAC’S Power Stations

The Total production from EAC’s three Power Stations amounted to 4,618,079,000 kWh in 2006, against 4,34,7943,000 kWh in 2005, showing an increase of 6.2% compared to the previous year. This energy total includes 40,598,000 kWh supplied to areas occupied by the Turkish army north of the

cease-fire line and, if excluded from the total, it yields a rate of increase of 5.3% in 2006, compared with the 4.1% in 2005.

Autoproducer Generation

“Vasilikos Cementworks Ltd” with an approved load of 20.5 MVA was the first Autoproducing consumer to be licensed by CERA. Since the middle of 2003, this consumer maintains four Internal Combustion Generating Units of 6 MW total capacity (1.5 MW each). On 30/06/2006, this consumer obtained a license from CERA for the construction and operation of two additional Internal Combustion Generating Units of 5 MW total capacity (2.5 MW each). The total energy consumption in 2006 amounted to 142,737,000 kWh of which 32,175,000 kWh (i.e. 22.5% of the total) came from Autoproducer Generation. The total energy produced by Autoproducers in 2006 was 32,175,000 kWh compared to the 28,099,000 kWh of 2005, showing an increase in the order of 14.5%.

Generation and Transmission System Losses

The internal requirements for electrical energy consumption within EAC’s Power Stations in 2006 was 5.5% of the total generation produced, compared to 5.6% of the previous year.

Thermal losses during the transmission of the produced electrical power through the Transmission Network, in 2006 represented 1.7% of the output of the Power Stations compared to 1.6% in 2005.

System maximum demand

The maximum demand of the system was recorded on Tuesday 22/08/2006 at 14:15 hrs when it reached 907 MW, against 856 MW of 2005, showing an increase of 5.6% compared to the previous year. The figure of 907 MW includes the contribution from autoproducer generation, which reached 3 MW at that specific date and time.

Figure 1 shows the variation in total generation during the days of maximum demand in the year as well as the day when the minimum daily demand was recorded.

Load Factor

The Load Factor (i.e. the ratio, average load over peak load), including the contribution from autoproducer generation, was 58.5% in 2006 compared to 58.4% in 2005.

Taking into account EAC's production alone, the 2006 load factor was 58.3% against 58.0% of 2005. It should be noted that the load factor figure for 2006 also includes energy supply to areas occupied by the Turkish army north of the cease-fire line where the Government cannot exercise effective control.

SYSTEM RELIABILITY

Generation System Faults

Faults in generating units affect the Transmission System directly and, depending on their severity, they endanger the safety of the whole Generation-Transmission-Distribution System for electrical energy. It is therefore vital for faults to be recorded, analysed and monitored.

During 2006, a total of thirteen faults occurred in the Generation System. Eleven of these occurred at Vasilikos Power Station where, ten occurred on Unit No.3 and one on Unit No.1.

Of the remaining two faults, one occurred on Unit No.5 at Dhekelia Power Station and the other on Unit No.5 at Moni Power Station. It should be noted that at the time the faults occurred on Unit No.3 at Vasilikos Power Station, the Unit was undergoing trials and it had not yet been handed over by the Contractor to EAC.

In six cases, the loss of operation of one Unit was followed by the scheduled disconnection of groups of consumers, either manually by the National Energy Control Centre or, automatically after the activation of the under-frequency relays. The most severe fault occurred on 14/03/2006 at 20:00 hrs at Vasilikos Power Station when Unit No.3 with a 90 MW load tripped at a time when the total load demand was 635 MW and the Spinning Reserve was 28 MW. As a result, the frequency dropped down to 49.00 Hz and there was rejection of 117 MW load (i.e. 18.4% of the total). The system was stabilised and the worst was avoided by the correct operation of the under frequency load-shedding scheme in order to balance load demand with the remaining generation capacity.

Transmission Faults

During 2006, a total of **thirty-seven faults** occurred in the Transmission System resulting in the loss of connection to the High Voltage network. The faults fall into the following categories, depending on their causes:

• Faults due to adverse weather conditions	6
• Faults due to high humidity	18
• Faults due to equipment failure or multifunction	12
• Faults due to problems in the network, north of the cease-fire line	1

In twenty-eight cases the fault resulted in the disconnection of consumers (load loss) and this was due to faults occurring at a star point feeder or due to the disruption caused to the System.

The most severe fault occurred on 18/10/2006 at 08:40 hrs when a total shutdown of the Episkopi, Pissouri and Xeropotamos Substations occurred due to adverse weather conditions. Supply was fully restored at 6:50 hrs on the following day, i.e. after 10 hrs and 10 minutes, of loss of 20MW load.

It is worth noting that half the number of faults that occurred was due to the high humidity during the summer months, unusual for that time of the year.

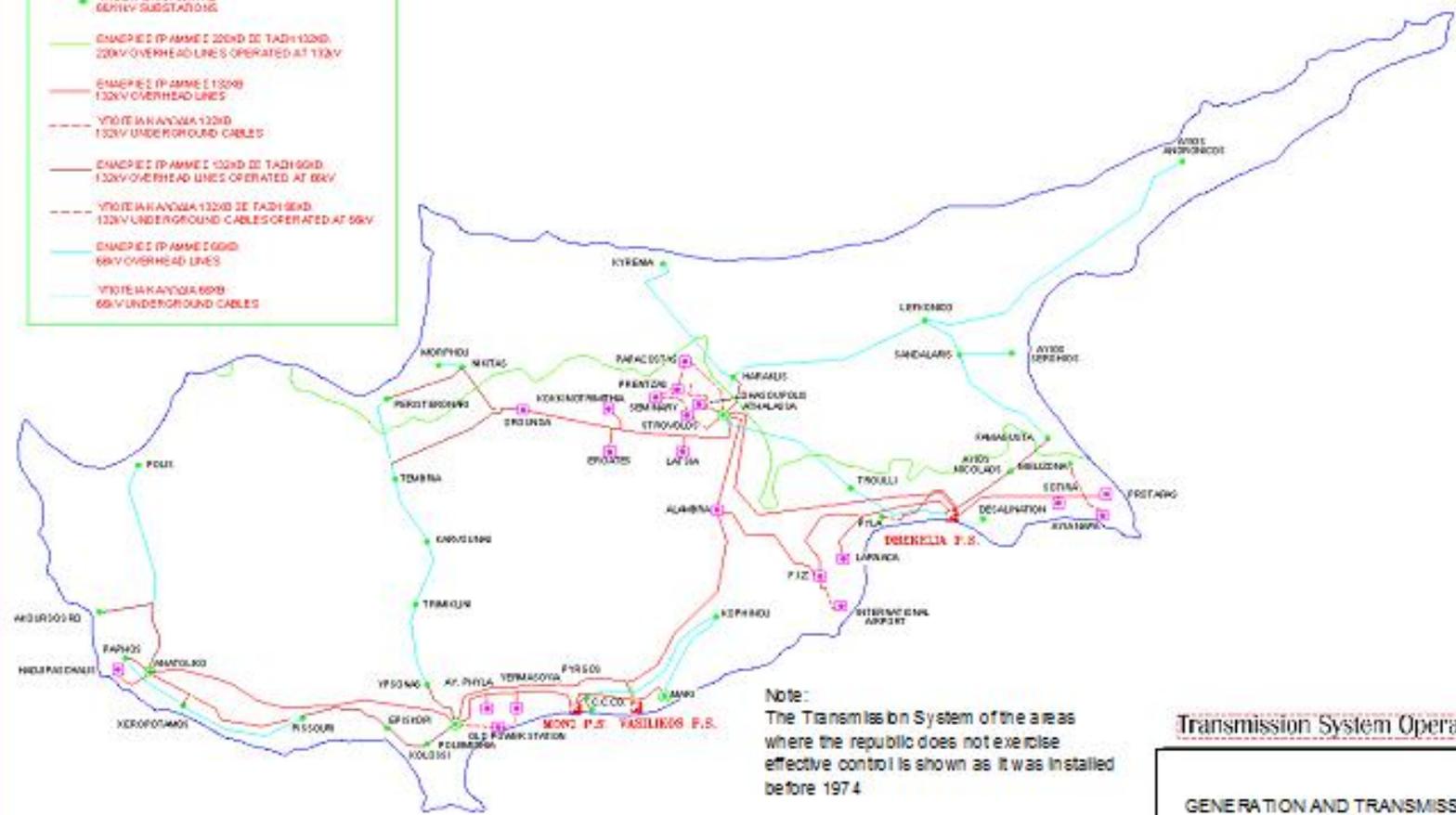
TSO Telecommunication Network Faults

The table below lists faults that occurred in the electronic and telecommunications equipment at the National Energy Control Centre. The faults were dealt with timely and repaired by TSO and EAC staff.

Terminal Units and Power Supplies	39
Remote Teleprotection NECC Systems	4
Telephone System	1
Fiber-optic telecommunications	1



- ΚΩΔΙΚΑΤ**
CODE
- ΠΡΩΤΟΓΡΑΦΑΡΧΟΙ ΣΤΑΘΜΟΙ
GENERATING STATIONS
 - ΥΠΟΣΤΑΘΜΟΙ 132KV ΗΒ
132KV HV SUBSTATIONS
 - ΥΠΟΣΤΑΘΜΟΙ 132KV ΗΒ
132KV HV SUBSTATIONS
 - ΥΠΟΣΤΑΘΜΟΙ 66KV ΗΒ
66KV SUBSTATIONS
 - ΕΝΔΟΧΕΙΡΙΑΣΤΕΣ 220KV ΔΕ ΤΑΧΗ 132KV
220KV OVERHEAD LINES OPERATED AT 132KV
 - ΕΝΔΟΧΕΙΡΙΑΣΤΕΣ 132KV
132KV OVERHEAD LINES
 - - - ΥΠΟΓΕΙΑ ΚΑΒΛΩΣΜΑ 132KV
132KV UNDERGROUND CABLES
 - ΕΝΔΟΧΕΙΡΙΑΣΤΕΣ 132KV ΔΕ ΤΑΧΗ 66KV
132KV OVERHEAD LINES OPERATED AT 66KV
 - - - ΥΠΟΓΕΙΑ ΚΑΒΛΩΣΜΑ 132KV ΔΕ ΤΑΧΗ 66KV
132KV UNDERGROUND CABLES OPERATED AT 66KV
 - ΕΝΔΟΧΕΙΡΙΑΣΤΕΣ 66KV
66KV OVERHEAD LINES
 - - - ΥΠΟΓΕΙΑ ΚΑΒΛΩΣΜΑ 66KV
66KV UNDERGROUND CABLES

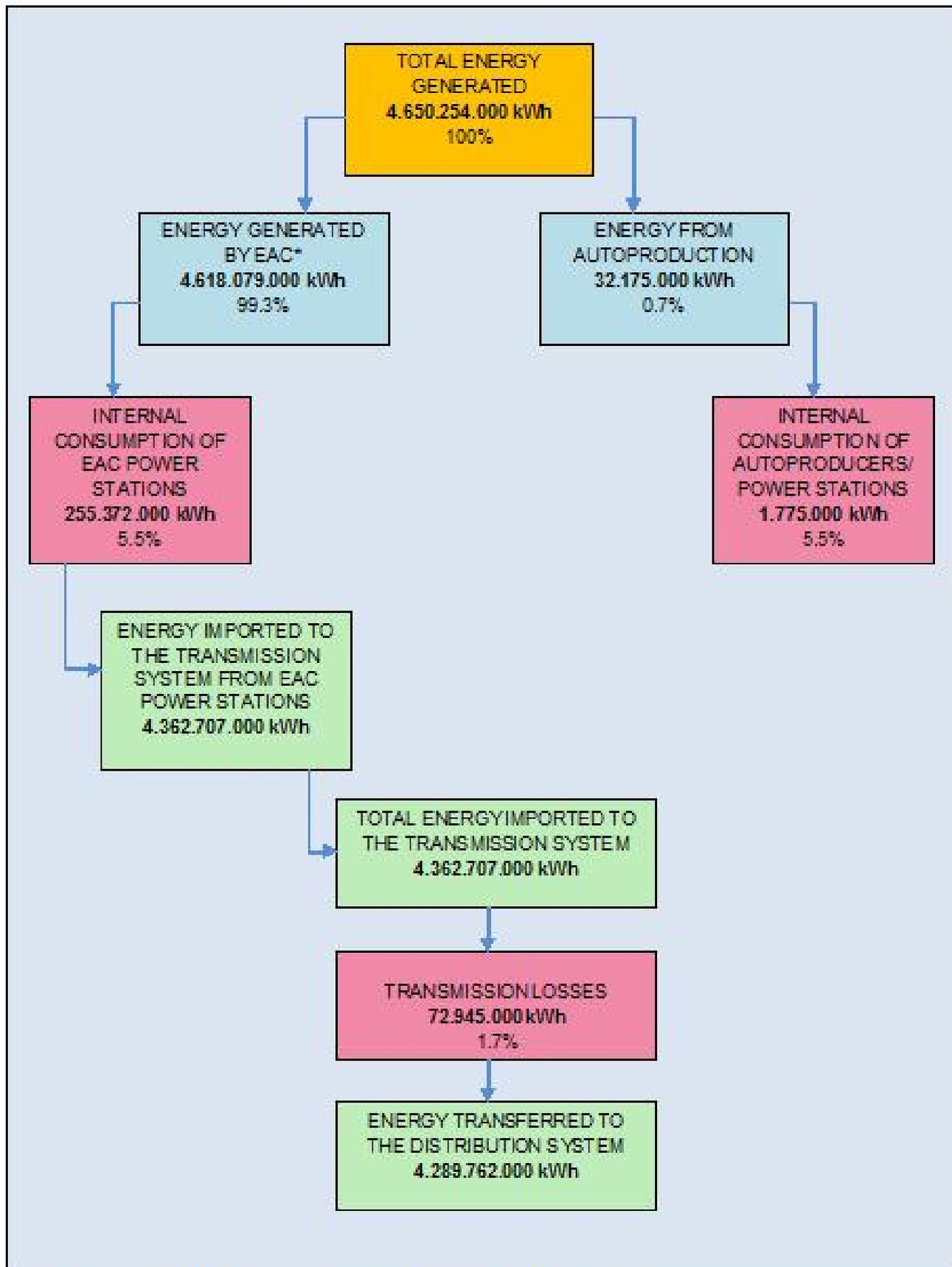


Note:
The Transmission System of the areas where the republic does not exercise effective control is shown as it was installed before 1974

Transmission System Operator - Cyprus

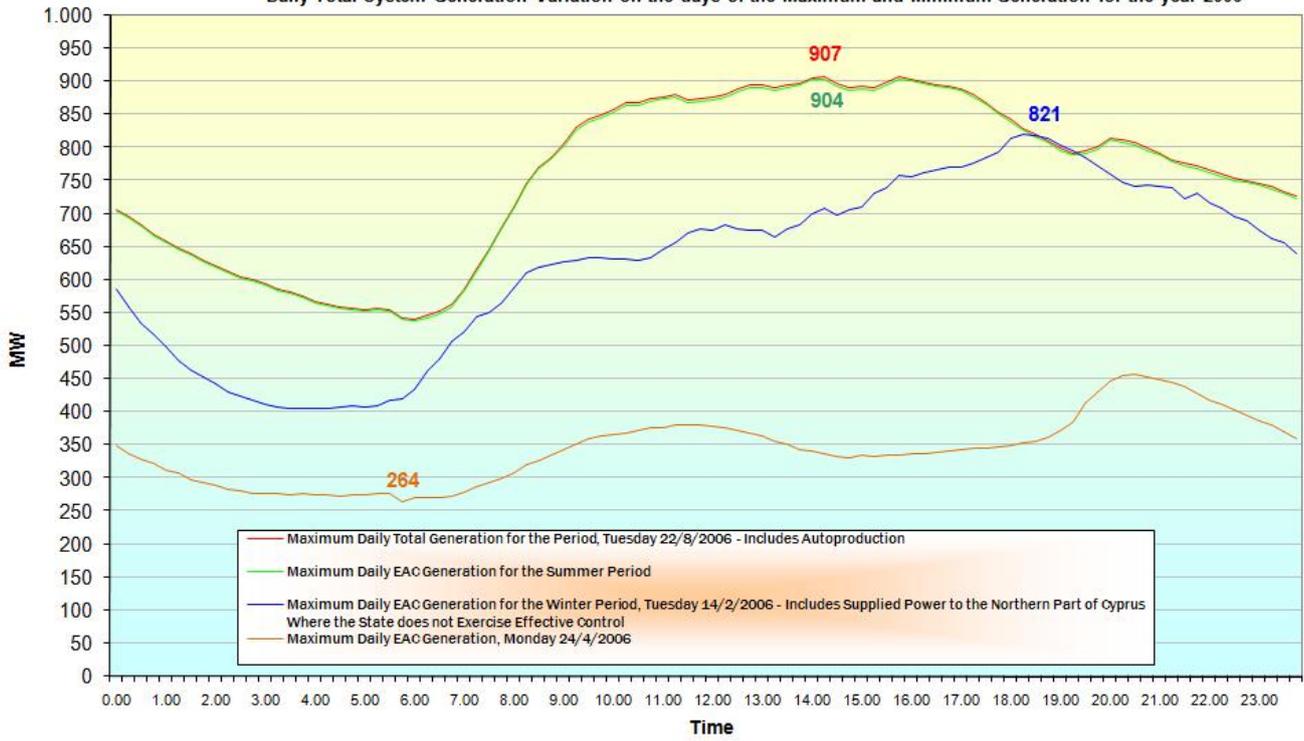
GENERATION AND TRANSMISSION SYSTEM
DECEMBER 2006

Fig.1. Generation and Transmission of Electrical Energy in 2008



*Includes 40,598,000 kWh supplied to the areas on the north of the cease fire line, where the State does not exercise effective control.

Daily Total System Generation Variation on the days of the Maximum and Minimum Generation for the year 2006



**TRANSMISSION SYSTEM OPERATOR
INCOME STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2006**

	Notes	2006 CY£	2005 CY£
Turnover	5	1.989.642	1.700.451
Administrative expenses		(1.989.137)	(1.632.857)
		-----	-----
Surplus from operations		505	67.594
Financial expenses, net	7	(401)	(46)
		-----	-----
Surplus before taxation		104	67.548
Taxation		(104)	-
		-----	-----
Surplus for the year		-	67.548
		=====	=====

**STATEMENT OF RECOGNISED GAINS AND LOSSES
FOR THE YEAR ENDED 31 DECEMBER 2006**

	2006 CY£	2005 CY£
Net gains not recognised in the income statement	-	-
Surplus for the year	-	67.548
	-----	-----
	-	67.548
	=====	=====

**TRANSMISSION SYSTEM OPERATOR
BALANCE SHEET
AS AT 31ST DECEMBER 2006**

	Notes	2006 CY£	2005 CY£
ASSETS			
Non-current assets			
Fixed assets	9	-	54.644
		-----	-----
Current assets			
Debtors and prepayments	10	12.710	12.250
Cash and cash equivalents		400.480	763
		-----	-----
		413.190	13.013
		-----	-----
Total assets		413.190	67.657
		=====	=====
RESERVES AND LIABILITIES			
Reserves			
Retained earnings	8	-	67.548
		-----	-----
		-	67.548
		-----	-----
Current liabilities			
Bank overdraft		-	4
Creditors and accruals	11	413.190	105
		-----	-----
		413.190	109
		-----	-----
Total reserves and liabilities		413.190	67.657
		=====	=====