

Cyprus Energy Regulatory Authority

2018 National Report

to the European Commission

for the year 2017 and the first half of 2018



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List of abbreviations

- **CEER** Council of European Energy Regulators
- CERA Cyprus Energy Regulatory Authority
- DAM Day Ahead Market
- DSO Distribution System Operator
- EAC Electricity Authority of Cyprus
- GO Guarantees of Origin
- ISP Integrated Scheduling Process
- MECIT Ministry of Energy, Commerce, Industry and Tourism
- MO Market Operator
- NRA National Regulatory Authority
- OTC Over the Counter
- PSO Public Service Obligations
- RAG Regulatory Accounting Guidelines
- **REMIT** EU Regulation 1227/2011 on the integrity and transparency of wholesale energy market
- **RES** Renewable Energy Sources
- **RES-E** Renewable Energy Sources-Electricity
- SRA Separated Regulatory Accounts
- TSO Transmission System Operator

1. Foreword

During the period under review, the Cyprus Energy Regulatory Authority (CERA), within the framework of the European and national legislation, took a series of decisions aimed at shaping and developing the Cyprus energy market in conditions of healthy competition, consumer protection and the encouragement of the use of renewable energy sources. Moreover, CERA has taken several important decisions aimed at harmonising the regulatory framework of our country on the basis of the provisions of the Energy Union.

In summary, the Energy Union Package aims to ensure affordable, secure and sustainable energy for the citizens of the Member States of the European Union. It is a proactive policy of the European Union to tackle the climate change.

The vision of the Energy Union is an integrated energy system for all Member States of the European Union, where energy will move freely between states' borders with competition rules, with the best possible use of energy sources and with a credible European regulatory framework. Citizens are at the heart of the Energy Union, since energy prices must be affordable and competitive with greater choice of supplier.

The key points of the plan for the abolition of energy borders within the European Union are:

- the adoption of new legislation to redesign and reform the electricity market,
- the introduction of a new legislative framework to safeguard the supply of electricity and natural gas,
- greater transparency in natural gas contracts,
- the development of an integrated regional cooperation aiming to the consolidation of the market under a stronger regulatory framework,
- the increase in funding from the European Union to improve energy efficiency or a new renewable energy sources package.

Both the European Council and the European Parliament have repeatedly stressed that a wellfunctioning integrated internal energy market is the best tool for ensuring affordable energy prices within the European Union, to guarantee the security of energy supply and to enable the integration and development of larger quantities of energy from renewable sources in a cost-effective way.

Significant changes are also taking place at the level of technology. The digitisation and rapid development of online measurement and marketing tools allow industry, businesses, and even households to produce and store electricity, as well as to participate in the electricity markets through so-called "demand response" solutions.

The electricity market in the next decade will be characterised by more variable and decentralised electricity generation, increased interdependence between Member States and new technological opportunities for consumers to reduce their bills and to actively participate in the electricity markets through demand response, self-consumption or storage.

At the same time, the European Union's Energy Strategy has set priorities to increase the security of supply of the European Union. Particularly for natural gas, part of the strategy focuses on the development of gas production infrastructure in the countries of South-Eastern Europe, where our country belongs, and in finding alternative gas suppliers.

The European Union's Energy Strategy primarily concerns the Member States that are currently unable to negotiate and are forced to import energy on unfavourable terms and conditions in their supply contracts, due their geographical location, such as Cyprus. With respect to Member States which are

supplied with energy on more unfavourable terms and at higher prices, the Energy Union is expected to deliver positive results by offering the opportunity to reduce energy costs.

In order for Cyprus to move away from the current situation to a low-carbon economy with the use of sustainable technologies, there is a need for further harmonisation of its energy regulatory framework that will lead our country to complete the internal energy market of the European Union on the basis of the provisions of the Energy Union.

During 2017, CERA, taking into account, inter alia, the concern of the State and the House of Representatives about the delay in the full commercial operation of the new electricity market model, has issued and published two Regulatory Decisions in the Official Gazette of the Republic of Cyprus. The Regulatory Decisions concern the application of a binding timetable for the full commercial operation of the new electricity market model, with the deadline set for 1 July 2019.

In order to cover the time gap inevitably created until the full commercial operation of the new electricity market model, CERA has issued a relevant Regulatory Decision including detailed transitional arrangement regulations.

At the same time, CERA, within the framework of its responsibilities and taking care, among other things, for the security of energy supply in the natural gas sector and the efficiency of the functioning of the internal natural gas market, took the initiative and proceeded with the preparation of a summary report on the options for the development of the gas market in Cyprus. In this report, a recommendation was made to the State that the import of liquefied natural gas (LNG) into Cyprus should be seriously studied. The option of LNG from other sources should not be treated as an intermediate stage but as a permanent one and parallel to that of gas supply from domestic deposits, primarily for reasons of security of supply and competition in the gas market, and by extension in the electricity market, but also in order to develop the use of natural gas in other sectors. CERA also recommended the disconnection of the necessary infrastructure from the LNG supply contract.

On the basis of the above recommendation of CERA, a decision was taken by the Council of Ministers, which mandated the Natural Gas Public Company (DEFA) to proceed with a contract for the supply of LNG and at the same time in a separate procedure to proceed with the construction and operation of the required infrastructure, taking into account, inter alia, that natural gas should be available as soon as possible before 2020.

In conclusion, CERA has included in its strategic planning both short-term and long-term actions, including:

- the commencement of the transitional arrangements regulation of the electricity market,
- the implementation of the new competitive electricity market model,
- the completion of the operational and accounting separation of the EAC,
- the modernisation of the electricity and gas licensing regulations,
- attaining the renewable energy sources targets for 2020,
- establishing an institutional framework for the natural gas market,
- determining options for the introduction and creation of a natural gas market for use in all sectors of the economy, and
- the integration of energy storage systems.

Based on the data and developments in 2017 in the field of energy and sustainable development, and bearing in mind that the successful operation of CERA is based on the following three basic principles:

- the independence of CERA,
- the transparency in the decisions of CERA,
- the protection of consumers and energy investors by CERA,

CERA will continue to perform its work to develop a people-centred and fair energy regulation focused on the consumer. The proper functioning of the electricity and natural gas markets is crucial for the economy and the stability of our country as well as for the well-being of its citizens.

A. Purlin

Dr. Andreas Poullikkas Chairman

2. Main developments in the gas and electricity markets

This Report covers the annual reporting obligation, required by the Article 37(1)(e) of the Directive 2009/72/EC concerning common rules for the internal market in electricity and Article 41(1)(e) of the Directive 2009/73/EC concerning common rules for the internal market in gas.

The Report concerns the calendar year 2017 and some key developments for the first semester of 2018 and follows, the reporting structure recommended by the European Council of Energy Regulators (CEER).

Due to the fact that there was is no natural gas market in Cyprus, the report focuses mainly on the internal electricity market and covers this sector for the year 2016.

During the year under review CERA, taking into account the trends followed at European level and bearing in mind the needs of the energy system in Cyprus, had to take a series of important decisions in order to complete the regulatory framework in the energy sector, focusing in the security of supply, the consumer protection and ensuring fair competition through the development of an economically viable and efficient electricity market and the possibility share of renewable energies in the competitive market.

The energy sector in Cyprus is undergoing fundamental transformations concerning its structure and organisation, its institutional framework and the diversification of its energy mix. The Cypriot electricity sector is today 100% covered on the supply side and more than 90% on the generation side, by the state-owned Electricity Authority of Cyprus (EAC). In an effort to open up the market to new participants, CERA has proposed the Net-Pool model as being the most appropriate trading arrangement approach for the Cyprus electricity market. The formulation of a net-pool incorporates both, a bilateral contracts market and a central Day Ahead Market. In the near future, an Intra-Day Market would be organized. The proposed design includes also a real time Balancing Mechanism that provides the Transmission System Operator (TSO) with the ability to purchase the required operational reserves, activate balancing services, and settle imbalances.

At present, CERA decided on the implementation of the transitional arrangements of the electricity market in Cyprus prior the full implementation of the new Electricity Market Model. The transitional period will be based on bilateral contracts between producers and suppliers for the supply of a standard quantity of electricity (kWh) on a monthly basis. The transitional period of the electricity market in Cyprus started on 1 September 2017 and will be in force until the full implementation of the new Electricity Market Model.

During the period under review CERA issued a series of important Regulatory Decisions concerning:

- the implementation of a binding timetable with a binding target on 1 July 2019 as the date for the full commercial operation of the new Electricity Market Model,
- the guidelines to the Owner of the Transmission System for the allocation of necessary human resources to the TSO, so that the TSO may be capable to the exercise his competences to proceed immediately to take the necessary actions for the implementation of the tasks needed for the full commercial operation of the new Electricity Market Model according to the binding timetable mentioned above,
- the implementation of the transitional arrangements of the electricity market in Cyprus, "Bilateral Contracts between Producers and Suppliers", prior the full implementation of the new Electricity Market Model,
- the implementation of a binding timetable for the complete installation and operation by the TSO of the Meter Data Management System (MDMS) software, with a binding target on 1 April 2019 and
- the Regulatory Accounting Guidelines for the preparation of Separate Regulatory Accounts.

which were subject to public consultation for 30 days, as required by law.

At the same time CERA took a series of Decisions, the most important of which were:

- the approval of the fuel adjustment clause and the basic purchase prices of electricity from renewable energy sources (RES), for the year 2017 and the first half of 2018,
- the approval of the TSO fee (Tariff T TSO: Tariff for TSO expenses) for the years 2017 and 2018,
- the approval of the long-term forecast of the annual maximum electricity generation and total electricity generation for the 2018-2027 decade submitted by the TSO,
- the approval of the proposed revised Electricity Market Rules presented by the TSO,
- the approval of the revised Protocol between the TSO and DSO,
- the approval of the allowed revenues for the generation activities by a dominant producer, for the ownership of the Transmission System, for the Transmission and Distribution Systems and for the supply activities by the dominant supplier for the Regulatory Control Period 2017 – 2021,
- the issuance of detailed Transitional Arrangement Regulations regulating the transitional arrangements in the electricity market of Cyprus,
- the issuance of a methodology calculating the monthly wholesale weighted average tariff (T-W)
- setting a threshold for participation in the transitional arrangements of the electricity market for producers either with conventional stations or with RES units with a standard meter, at 4.5 MW, for a production licence for a station of the net nominal power that they represent,
- setting a threshold, for contracting the supply of energy to the consumers with a total agreed power for participation in the transitional arrangements of the electricity market, for the suppliers, at 10 MW,
- laying down the basic principles of the pricing methodology for Liquefied Natural Gas (LNG) facilities to be used in setting the regulated tariffs for the use of LNG facilities,
- the approval of the procedure for changing supplier and the accompanying documents submitted by the DSO,
- taking a decision on Cross-Border Cost Allocation (CBCA) of Project of Common Interest No. 7.3.2 'Removing internal bottlenecks in Cyprus to end isolation and to allow for the transmission of gas from the Eastern Mediterranean region',
- taking a decision on CBCA for the 1st stage of the Projects of Common Interest No. 3.10.2 'Interconnection between Kofinou (CY) and Korakia, Crete (EL)' and No. 3.10.3 'Internal Line Between Korakia, Crete and Attica Region (EL)',
- the approval of new tariffs submitted by EAC, for the years 2017 and 2018,
- the approval of the methodology calculating the purchase price of electric energy from RES, and

It is also worth noting that during 2017, an electronic register of licences was created with the aim of facilitating the process of recording applications for the granting of a licence to operate in the electricity sector, evaluating applications and licensing, as well as recording and handling requests concerning the applications and licences.

3. The electricity market

3.1. Network regulation

3.1.1. Unbundling

3.1.1.1. Development in TSO unbundling and Report on TSO certification

The third energy package provides for three basic models for unbundling: Ownership Unbundling (OU), the Independent System Operator (ISO) and the Independent Transmission Operator (ITO). When implementing the unbundling rules of the third energy package Member States have to decide whether to implement exclusively the Ownership Unbundling model or leave to the TSO a choice between the different models. However, Cyprus, according to article 44 (derogations) of the 2009/72/EC directive, has obtained an exemption from article 9 on Unbundling of Transmission Systems, therefore Cyprus has maintained its present regime on TSO unbundling.

As from previous directive, a TSO has been appointed and functions independently in terms of organisation and decision making from the Owner of the Transmission System and the Distribution System Owner and Operator (DSO) which is namely the EAC. Under current legislation, the TSO which is legally unbundled, acts independently from production, distribution and supply activities in order to safeguard third party access onto the transmission network and equal treatment of all users of the network.

Furthermore, the TSOs' Certification procedure does not apply for Cyprus due to the exemption from Article 9 of the above said directive.

Currently the Cyprus TSO is located separately from EAC. The TSO presents himself to customers as a separate entity with his own name, logo and website. Cyprus TSO is provided with all of its employees by the single vertically integrated utility, namely the EAC.

Share of shared services adds up to 100% and shared employees likewise.

In the meantime and taking into account the New Electricity Market Arrangements that are expected to be in force in 2019 and the need for the alignment of the Law and the Trading and Settlement Rules, deliberations between CERA and the Ministry of Energy, Commerce, Industry and Tourism are held in order to amend the law regulating the electricity market. The outcome of the proposed amendments may affect the structure of the TSO.

3.1.1.2. Development in DSO unbundling

The Owner of the distribution system has also been nominated as the DSO and although it is not independent in the sense that the TSO is, it has the same duty of safeguarding third party access to the distribution network and the equal treatment of all users of the said network.

The function of the single DSO has remained within the Network Business Unit of EAC in agreement with the relevant clauses of the Electricity Directive and the approval of the Government of Cyprus.

Cyprus as a small and isolated system has decided, according to article 26 on the unbundling of distribution system operators of the 2009/72/EC directive, not to apply the proposed unbundling regime of the DSO. In accordance with the Law regulating the electricity market EAC assigns an officer of EAC as the "Distribution System Operator Director" which is responsible for the management of the distribution system.

However, according to current legislation the Cyprus' DSO must establish a compliance programme, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that

observance of it, is adequately monitored. The compliance programme sets out the specific obligations of employees to meet that objective. An annual report, setting out the measures taken, shall be submitted to CERA for approval by the body responsible for monitoring the compliance programme.

DSO is provided with all of its employees by the single vertically integrated utility, namely the EAC.

3.1.1.3. Accounting and Functional Unbundling

In August 2014, CERA issued the Accounting and Functional Unbundling Regulatory Decisions for EAC, as well as the Regulatory Accounting Guidelines (RAG) for the preparation of the Separated Regulatory Accounts (SRAs) of EAC. These decisions, set the basis for the unbundling of the four regulated activities of Generation, Transmission, Distribution and Supply and the non-regulated activities of the organisation.

Regarding the Accounting Unbundling of EAC, Article 108(4) of the Law provides that EAC should maintain SRAs for each of its activities that were licensed by CERA according to Article 34. The same applies for the provision of PSOs and EAC's activities not related to electricity.

According to the Regulatory Decision 04/2014 regarding the functional unbundling of EAC's activities, the latter is obliged to proceed with the organization of five distinct Business Units (BUs); **Generation**, **Supply, Transmission and Distribution** and another distinct Unit for **"Other Activities"**. It calls for the discrete separation of the competencies between Distribution and Supply as well as the creation within the Distribution BU, of a Section for the Operation of the Distribution System. Within the Distribution BU, it also calls for the creation of a ring-fenced "Metering" Section. The "Other Activities" Unit will include all the non-regulated EAC Activities such as Inspection of Electrical Installations, Desalination Unit, Street Lighting Maintenance, MRTC, third party supply and installation of PV Systems, third party telecommunications, contracting activities etc.

Functional unbundling of EAC is at official operation since December 2016. The accounting unbundling has also been completed and SRAs have been submitted to CERA for the years ended 31.12.1014, 31.12.2015 and 31.12.2016. The SRAs for the year ended 31.12.2017 will be submitted to CERA on 31.08.2018.

CERA, by its decisions, have decided to grant approval for the non-publication of EAC's SRAs for the years 2014 – 2016. CERA also informed EAC, that from 2017 onwards, the SRAs will be publish according to the provisions of the Regulatory Decision 02/2014, "Regulatory Accounting Guidelines for the preparation of Separate Regulatory Accounts".

CERA considered that for reasons of transparency in the competitive electricity market, for ensuring that the electricity market provides the right signals for electricity generation and supply investments, for the timely information of the participants and / or potential entrants to join the competitive electricity market and for the provision of the basis for taking the investment decisions, the information included in the SRAs must be available earlier than the 31st of August of the following year. Therefore, with the publication of Regulatory Decision 01/2018, CERA decided that SRAs should be submitted by the competent authorities by 31st of May of the year following the end of the financial reference year, both in hard copy and in electronic form. The Regulatory Decision regarding the SRAs will be applied from 2021 and thereafter.

At the same time, through the aforementioned Regulatory Decision, CERA, considering that the necessary time should be given to EAC to find an alternative solution and / or upgrade its accounting system for the preparation and control of the SRAs, decided to invite the EAC to submit quarterly progress reports. The first progress report will be submitted on 30 September 2018.

CERA based on the provisions of Regulatory Decision 04/2014 regarding the functional unbundling of EAC's activities, commissioned in 2017, through an open procedure, external consultants tasked with carrying out audits of the degree of compliance of EAC's operations on the basis of the functional

unbundling of its activities in accordance with the regulatory framework, by carrying out specialized audits to be implemented in three distinct periods of time.

In accordance with the terms of reference, in 2017 the first audit was carried out. A documented and detailed report was submitted to CERA by its external consultants, recording the audit findings and revealing specific discrepancies of EAC's compliance with the regulatory framework.

CERA, taking into account the findings of the first audit, proceeded with the appropriate actions, pointing out to the EAC's Board of Directors these findings and in particular the specific deviations, and gave instructions to the Board to correct them and fully implement and observe the provisions of the regulatory framework.

In 2018, the second and third audit by CERA will follow, aiming at the full implementation of the provisions of the regulatory framework for the functional unbundling of EAC's activities.

3.1.2. Technical functioning

3.1.2.1. Balancing Services

According to the Law Regulating the Electricity Market in Cyprus, CERA is responsible for fixing and/or approving methodologies for the provision of balancing services which shall be performed in the most economic manner possible and provide appropriate incentives for network users to balance their inputs and off-takes. CERA ensures that the balancing services shall be provided in a fair and non-discriminatory manner and be based on objective criteria.

Moreover, CERA shall ensure that Cyprus TSO and DSO, namely the EAC, are granted appropriate incentive, over both short and long term, to increase efficiencies, foster market integration and security of supply and support the related research activities.

In that extend, CERA instructed the Cyprus TSO to draft the Trading and Settlement Rules, which enable the Cyprus TSO to fulfil its obligations under the Law, regulate the means by which participants may trade energy, allow the calculation and settlement of payments in respect of Energy and specify the way in which settlement and billing shall be carried out. The Trading and Settlement Rules provide all necessary information concerning the operation of the electricity market in the country. The balancing arrangements are also described in these.

According to the Trading and Settlement Rules, the Balancing Market concerns all the institutional, commercial and operational arrangements that establish the balancing of the system through the market. These are two distinct processes, the Integrated Planning Process (a programming tool) and the Real-Time Balancing Market (a distribution tool). The main objective of the Cyprus TSO, who is the Balancing Market Operator, is to enter into contracts with Balancing Service Providers and to activate Balancing Energy Offers in order to balance the total supply and demand in real time.

The energy balance is achieved primarily by the participants who contribute to the delivery of energy for the expected consumption of the consumers through bilateral contracts and by buying or selling through the Day Ahead Market (DAM). Such energy transactions relate to the delivery of specified amounts of energy for each clearing period.

When the TSO believes that net production is not equal to net demand, then it is contracted to buy or sell balancing energy to bring the two into balance for each clearing period.

The main tool used by the TSO to achieve the balance in real time is the Balancing Market. Participants submit Balancing Energy Offers and Reserve Capacity Offers in the Balancing Market for the Balancing Service Providers they represent.

The TSO will prepare a schedule of activities (schedule of the Integrated Planning Process) governing the actions required to resolve the Integrated Planning Process. The timetable will be published on the TSO's website and will be updated from time to time, after reasonable notice from the participants.

By Decision 84/2017, 12 May 2017, the Members of CERA decided to approve the proposed amended Trading and Settlement Rules submitted by the Cyprus TSO.

Given the time required by the Cyprus TSO for the procurement of the relevant software and hardware for the implementation of the new revised Trading and Settlement Rules set out in Regulatory Decision 01/2015, CERA will decide at a later stage on the date of publication of the new revised and approved Trading and Settlement Rules in the Official Gazette of the Republic of Cyprus, which, under the provisions of article 81(6) of the Law Regulating the Electricity Market in Cyprus, will enter into force. At the same time, in the framework of full transparency and timely information of all investors interested in their activity in the field of the competitive electricity market, as well as to inform any other interested persons and/or market participants in the electricity market, the new revised approved Trading and Settlement Rules is published on the website of the Cyprus TSO without having any effect.

3.1.2.2. Security and Reliability Standards, Quality of Service and Supply

CERA monitors the compliance with and reviewing the past performance of network security and reliability rules and sets or approves standards and requirements for quality of service and supply.

Under the Laws on Regulating the Electricity Market of 2003 to 2017, CERA by a Regulatory Decision gives instructions to the Cyprus TSO and the DSO to prepare and issue technical rules, which are subject to CERA's approval, on the operation of the Transmission System and the Distribution System, respectively.

The provisions of the Transmission and Distribution Rules are observed by all licensees or by persons to whom exemptions were granted, to the extent that the licences or exemptions require this, respectively.

In general, the Transmission and Distribution Rules are designed to achieve the development, the maintenance and the operation of an efficient, coordinated and economically viable Transmission and Distribution System whilst facilitating competition in generation and supply of electricity.

The Rules:

- govern the technical requirements and constraints that will apply wherever license holders wish to connect to the transmission system and/or distribution system or use the transmission system or distribution system for the transportation of electricity
- ensure that the technical conditions that apply to license holders who wish to connect to or use the transmission system or distribution system do not result in them being subject to undue discrimination
- foster efficiency, reliability, and economy in the use and development of the transmission system and the distribution system

During the year under review, a revision of the Transmission and Distribution Rules (Version 4.0.2.) were published by the TSO on 10 November 2017, following CERA's approval.

3.1.2.3. Monitoring time taken to connect and repair

CERA monitors the time taken by the TSO and EAC, to make connections and repairs. Each year the TSO has to report to CERA through its annual report regarding this issue. In general, CERA monitors the number of disconnections due to repair and the duration of these disconnections.

Furthermore, CERA in 2005 enacted regulations "On regulating the electricity market - Performance Indicators - Reg. 571/2005" whereby, Performance Indicators are defined as the indicators for the

supply of electricity and include the obligations of the Supplier and DSO, consumer rights, performance standards and minimum levels of performance as well as the fine automatically imposed in cases of the Supplier's and/or the DSO failure to comply. More information is given in Chapter 5.

A total of forty one (41) production disturbances occurred in 2017, of which eighteen (18) at Vasiliko Power Station, twelve (12) at the Dekeleia Power Station, one (1) at Wind Park, eight (8) at Power Stations located in the occupied areas, one (1) incident involved jointly the Vasilikos Power Station and the Power Station located in the occupied areas and one (1) incident involved jointly the Dhekelia Power Station and the Power Station located in the occupied areas.

In ten (10) cases the loss of production units was accompanied by load disconnection.

In 2017, a total of fifteen (15) failures in the transport system occurred:

- Twelve (12) faults due to failure or malfunction of the equipment (80%).
- One (1) failure due to bad weather (7%)
- Two (2) failures due to humidity (13%)

In six (6) out of fifteen (15) cases, the damage was accompanied by disconnection of consumers. All failures were fully restored.

The total number of transport failures (15) in 2017 has decreased by 21% compared to 2016 (19). The number of failures, due to failure or malfunction of the equipment, decreased by 4%, while the number of damage due to bad weather decreased by 9%. It is also worth noting that the number of high humidity failures increased by 13% comparing to 2016.

3.1.2.4. Monitoring Safeguard Measures

In accordance with the Article 70(A) of the Law Regulating the Electricity Market in Cyprus, when the Minister of Energy, Commerce, Industry and Tourism or CERA decide that a sudden crisis in the energy market is presented, the Minister, after consultation with CERA issues a Decree under which declares the energy market under sudden crisis and determines the beginning of the energy crisis.

When the Minister or CERA decide that the reasons for which the energy market was declared under sudden crisis, have ceased, the Minister, after consultation with CERA issues a Decree under which declares the end of the sudden crisis in the energy market and determines how to restore the normal situation.

Furthermore, CERA has to issue a Regulatory Decision in order to establish the following:

- Preventive/pro-active Action Plan of the measures required to eliminate or mitigate risks and
- Emergency Plan of the measures to be taken to eliminate or mitigate the impact of a sudden crisis in the energy market.

The above plans must cause the least possible disturbance in the functioning of the internal market and must not be wider in scope than is strictly necessary to remedy the sudden difficulties which have arisen.

During the year under review no sudden crisis incident occurred.

3.1.2.5. RES regulatory framework

Provided security and quality of supply requirements are met, RES-E producers have priority dispatch over conventional ones. According to the Trading and Settlement Rules generators are self-dispatched. Existing RES generators (currently only RES energy sold to EAC by the feed-in tariff regime, is injected to the system) provide their forecast to the TSO on the day-ahead on a half hour basis and are not liable for any imbalances.

Furthermore, according to the New Market Model to be implemented in the coming years, new RES generators with installed capacity above 1 MW may either directly participate into the market on a per plant basis or be represented by an aggregator. Operators of such plants may choose to bilaterally trade their output or trade it through the DAM or both. Participation to the DAM will be possible through priced Orders (Offers). New RES generators with installed capacity below 1 MW as they cannot offer energy quantities, on a half hourly basis, greater than 0,5 MWh shall be represented by an aggregator.

With respect to RES generators under the Support Scheme it was decided that EAC will manage the total of RES under Support Schemes under its demand portfolio (independently of their size) in which case EAC would have to forecast the total of their input and handle them as negative load.

The Council of Ministers, exercising the powers granted to it under paragraph (f) of section 44 of the Promotion and Encouragement of the Use of RES Laws of 2013 to 2015, has issued Regulations K. Δ . Π . 375/2016 on the Promotion and Encouragement of the Use of RES (Fixing the Amount of Excise Tax).

These Regulations concern the determination of the amount of the excise tax and the date of its enforcement, and in addition include a provision for reimbursement of the amount paid by the RES producers in 2015.

By Decision 10/2017, CERA decided to approve the application of a maximum 4% in tolerance to the maximum nominal capacity only in respect of the category of net-metering systems of the support regimes and the application of tolerance to the maximum nominal capacity of the voltage inverter up to 1kVA greater than the total installed capacity in kWp of the photovoltaic systems.

Therefore, the maximum nominal capacity of the net-metering systems of the support schemes was increased for single-phase systems from 4 kWp to 4,16 kWp and for three-phase systems from 5 kWp to 5,2 kWp.

By Decision 124/2018 issued on June 18, 2018, CERA decided to revise the network charges, ancillary and other services that will apply for the implementation of the Governments' Support Schemes on Netmetering, net-billing and self-generation.

On June 25, 2018 the Ministry of Energy, Commerce, Industry and Tourism announced a new Support Scheme concerning the production of electricity from RES-E for own consumption. This Scheme includes the following categories:

- Net-metering PV systems up to 10kW
- Net-billing RES-E systems from 10kW up to 10MW
- Autonomous PV systems

3.1.3. Network tariffs for connection and access

3.1.3.1. Report on New tariff regulation provisions

CERA, as the regulator, has the duty and the authority to approve the methodologies used to calculate the connection fees and the network use charges, and establish the terms and conditions for connection and access to the transmission and distribution system. The regulator may also require the TSO and DSO to change the tariffs or methodologies used for determining the transmission and distribution tariffs to ensure that these are proportional and non-discriminatory.

The methodology developed and followed concerning network tariffs is based on the following principles:

- Unbundling of EAC accounts under the following broad categories:
 - Generation
 - Transmission Network
 - Transmission System Operator
 - Distribution

- Supply
- Non-regulated business
- Re-evaluation of generation and network assets.
- Identification of ancillary services and cost valuation of each one separately.
- Identification of PSOs.
- Benchmarking of various activities with reference to published performance indices of European Utilities.

CERA has been vested through the Law with the responsibility of approving tariff methodologies and actual tariffs and charges of the Monopoly Sectors of the industry and all activities of EAC who the dominant participant in the Electricity Market is (Generation and Supply of electricity).

On 25 May 2017, by Decision 97/2017, CERA approved the new tariffs submitted by EAC for the regulatory period 2017 – 2021. Specifically, CERA decided the following:

- Approval of the Allowed Revenues submitted by EAC for the regulatory period 2017 2021, provided that they will be reviewed in accordance with the provisions of the Regulatory Decision 02/2015 (Statement of Regulatory Practice and Electricity Tariff Methodology).
- Approval of the Allowed Revenues of the TSO, submitted by the TSO on 25 January 2017, provided that they will be reviewed each year.
- Approval of the recovery of the Allowed Revenues for the regulatory period 2017 2021 through energy charge (which includes marginal cost of energy and marginal capacity cost).
- Approval of new tariff categories submitted by EAC.
- Approval of the Seasonal Time of Day (STOD) tariff structure:

| Season | Period | Description | Season | Period | Description |
|-----------------------|----------|---------------------------|---------------------|----------|---------------------------|
| Summer | Peak | 09:00 – 23:00 All days | Other (October – | Peak | 16:00 – 23:00 All days |
| (June – September) | Off-peak | 23:00 – 09:00 All days | (October – May) | Off-peak | 23:00 – 16:00 All days |

- Approval of the Wholesale tariff submitted by EAC.
- Approval of the Use of the Transmission System tariff per voltage as:

| High Voltage | 0.54 €c/kWh |
|----------------|-------------|
| Medium Voltage | 0.86 €c/kWh |
| Low Voltage | 0.88 €c/kWh |

- Approval of the Use of the low and medium voltage Distribution System tariffs submitted by EAC.
- Approval of the Business Management Services provided to customers tariff submitted by EAC, as monthly charge of €2.33 per consumer. CERA instructed EAC to submit a revised proposal for the above-mentioned tariff by the end of June 2018 at the latest.
- For the purpose of calculating the Ancillary Services and Long-Term Reserve tariffs, use the
 existing pricing as approved by the CERA in the Regulatory Decision 03/2010 (Charges for the use
 of Transmission and Distribution Networks, TSO Expenditure, Ancillary Services and Long-Term
 Reserve in the Electricity System). The Ancillary Services tariff should be applied per voltage as
 follows:

| High Voltage | 0.65 €c/kWh |
|----------------|-------------|
| Medium Voltage | 0.66 €c/kWh |
| Low Voltage | 0.67 €c/kWh |

CERA instructed TSO to submit a revised proposal for the above-mentioned tariffs by 30 September 2018 at the latest.

• The recovery of the TSO Expenditure tariff for 2017 should be applied per voltage as follows:

| High Voltage | 0.09 €c/kWh |
|----------------|-------------|
| Medium Voltage | 0.09 €c/kWh |
| Low Voltage | 0.09 €c/kWh |

- Approval of the recovery Measurements Expenditure tariff submitted by EAC, as monthly charge of €0.49 per consumer. CERA instructed EAC to submit a revised proposal for the above-mentioned tariff by the end of June 2018 at the latest.
- Considering that, on the basis of cost-orientation, there is an average reduction in total tariffs, and the following tariff categories presented an increase based on cost-reflectivity:

| Tariff description | Code | % Increase due to cost- orientation |
|---|------|--|
| High Voltage | 83 | 2 |
| Public Lighting | 35 | 3 |
| Water Pumping | 41 | 13 |
| Off-peak | 55 | 49 |
| Industrial Use Maximum Demand Medium Voltage | 76 | 4 |

CERA decided to approve EAC's proposal to maintain the above tariffs at current levels for energy charges for up to the operation of the new Electricity Market or four years after the new tariffs are applied, whichever is the sooner. The reduced revenues that the EAC will incur from the implementation of the above tariffs will not be passed on the consumers, and EAC will bear the reduced revenues.

- The new tariffs will be applied from 1 September 2017.
- CERA instructed EAC to submit, by 30 June 2017, the detailed Electricity Tariff Plans of 2017 for approval by CERA, which will include all the elements of each tariff code. Following the approval of CERA, EAC will publish the approved Tariff Plans to properly inform the electricity consumers and other electricity market participants.
- CERA also instructed EAC to submit, by 30 June 2017, a recommendation to CERA on the content of electricity tariffs bills to be issued to consumers in accordance with the provisions of the Regulatory Decision 02/2015 (Regulatory Practice Statement and Electricity Tariff Methodology)
- Finally, taking into account that the recoveries of the Allowed Revenues will be achieved through tariffs based on energy pricing (including marginal cost of energy and marginal capacity cost) rather than energy pricing and power pricing, EAC will submit to the CERA every January a full report covering the profile of the reactive capacity and of the capacity coefficient of the electrical system of the previous year.

Following the above Decision, on 12 December 2017, CERA issued the Decision 265/2017, by which decided the following:

- Approval of the tariffs for the four regulated activities of the EAC and the TSO for the year 2018.
- To continue the non-implementation of fully cost-oriented tariffs, according to the previous Decision 97/2017 for the following categories:

| Tariff description | New Code |
|---|----------|
| High Voltage | 50 |
| Public Lighting | 36 |
| Water Pumping | 46 |
| Off-peak | 56 |
| Industrial Use Maximum Demand Medium Voltage | 40 |

This arrangement will be maintained for the above-mentioned tariff categories until the operation of the Electricity Market or four years after the new tariffs are applied, whichever is the sooner,

while at the end of the transitional period, the said tariffs will be adjusted to cost-oriented levels.

It is also clarified that the reduced revenues that the EAC will incur from the application of the above-mentioned tariffs will not be transposed on to the electricity consumers.

• Approval of the Use of the Transmission System tariff per voltage as:

| High Voltage | 0.55 €c/kWh |
|----------------|-------------|
| Medium Voltage | 0.87 €c/kWh |
| Low Voltage | 0.88 €c/kWh |

- The new tariffs will be applied from 1 January 2018.
- CERA instructed EAC to submit, 10 days after the publication of the Decision, the detailed Electricity Tariff Plans of 2018 for approval by CERA, which will include all the elements of each tariff code. Following the approval of CERA, EAC will publish the approved Tariff Plans to properly inform the electricity consumers and other electricity market participants.
- CERA gave instructions to the DSO to submit the proposed tariffs for the use of the distribution system (Medium and Low Voltage), irrespective of the other regulated EAC activities.
- Finally, CERA drew the attention of the EAC to the fact that it has not submitted by the scheduled date to CERA for approval the Tariff Plans for 2017 and that any reduced revenue that may arise from any delay in the application of the 2018 tariffs cannot be recovered.

The summary of the charges for the use of network for the year 2014 - 2018, is shown in Table 1.

| CHARGES FOR THE USE OF NETWORKS AND OTHER OPERATIONAL EXPENSES | 2014 €cents/ kWh | 2015 €cents/ kWh | 2016 €cents/ kWh | Jan- Aug/2017 €cents/ kWh | Sept- Dec/2017 €cents/ kWh | 2018 €cents/ kWh |
|---|------------------------|------------------------|------------------------|------------------------------------|-------------------------------------|------------------------|
| High Voltage (HV) | 0.86 | 0.86 | 0.86 | 0.86 | 0.54 | 0.55 |
| Medium Voltage (MV) | 1.33 | 1.33 | 1.33 | 1.33 | 0.86 | 0.87 |
| Low Voltage (XT) | 1.47 | 1.47 | 1.47 | 1.47 | 0.88 | 0.88 |
| TSO | 0.11 | 0.11 | 0.09 | 0.09 | 0.09 | 0.15 |
| Ancillary Services | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Long Term Reserve/Stand by | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| TOTAL HV | 1.61 | 1.61 | 1.62 | 1.62 | 1.30 | 1.37 |
| TOTAL MV | 2.94 | 2.94 | 2.95 | 2.95 | 1.62 | 1.69 |
| TOTAL LV | 2.25 | 2.25 | 2.23 | 2.23 | 1.64 | 1.70 |

Table 1. Charges for the use of networks and other operational expenses

By Decisions 23/2017, 161/2017 and 30/2018, CERA decided to approve the coefficients for the fuel adjustment clause and the following basic purchase prices of RES energy for the first half of 2017, the second half of 2017 and the first half of 2018 respectively, setting, however, limits on the quantities of each fuel that can be used to recover fuel costs through fuel price adjustment by the EAC. The fuel clause coefficients and base prices, are summarised in the following table. The fuel clause coefficients for the first half of 2018 were calculated for €1c/MT but for comparison reasons it is transposed to €5c/MT:

Table 2. Fuel clause coefficients and base prices, for 2017 until June 2018

| | 01 – 06 / 2017 | 07 – 12 / 2017 | 01 – 06 /2018 | | | | | |
|--|----------------|----------------|---------------|--|--|--|--|--|
| Fuel clause coefficients for the consumers (€c/kWh/€5c/MT) | | | | | | | | |
| Low voltage | 0.00128 | 0.00115 | 0.00122 | | | | | |
| Medium voltage | 0.00125 | 0.00112 | 0.00120 | | | | | |

| High voltage | 0.00122 | 0.00110 | 0.00118 | | | | | |
|--|---------|---------|---------|--|--|--|--|--|
| Fuel clause coefficients for RES energy purchase (€c/kWh/€5c/MT) | | | | | | | | |
| Low voltage | 0.00125 | 0.00112 | 0.00120 | | | | | |
| Medium voltage | 0.00122 | 0.00110 | 0.00118 | | | | | |
| High voltage | 0.00121 | 0.00108 | 0.00115 | | | | | |
| RES base prices (€c/kWh) | | | | | | | | |
| Low voltage | 7.648 | 6.974 | 7.393 | | | | | |
| Medium voltage | 7.509 | 6.829 | 7.264 | | | | | |
| High voltage | 7.407 | 6.723 | 7.135 | | | | | |

3.1.3.2. Prevention of cross-subsidies

One of the main objectives of the Regulatory Decision No. 02/2015 "Statement of Regulatory Practice and Electricity Tariffs Methodology" is the prevention of cost subsidies between regulated activities.

With the issue of Decisions No. 97/2017 and 265/2017, which are given in detail in section 3.1.3.1 above, CERA approved the tariffs for the four regulated activities of the EAC and the TSO for the years 2017 and 2018. CERA approved the cost-reflective electricity tariffs for all customer groups, with the exception of high voltage, public lighting, water pumping, off-peak and industrial use tariffs, which presented an increase based on cost-reflectivity. CERA decided to approve EAC's proposal to maintain the above tariffs at current levels for energy charges for up to the operation of the new Electricity Market or four years after the new tariffs are applied, whichever is the sooner. The reduced revenues that the EAC will incur from the implementation of the above tariffs will not be passed on the consumers, and EAC will bear the reduced revenues.

3.1.4. Cross-border issues

At present, the electricity system of Cyprus operates without cross-border links. On 24 November 2017, the European Commission adopted the third list of 173 key energy infrastructure projects (Projects of Common Interest (PCIs)). In the Union list, the project "EuroAsia Interconnector" is included, which concerns Cyprus.

The EuroAsia Interconnector was proposed for the electricity interconnection between Israel, Cyprus and Greece. It was approved by the European Commission and was included in EU list as a Cluster consisting of three distinct projects: Israel - Cyprus, Cyprus - Crete and Crete - Attica. The project consists of a DC subsea cable (HVDC) 600 kV with a total capacity of 2000 MW, and the required electrical equipment, i.e. power plants to convert the electrical current from DC to alternating current (AC) and vice versa, and for its transmission from and to the countries concerned. The total length of the submarine cable is estimated at around 820 nautical miles/ about 1518 km (329 miles between Cyprus and Israel, 879 km between Cyprus and Crete, and 310 km between Crete and Attica). It is estimated that the laying of the cable on the seabed in some places between Cyprus and Israel will exceed the depth of 2000 meters and 2500 meters between Cyprus and Greece.

With the implementation of this project, Cyprus will cease to be a system isolated from the European network, which is one of the main pillars set by the EU. It is also expected to contribute positively to the achievement of EU goals for the integration of the internal electricity market, security of supply, energy efficiency and better backup supply in emergencies.

On 24 April 2016, the project promoter of EuroAsia Interconnector notified the project in writing to the competent authority of Cyprus, the MECIT. On 6 May 2016, the MECIT accepted the notification.

Subsequently, the project promoter submitted an investment request to the Regulatory Authorities of Cyprus and Greece on 5 September 2017 for the first stage of the "Interconnection between Kofinou (CY) and Korakia, Crete (EL)" with a total capacity of 1000 MW and for the first stage of the "Internal line between Korakia, Crete and Attica region (EL)" with a total capacity of 1000 MW. Following

consultations between CERA and RAE, an agreement was reached on 10 October 2017 on the crossborder cost allocation (CBCA).

CERA proceeded to issue the Decision 216/2017, on 10 October 2017, in which it adopted and decided the following:

- that PCIs No. 3.10.2 "Interconnection between Kofinou (CY) and Korakia, Crete (EL)" and 3.10.3 "Internal line between Korakia, Crete and Attica region (EL)" have reached a sufficient degree of maturity,
- that CBCA the two Member States is reasonable and well documented and there is a net positive impact from project outcomes on the parties involved,
- that for Step 2 (Crete-Attica) of Project No. 3.10.3 "Internal line between Korakia, Crete and Attica
 region (EL)", Greece is the only one of the two Member States involved and will bear any
 investment and operating costs associated with the implementation of the project, while Cyprus will
 have zero (0) costs, and
- that for the Step 3 (Cyprus-Crete) of Project No. 3.10.2 "Interconnection between Kofinou (CY) and Korakia, Crete (EL)", Cyprus will bear 63% of the cost of the implementation of the project and Greece 37%, provided that the project will be subsidized at 50% by third parties.

3.1.5. Compliance

Ensuring compliance with binding decisions of the Agency and the Commission, and with the Guidelines

Under the Third Package, NRAs are required to ensure compliance with and implement binding decisions of ACER and of the European Commission. In order to enable CERA to do this, the Law Regulating the Electricity Market has been amended so as to provide the Authority with the necessary powers to carry out its functions in the manner that it considers is best calculated to implement or ensure compliance with any binding decision of ACER or of the European Commission.

Compliance of transmission and distribution companies, system owners and electricity undertakings with relevant Community legislation, including cross-border issues

CERA has the power to investigate compliance of transmission and distribution, electricity undertakings with relevant Community legislation. If a breach is found, CERA has the power to impose penalties. Furthermore, Cyprus has obtained an exemption from article 9 of the new Directive on the unbundling of transmission systems, therefore TSOs' certification compliance does not apply.

3.2. Promoting Competition

3.2.1. Wholesale markets

The Electricity Market was liberalised by 35% with effect from 1st of May 2004 and was further liberalised by approximately 65% in total with effect from January 2009, to include all "non-domestic" consumers which are able to select their Supplier according to what is in their best interest. From 1st of January 2014 the market is fully liberalised and all consumers of electrical energy are able to choose their Supplier. However, currently there is no other Supplier in Cyprus apart from EAC.

After public consultation, CERA decided to adopt a study, which was prepared by an external consultant of CERA titled "The New Electricity Market Arrangements in Cyprus" concerning the detailed design of the Electricity Market in Cyprus and published the Regulatory Decision 01/2015 whose content was the actual study. The study proposes a design regarding the new electricity market arrangements in Cyprus based on the decision for implementing a Net-Pool Model as being the most appropriate trading arrangement approach for the Cyprus electricity market and which was fully compliant with the EU target Model.

In brief, the above market design, is aiming at creating the appropriate market environment to enable market participants to operate in the electricity sector of Cyprus. Special arrangements and mechanisms have been included in the design in order to allow RES generators (not operating under government support schemes) to benefit by their direct participation in the competitive electricity market either through a day ahead market (DAM) or through bilateral contracts with suppliers.

Specifically, under the net pool design, bilateral physical forward contracts are notified and corresponding schedules are nominated on a half hourly basis to the MO on the day ahead of real time. Orders in the DAM are unit based in the case of generators (or per RES plant or per aggregators of smaller size RES plant). Suppliers submit demand orders based on individually forecast half-hourly demand. Orders in the DAM correspond to residual quantities not already covered by the nominated bilateral contracts. The DAM is centrally managed by the MO by processing matching bid curves in order to optimise dispatch. Contracts resulting from the DAM are between market participants and the MO at the DAM clearing price. Through a centralised approach, the crucial ancillary services are allocated using a co-optimising Integrated Scheduling Process (ISP) prior to gate closure on the day ahead of real time. A real time Balancing Mechanism is used for optimised real time dispatch actions.

The Market Arrangements provide for a centrally organized Day – Ahead Market, compatible with Regional Price Coupling principles (PCR) and an-Intra-Day Market. An integrated Daily Unit Scheduling Process is also provided, matching with a real time Balancing Market. Development of a Forward market is also foreseen, based on Over-the-Counter (OTC) transactions. Over-the-Counter forward products are bilateral contracts, negotiated and concluded between market players, in some case with the mediation of a broker. These contracts are not referring to standardized products transacted in an organized marketplace, e.g. a Power Exchange, although in the market arrangements a platform for the transaction of these contracts might be developed later by the Market Operator.

Subsequently CERA, instructed the Cyprus TSO, as the competent and responsible organisation, to prepare, according to the detailed description of the high-level design, the new Trading and Settlement Rules (known as the Market Rules) and take all necessary steps leading to the implementation of the market according to the agreed plan and timetable. Cyprus TSO set under Public Consultation a text modifying the Market Rules and discussion within the Advisory Committee followed. By Decision 84/2017, 12 May 2017, the Members of CERA decided to approved the proposed amended Trading and Settlement Rules submitted by the Cyprus TSO.

By Regulatory Decision 01/2017, on 27 January 2017, CERA set the implementation of a Binding Timetable for the full commercial operation of the new Electricity Market Model. Specifically, CERA decided to instruct the Cyprus TSO to be staffed, by 30 June 2017, by applying the provisions of article 60(1)(c) of the Law Regulating the Electricity Market, to meet its needs in order to become competent in the exercise of its responsibilities and proceeded immediately with the necessary actions for the completion of the works needed for the full commercial operation of the new Electricity Market Model, until the EAC Board of Directors places appropriate permanent staff.

Moreover, CERA decided that by 1 July 2017, to initiate the implementation of the timetable, as proposed by the Cyprus TSO, and complete within 24 months for the full commercial operation of the new Electricity Market Model. Also, CERA has set the 1st of July, 2019 as the latest date that the new Electricity Market Model to be fully operated.

By Regulatory Decision 02/2017, on 27 January 2017, CERA instructed the Owner of the Transmission System for allocation of resources to the Cyprus TSO, by 30 April 2017, in order to become competent in the exercise of its responsibilities and proceeded immediately with the necessary actions for the completion of the works needed for the full commercial operation of the new Electricity Market Model.

By Regulatory Decision 04/2017, on 26 June 2017, CERA decided on the implementation of the transitional arrangements of the electricity market in Cyprus prior the full implementation of the new Electricity Market Model. The transitional period will be based on bilateral contracts between producers and suppliers for the supply of a standard quantity of electricity (kWh) on a monthly basis. The

implementation and operation of the transitional arrangements do not require a Market software, due to the fact that the related tasks are relatively simple and can be implemented with simple spreadsheets. The RES-E producers interested in joining the transitional electricity market, should be included under a support scheme of the MECIT, which was announced on September 2017.

Finally, the transitional arrangements of the electricity market in Cyprus will start at 1 September 2017 and will be in force until the full implementation of the new Electricity Market Model where the work of all market participants, EAC-Production and EAC-Supply will be transferred to the new electricity market.

By Decisions 120/2017 and 121/2017, 26 June 2017, CERA decided respectively, that the threshold for participation in the transitional electricity market for producers with either generation units or RES Units would be above 4.5 MW and the threshold for contracts for the supply of energy to consumers, with a total agreed capacity, to participate in the transitional electricity market for suppliers would be above 10 MW.

The two thresholds mentioned above are dynamic and may be modified depending on the participation in the transitional electricity market.

As regards the degree of integration of the market with neighbouring Member States, it was previously mentioned that Cyprus constitutes a small and isolated system.

3.2.1.1. Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

By Regulatory Decision, the Members of CERA decided, on 7 October 2016, to apply provisions prohibiting abusive practices affecting the wholesale energy markets, which are in line with the rules applicable to the financial markets and the proper functioning of those wholesale energy markets, taking into account at the same time their specific characteristics.

In particular, this Regulatory Decision introduces more specific legislative and regulatory arrangements that are deemed necessary for the issues related to Regulation (EU) No. 1227/2011 on the prohibition of insider trading, the obligation to publish inside information, the prohibition of market manipulation, implementation of prohibitions against market abuse and the imposition of related sanctions.

3.2.2. Retail market

As already pointed out, Cyprus has opened the Electricity Market on the 1st May 2004 for the 35% of the annual consumption, on 1st January 2009 extended up to 67% and finally on 1st of January 2014 the market is fully liberilised and each customer is able to choose his own supplier. Currently EAC is the only supplier of electricity, as no new players already being licensed have been put into operation. It is expected that with the establishment of the New Market Model the competition will start developing.

The total consumption of customers and the consumption by sector is given below

| CONSUMERS, TOTAL & AVERAGE SALES & AVERAGE PRICES | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--|--|
| As at 31 December | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | | |
| NUMBER OF CONSUMERS | | | | | | | | |
| Domestic | 427184 | 428616 | 433072 | 437577 | 442293 | 444895 | | |
| Commercial | 85198 | 84695 | 85188 | 85525 | 86494 | 87065 | | |
| Industrial | 10805 | 10222 | 9836 | 9712 | 9596 | 9760 | | |

Table 3. Consumers, total and average sales and prices

| Agricultural | 14978 | 15280 | 15536 | 15748 | 15886 | 15902 | | |
|---|-------------|------------|---------|---------|---------|---------|--|--|
| Public Lighting | 10333 | 10635 | 10942 | 11138 | 11287 | 10878 | | |
| TOTAL | 548498 | 549448 | 554574 | 559700 | 565556 | 568500 | | |
| SALES TO CON | SUMERS (tho | usands kWh | ı) | | | | | |
| Domestic | 1671095 | 1435231 | 1407656 | 1475972 | 1567312 | 1641033 | | |
| Commercial | 1836756 | 1655761 | 1630789 | 1659588 | 1728200 | 1755094 | | |
| Industrial | 631829 | 581860 | 656097 | 685864 | 819693 | 856422 | | |
| Agricultural | 128590 | 129129 | 135680 | 129447 | 155638 | 156453 | | |
| Public Lighting | 87330 | 87807 | 85257 | 85211 | 87648 | 86578 | | |
| TOTAL | 4 355 600 | 3889788 | 3915479 | 4036082 | 4358491 | 4495580 | | |
| AVERAGE SALES PER END YEAR CONSUMER (kWh) | | | | | | | | |
| Domestic | 3912 | 3349 | 3250 | 3373 | 3544 | 3689 | | |
| Commercial | 21559 | 19550 | 19143 | 19405 | 19981 | 20158 | | |
| Industrial | 58476 | 56922 | 66703 | 70620 | 85240 | 87748 | | |
| Agricultural | 8585 | 8451 | 8733 | 8220 | 9797 | 9839 | | |
| Public Lighting | 8452 | 8256 | 7792 | 7650 | 7765 | 7959 | | |

As there is only one supplier operating at present, switching procedures for customers to change suppliers are not possible. Regarding the average (typical) contract duration for households, this for the time being is not applicable in Cyprus. As a general assessment to whether the market is seen to be active, it could be said that the market seems to become active. By considering the above conditions under which Cyprus has to act, i.e. small isolated system, the progressively opening of the electricity market where it constitutes a contemporary activity for the island, the above situation can be justified.

Table 4. Market share of 3 largest companies & supplier switching

| | | | | | | Cumulative % customers having changed supplier (by volume) | | | |
|------|--|---|---|---|---|---|---|---|--|
| | No. of companies with >5% retail market | Number of fully (1) independent suppliers | Large and very large industrial | Small- medium industrial and business | Very small business and household | Large and very large industrial | Small- medium industrial and business | Very small business and household | |
| 3.66 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 3.74 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 3.93 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.14 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.30 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.56 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.66 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.78 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.59 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.35 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.26 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| 4.32 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 | |
| | consumption (TWh) 3.66 3.74 3.93 4.14 4.30 4.56 4.66 4.78 4.59 4.35 4.26 | Total companies consumption with >5% retail market 3.66 1 3.74 1 3.74 1 3.93 1 4.14 1 4.30 1 4.56 1 4.56 1 4.33 1 4.4.56 1 4.55 1 4.59 1 4.35 1 | Total consumptioncompanies with >5% retail marketNumber of fully (1) independent suppliers 3.66 10 3.74 10 3.74 10 3.93 10 4.14 10 4.30 10 4.66 10 4.78 10 4.35 10 4.26 10 | No. of companies (TWh)No. of companies humber of fully (1) independent suppliersLarge and very large industrial 3.66 10n/a 3.66 10n/a 3.74 10n/a 3.73 10n/a 4.14 10n/a 4.14 10n/a 4.56 10n/a 4.66 10n/a 4.78 10n/a 4.59 10n/a 4.35 10n/a 4.35 10n/a 4.26 10n/a | No. of companiesNumber of fully (1) ndependent suppliersLarge and wery large industrial and business3.6610n/a3.6610n/a3.7410n/a3.7410n/a3.9310n/a4.1410n/a4.3010n/a4.3610n/a4.3610n/a4.3610n/a4.45610n/a4.45910n/a4.3510n/a4.3510n/a4.3510n/a4.3510n/a4.3510n/a4.3510n/a4.3510n/a | Total consumptioncompanies with >5% retail marketNumber of fully (1) independent suppliersLarge and very large industrial and businessVery small business and household3.6610n/an/an/a3.6610n/an/an/a3.7410n/an/an/a3.9310n/an/an/a4.1410n/an/an/a4.3010n/an/an/a4.3610n/an/an/a4.6610n/an/an/a4.7810n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/an/a4.3510n/an/a4.3510n/an/a4.3510n/an/a <tr< td=""><td>Market share of three largest companies (Producers)having of (tread consumption with >5% retail marketNumber of fully (1) independent suppliersLarge and very large industrial and businessVery small business and householdLarge and very large and household3.6610n/an/an/a03.7410n/an/an/a03.7410n/an/an/a03.7410n/an/a004.1410n/an/a004.5610n/an/a004.6610n/an/a004.7810n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.42610n/an/a0</td><td>Marker share of three largests companies (Producers)having changed s (by volume large and suppliersTotal consumption with >5% (TWh)Number of fully (1) independent suppliersLarge and very large industrial and businessSmall- medium industrial and businessLarge and medium industrial and businessLarge and businessSmall- medium industrial and businessLarge and medium industrial and businessSmall- wery large industrial and business3.6610n/an/an/a003.7410n/an/an/a003.7410n/an/an/a004.1410n/an/an/a004.3010n/an/an/a004.5610n/an/an/a004.5610n/an/an/a004.5910n/an/an/a004.5910n/an/an/a004.3510n/an/an/a004.2610n/an/an/a00</td></tr<> | Market share of three largest companies (Producers)having of (tread consumption with >5% retail marketNumber of fully (1) independent suppliersLarge and very large industrial and businessVery small business and householdLarge and very large and household3.6610n/an/an/a03.7410n/an/an/a03.7410n/an/an/a03.7410n/an/a004.1410n/an/a004.5610n/an/a004.6610n/an/a004.7810n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.43510n/an/a004.42610n/an/a0 | Marker share of three largests companies (Producers)having changed s (by volume large and suppliersTotal consumption with >5% (TWh)Number of fully (1) independent suppliersLarge and very large industrial and businessSmall- medium industrial and businessLarge and medium industrial and businessLarge and businessSmall- medium industrial and businessLarge and medium industrial and businessSmall- wery large industrial and business3.6610n/an/an/a003.7410n/an/an/a003.7410n/an/an/a004.1410n/an/an/a004.3010n/an/an/a004.5610n/an/an/a004.5610n/an/an/a004.5910n/an/an/a004.5910n/an/an/a004.3510n/an/an/a004.2610n/an/an/a00 | |

| 2015 | 4.51 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 |
|------|------|---|---|-----|-----|-----|---|---|---|
| 2016 | 4.86 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 |
| 2017 | 4.97 | 1 | 0 | n/a | n/a | n/a | 0 | 0 | 0 |

3.2.2.1. Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

By Decision 1524/2016, having taken into consideration Regulatory Decision 02/2015 (Regulatory Practice Statement and Electricity Tariffs Methodology) and the calculations on allowable revenue submitted by EAC, CERA decided to preliminary approve the Allowed Revenue of EAC for the 2017 – 2021 regulatory period provided that these will be differentiated on the basis of the 10 remarks that CERA has set in its Decision.

During the process of verifying the calculations of Allowed Revenue submitted by EAC, it emerged that the volume of work for the preparation of the Allowed Revenue calculations was concentrated on a very small number of employees in the EAC Financial Services Unit. CERA urged EAC to proceed with the training and re-training of more officers involved in the subject of Allowed Revenue in order to perform more efficiently and effectively the work related to the calculation of Allowed Revenue.

By Decision 1557/2016, CERA decided to give instructions to EAC to include in the calculation of the purchase price of electricity from RES the avoidance cost of purchasing greenhouse gas allowances, which EAC does not incur due to the generation of electricity from RES.

CERA also decided that the base prices and the fuel adjustment clause for the purchase of electricity produced from RES, including the following:

- Fuel Cost Avoidance,
- Variable Maintenance Cost Avoidance,
- Greenhouse gas emissions purchasing cost avoidance, and
- Contribution to the Cyprus Organisation for Storage and Maintenance of Oil Stocks cost avoidance,

should be submitted to CERA for approval.

Furthermore, the Decision states that the purchase price of electricity from RES is under detailed scrutiny and will change on the basis of the results that will emerge.

On 25 May 2017, by Decision 97/2017, CERA approved the new tariffs submitted by EAC for the regulatory period 2017 – 2021. The provisions of CERA's decision, are presented in detail in the previous section 3.1.3.1. The new tariffs applied from September 2017. According to the estimations of CERA, the expected reductions in basic electricity tariffs will be on average 6%.

The determination of the allowed revenues of each regulated activity and the new, cost-oriented tariffs contribute to greater transparency and set the benchmark on which stakeholders interested in participating in the electricity market will be based.

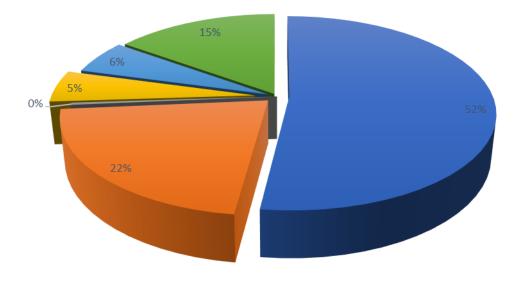
CERA by its Decision No. 160/2017 approved the new EAC invoices, which show the breakdown of the electricity price to the individual charges of each regulated activity. With this additional information, the consumer will be able to make better decisions about consumption and to choose a supplier.

The new invoices which were applied together with the new tariffs, present the following charges:

- Power Consumption: Corresponds to the generation cost of the electricity consumed.
- Network use: Corresponds to the cost of the transmission and distribution networks use and the expenses of the TSO.

- Ancillary Services: Corresponds to the cost for the security and uninterrupted operation of the electricity system.
- Consumption Measurement: Corresponds the meter reading cost.
- Supply of Electricity: Corresponds to the cost of services of the electricity supplier for managing and servicing its customers.
- Fuel Adjustment: Adjustment for the cost associated with the fuel used in EAC's generation.
- Public Service Obligations: Recovering the costs (through the consumption of electricity) to which the EAC is subject due to the extra costs incurred by the application of the special household tariff for specific categories of vulnerable consumers.
- Renewable Energy Sources and Energy Saving Fund: Special charge that the EAC collects and contributes to the RES and Energy Saving Fund of the Ministry of Energy, Commerce, Industry and Tourism.
- VAT: Value Added Tax 19%.

Figure 1 shows the breakdown of the new invoice per billing category for a typical household consumer with a consumption of 600 kWh in December 2017.



■ Energy consumption ■ Network use ■ PSO ■ Fixed prices ■ RES and Energy Saving Funds ■ VAT **Figure 1 Breakdown of the new EAC invoice**

3.2.2.2. Recommendations on supply prices, investigations and measures to promote effective competition

The average selling price of electricity in €cent / kWh for all categories is given below: Table 5. Average Selling Price of Electricity

| AVERAGE SELLING PRICE OF ELECTRICITY (€cent / kWh) | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--|--|
| Year | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | | |
| Category | | | | | | | | |
| Domestic | 22.271 | 20.743 | 18.663 | 14.654 | 12.417 | 14.267 | | |
| Commercial | 22.645 | 20.840 | 18.923 | 14.731 | 12.498 | 14.108 | | |
| Industrial | 20.868 | 19.127 | 16.824 | 12.531 | 10.079 | 11.949 | | |
| Agricultural | 21.929 | 20.013 | 18.168 | 14.127 | 11.996 | 13.533 | | |
| Public Lighting | 20.909 | 19.393 | 17.353 | 13.366 | 10.558 | 13.166 | | |
| Average Selling Price (€cent / kWh) | 22.188 | 20.488 | 18.418 | 14.281 | 11.957 | 13.717 | | |

With regards to investigations and measures to promote effective competition CERA may on its own initiative or after receiving a complaint to investigate whether a licence holder is infringing or omitting to comply with any condition of the licence or any Regulatory Decision or Decision.

After carrying out such an investigation, CERA shall notify a notice to the aforementioned persons by which it shall determine:

- The term of the license or exemption or the regulatory decision or decision which, in CERA's opinion may be infringed at first sight or which is likely to be infringed by the licensee.
- The acts or omissions which in CERA's opinion may or are likely to constitute an infringement of the relevant term, Decision or Regulatory Decision of CERA.
- The deadline within which the licensee may submit objections in writing, which deadline shall not exceed the 30-day time limit from the date that the notice is notified.
- CERA shall examine any objections submitted. In examining any objection, CERA may issue a decision by which, it shall order the licensee to take such measures as may be necessary for remedying the infringement or preventing future infringements.
- In the event that the licensee fails to remedy the infringement within one month from being notified of the decision of CERA, or within a reasonable period of time as CERA may prescribe by its decision, CERA may:
- Impose an administrative fine on the licensee depending on the nature, seriousness and duration
 of the infringement or omission as may be prescribed by Regulations issued under the relevant
 Law; and/or,
- Decide that an administrative fine depending on the seriousness of the case, shall be owed for each day on which the infringement or omission is continuing as referred to above; and/or,

• Revoke an authorisation, exemption, order or prior permit in accordance with the procedure prescribed by Regulations issued by CERA.

CERA's decision to impose an administrative fine or to revoke a license must be in writing and duly reasoned.

CERA's reasoned decision to impose an administrative fine shall be notified to the person who has been considered to be responsible for the infringement or omission. Such person may, after being notified of the decision, make written representations to CERA which must be lodged within 30 days of the notification of the decision. CERA shall collect the administrative fine if the 75-day time limit for filing a recourse before the Supreme Court of Justice has passed without any action being taken from the date of notification of the decision to impose such administrative fine, or, in the event that the recourse has been filed, following the issuing of a court decision which does not annul the fine.

If a fine imposed by CERA in accordance with the Law and the Regulations issued under it is not paid, CERA shall initiate court proceedings and shall collect the sum as a civil debt due to the Fund of the Office of CERA.

3.3. Security of supply (if and insofar as NRA is competent authority)

3.3.1. Monitoring balance of supply and demand

CERA in accordance with the Law on Regulating the Electricity Market has the responsibility, for the adequacy of electricity supply in Cyprus, the reliability and security of the Generation, Transmission and Distribution system and the quality of electricity supply.

CERA systematically monitors the adequacy, quality and reliability of supply and whenever it ascertains possible shortfalls informs the Minister of Commerce, Industry and Tourism, who after consulting with CERA, takes the indicated corrective measures.

The Maximum Demand for 2017 was recorded on Monday 3/7/2017 at 14:30 hours, when the Total Power Generation rose to **1090 MW**. The energy crisis has adversely affected both maximum power generation of the year, as well as the annual energy generation.

The following important records concern the recorded Total Electrical Energy Generated during 2017. The total gross electrical energy generated reached **4974 GWh**. EAC contributed with **4559 GWh**, while RES producers generated **41.5 GWh**. The EAC Generating Stations produced **22.6 GWh** for their local needs. Total units sent out to the Transmission System from the EAC Power Stations, reached **4333 GWh**. Recorded energy losses in the Transmission System amounted to **6.61 GWh** of the energy flowing into the transmission network. It should be noted that the mean value of the Annual Load Factor decreased to 52.1% compared to 54.0% in 2016.

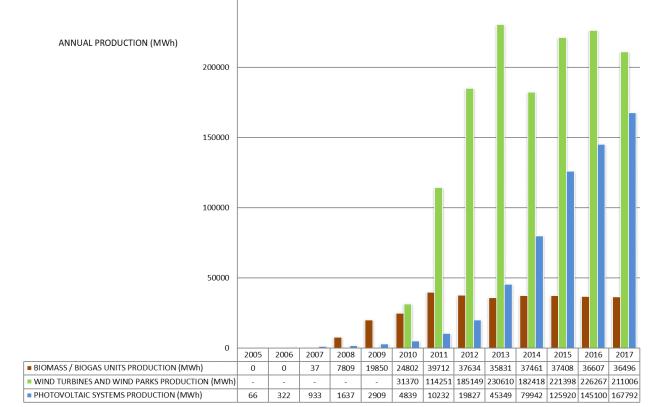


Figure 2 below shows the annual generation produced from each type of RES for the period 2005-2017:

250000

Figure 2. Annual installed capacity - Production (MWh) RES 2005-2017

Figure 3 below shows the total installed capacity of each type of RES-E for the period 2005-2017:

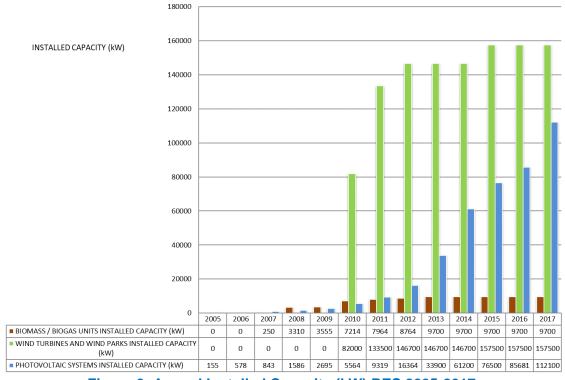


Figure 3. Annual Installed Capacity (kW) RES 2005-2017

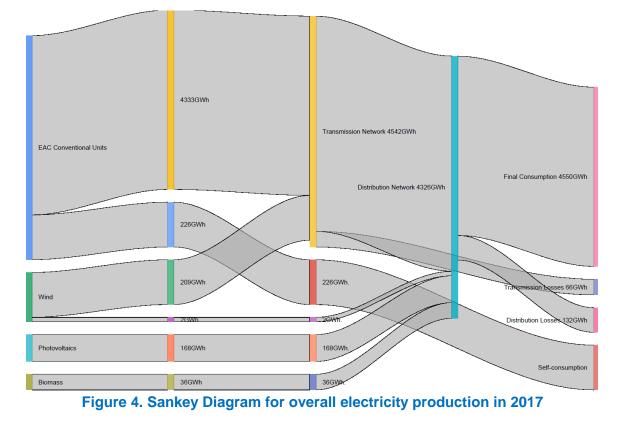


Figure 4 below shows the total electrical energy production in 2017:

Figure 5 below gives the RES penetration levels into the Cyprus electrical system for the year 2017. The average RES penetration reached 8.35 % of the Total Generation in Cyprus for 2017:

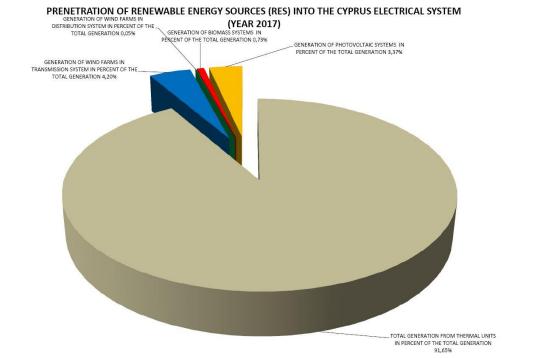


Figure 5. RES penetration levels into the Cyprus electrical system for the year 2017

Cost reflective market prices and transparent market mechanisms operated by independent operators under rules and regulations of an independent regulator should provide relevant signals for investors to timely respond to such needs. However, the combination of a small system size, without interconnections, as in the case of Cyprus reduces the margins for the effective response to such market signals to critical levels.

In line with the spirit of the Directive, the Law assigns priority to the market in offering the appropriate signals to investors so as to construct the most appropriate type and size of generation capacity, in order to meet the various needs of the market. To that effect, the Law adopts and prescribes an authorisation procedure, implemented through licences issued by CERA to interested prospective investors, subject to various criteria which are only supposed to safeguard participants rather than prescribe specific solutions.

Moreover, recognising the specificities of electricity and its importance for the economy, the Law introduces a safety valve, in the form of a tendering process, by which CERA may justifiably intervene when the authorisation process appears to be unable to timely bring about the needed generation capacity. For the specification of the need based on which the tendering process may be initiated the Law refers to the mandate of CERA to act so as to ensure security, continuity, quality and reliability of electricity supply. CERA is thus enabled to require from the TSO timely information on the expected needs of the system, and may provide the appropriate regulatory signals, where necessary; or, CERA may commence the tendering process described by the Law where CERA considers that despite such signals, or due to unforeseen circumstances, the market is unable or unwilling to bring about the needed investment. Clearly, the process should be directed to resolve the specific problem identified by the TSO, which the market cannot address in a timely manner, i.e. it should specify characteristics of new generation corresponding to the requirements of the TSO.

3.3.2. Monitoring investment in generation capacities in relation to SoS

3.3.2.1. Operational Network Security

The Table 7 below shows the total installed capacity of EAC's conventional units for 2017:

| Total Installed Capacity of EACs' Conventional Units (MW) | | | | | | | | |
|---|--------------------|---------------------|-------------------------|---|---|--|--|--|
| Power Station | CCGT units (MW) | Steam units (MW) | Gas Turbines (MW) | Internal Combustion Units (ICE) (MW) | Installed Capacity per Station (MW) | | | |
| Moni | - | - | 4x37.5=150 | - | 150 | | | |
| Dhekelia | - | 6x60=360 | - | 2x50=100 | 460 | | | |
| Vassilikos | 2x220=440 | 3x130=390 | 1x38=38 | - | 868 | | | |
| Installed Capacity | 440 | 750 | 188 | 100 | 1478 | | | |
| per type of unit | | | | | | | | |

Table 6. Total Installed Capacity of EACs' Conventional Units (MW)

During 2017, the total capacity licensed by CERA for conventional generating stations was 2,231.27 MW, of which 1478 MW belong to EAC, 33.93 MW belong to self-producers and 719.34 MW, belong to independent power producers. The total installed capacity of Wind Farms in commercial operation amounted to 157.5 MW. The total installed capacity of units for the cogeneration of heat and power, autonomous or interconnected to the electricity system amounted to 9.7 MW. Finally, the total installed capacity of PV systems was 112.1 MW.

Figures 6 and 7 below show the geographical distribution of licensed conventional generating stations and power plants using RES with a capacity of more than 20 KWp.

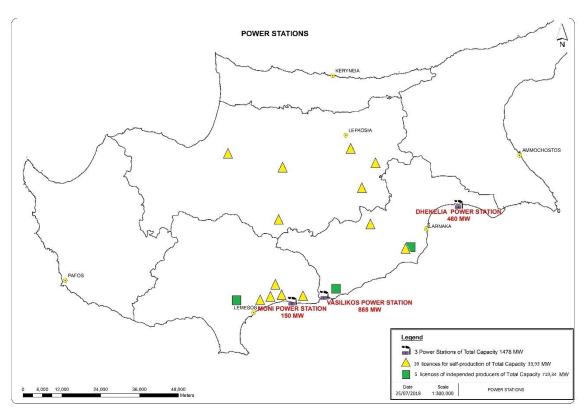


Figure 6. Presentation and Geographical Distribution of Licences for Conventional Generating Stations up to 2017

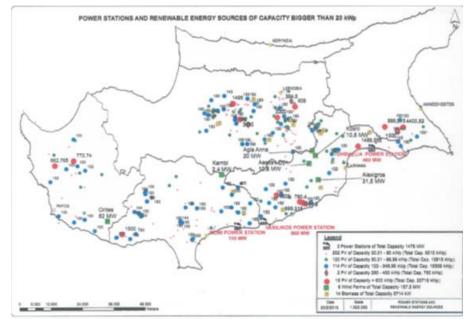


Figure 7. Presentation and Geographical Distribution of Licences for RES Units by 2017

3.3.2.2. Investment in Interconnection capacity for the next 5 years or more

As mentioned above, in Chapter 3.1.4, the electricity system of Cyprus operates without cross-border links. The "EuroAsia Interconnector Project" is currently under study, which is promoted as a Project of Common Interest (PCI).

The EuroAsia Interconnector was proposed for the electricity interconnection between Israel, Cyprus and Greece. It was approved by the European Commission and was included in EU list as a Cluster consisting of three distinct projects: Israel - Cyprus, Cyprus - Crete and Crete - Attica.

With the implementation of this project, Cyprus will cease to be a system isolated from the European network, which is one of the main pillars set by the EU. It is also expected to contribute positively to the achievement of EU goals for the integration of the internal electricity market, security of supply, energy efficiency and better backup supply in emergencies.

3.3.2.3. Expected future demand and envisaged capacity for the next 5 years and 5-15 years

According to the Electricity Market Laws 2003 – 2017, Long Term Forecast of Annual Total Generated Energy (GWh) and Long-Term Forecast of Annual Maximum Generation (MW) for the Years 2018 – 2027 were prepared by the TSO Cyprus and approved by CERA on the 27 February 2018.

The results of the Long-Term Forecast of Annual Total Generated Energy (GWh) and Long-Term Forecast of Annual Maximum Generation (MW) for the Years 2018 – 2027, along with the recorded generation from 2005 until today, are shown below:

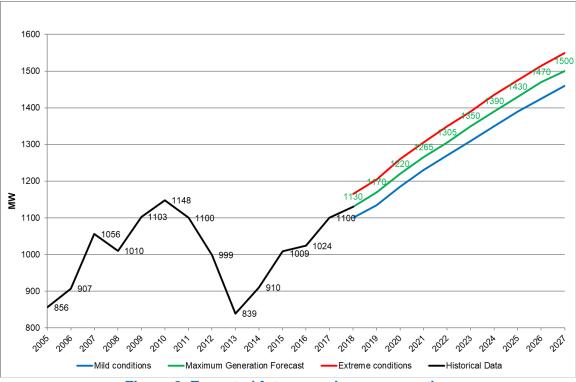
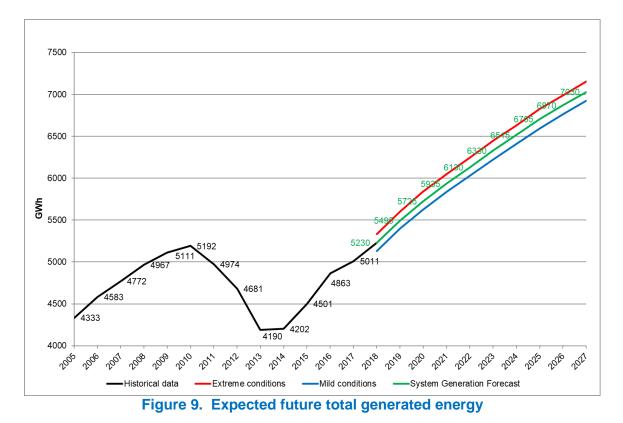


Figure 8. Expected future maximum generation



Cyprus has an obligation to reach 13% contribution from renewable energy sources in the final use of energy by 2020. The National Renewable Energy Action Plan submitted by the Government projected that by 2018 the electricity generation capacity from renewable energy sources would reach 425MW. This capacity is expected to reach 21.7% share of renewable energy in the gross energy consumption.

| Table 7. National RES Flatt provisions | | | | | | | | |
|--|---|------|------|------|--|--|--|--|
| | Estimation of total contribution expected from each RES technology in Cyprus | | | | | | | |
| RES Technology | 2017 | 2018 | 2019 | 2020 | | | | |
| Onshore Wind | 210 | 210 | 260 | 300 | | | | |
| Photovoltaic | 75 | 125 | 145 | 192 | | | | |
| Concentrated Solar Power | 75 | 75 | 75 | 75 | | | | |
| Biomass | 15 | 15 | 17 | 17 | | | | |
| Total Installed Capacity (MW) | 375 | 425 | 497 | 584 | | | | |
| Total Gross Electricity Generation (GWh) | 820 | 900 | 1033 | 1175 | | | | |

Table 7. National RES Plan provisions

3.3.3. Measures to cover peak demand or shortfalls of suppliers

CERA, during the energy crisis in 2011 and 2012 has taken immediate and effective steps to alleviate interruption of suppliers and to terminate shortfalls at the shortest possible time and at the same time at the lowest possible cost. Details are given in paragraph 3.1.2.4. "Monitoring Safeguard Measures" above.

4. The gas market

4.1. Network regulation

4.1.1. Unbundling

The gas sector according to the last amendment of the Law regulating the Natural Gas market as well as the relevant Ministerial Decision, shall be monopolistic.

Today, the natural gas market in Cyprus is non-existent due to factors such as geographical isolation, small size of the market and lack of interconnections with other gas networks. This has adverse effects on the cost of electricity generation, as well as lack of energy source diversity for the industry in general. Moreover, the environmental cost associated with the extensive use of heavy fuel oil for power generation is significant, as it affects emission targets required by EU legislation.

A political decision has been taken to investigate the introduction of natural gas in Cyprus' energy market, as an interim solution and until Cyprus gets its own gas, for the following principal reasons:

- The reduction of electricity generation cost and as a result the decrease of electricity prices to the end consumer; and
- The introduction of competition in the electricity generation market.

The Gas Directive (2009/73/EC) allows derogations for a limited duration from certain provisions, in the case of isolated and emergent natural gas markets, which are provided for assisting such markets in their transition in becoming functional and competitive. Since natural gas will be introduced in the Cyprus market for the first time, it is at the Governments' discretion to decide whether to invoke these derogations, fully or partially.

The long-term goal is the establishment of a functioning, competitive gas market in Cyprus with a level playing field and absence of conflicts of interest. This strategy is heavily fuelled by the strong interrelation between the gas and electricity markets and the decisive effects that a mature gas market will have on the introduction of competition in the electricity sector. Therefore, all necessary measures will be taken in order to ensure equal access to gas for potential IPPs, as well as other gas consumers.

Such strategy also necessitates the development of any network infrastructure, storage facilities and ancillary systems necessary for a fully functional and open market, able to utilize natural gas as part of the country's energy mix. Evidently, a backbone network for the supply of natural gas to the main industrial areas of the island, either via pipelines or through a system of transport and storage, would not only provide a geographical spread of electricity generation units (a strategic advantage against acts of terrorism, grand scale accidents or force majeure), but would also encourage, at a later stage, the use of natural gas by the transport sector, or by the heat intensive industries. In due course, large hotels, hospitals, or even domestic and office units will also be in position to utilise natural gas to cover their energy needs in heating, cooling and electricity through cogeneration and tri-generation technology.

In case the interim solution pursued by Natural Gas Public Company (known by its Greek Acronyms as DEFA - a private company which is not licenced by CERA in any way and is not appointed by the Government as TSO) with the bidders and EAC is successful, the Minister of Energy is planning to propose to the Council of Ministers to declare the Cyprus Natural Gas Market as an emergent market for the duration of this solution. This means that DEFA will be granted monopoly status in buying (importing), selling, transmitting, distributing and storing natural gas. This will be instated by selective use of certain derogation provisions of Directive 2009/73/EC. It will ensure stable introduction of natural gas in the market and gradual transition to an open competitive market. CERA has prepared a study which describes the evolution and functioning of the emergent market and also suggests the specific derogations to be invoked.

4.1.2. Technical functioning

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.1.3. Network and LNG tariffs for connection and access

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.1.4. Cross-border issues

At present, there are no cross - border gas links in Cyprus, however specific interconnection projects are promoted as PCIs. The European Commission has declared several energy projects, which are of strategic importance for Cyprus and Greece, as potential PCIs. The projects which concern Cyprus and have been included in the Union list in the cluster of natural gas and related equipment for the transmission of gas from new sources from offshore Eastern Mediterranean deposits are the following:

- "EastMed Pipeline" A pipeline from offshore Cyprus to Greece mainland via Crete
- "CyprusGas2EU" Ending the isolation in Cyprus in order to allow the transmission of gas to the Eastern Mediterranean region.

The Implementing Body of Project 7.3.2 "Removing internal bottlenecks in Cyprus to end the isolation and allow the transmission of gas from the Eastern Mediterranean region" submitted a request for investment to the Energy Regulators of Cyprus (CERA) and of Greece (RAE) on 28 August 2017. Following consultations between CERA and RAE, an agreement on the cross-border sharing of investment costs was reached on 9 October 2017.

CERA issued a relevant decision (215/2017) on 10 October 2017 which adopted and decided the following:

- The PCI No. 7.3.2 "Removing internal bottlenecks in Cyprus to end the isolation and allow the transmission of gas from the Eastern Mediterranean region" has reached a sufficient degree of maturity for decision-making purposes,
- the sharing of costs between the two Member States is reasonable and documented and there is a net positive impact of project results on the parties involved, and
- taking into account the investment application request of the Project Implementing Body, the Republic of Cyprus is the only one of the two Member States involved to bear any investment and operating costs related to the implementation of the project while Greece / the Greek System will have zero (0) costs.

4.1.5. Compliance

Ensuring compliance with binding decisions of the Agency and the Commission, and with the Guidelines

Under the Third Package NRAs are required to ensure compliance with and implement binding decisions of ACER and of the European Commission. In order to enable CERA to do this, the Gas Act has been amended so as to provide the Authority with the necessary powers to carry out its functions in the manner that it considers is best calculated to implement or ensure compliance with any binding decision of ACER or of the European Commission.

Compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant Community legislation, including cross-border issues

CERA has the power to investigate compliance of transmission and distribution, natural gas undertakings with relevant Community legislation. If a breach is found, CERA has the power to impose penalties.

4.2. **Promoting Competition**

4.2.1. Wholesale markets

CERA, recognising the need for an immediate re-evaluation of the strategy to be followed for the costeffective implementation of the gas import policy in Cyprus, has prepared a Report analytically presenting the parameters which should be taken into account in the planning of future actions aiming at achieving a final synthesis comprising a series of steps that could be taken to turn the apparent slowdown of progress in the gas market into a starting point for the fruitful conclusion of the whole effort as soon as possible.

According to the Report, the option of introducing Liquefied Natural Gas (LNG) in Cyprus' energy balance should not be seen as an intermediate situation, but as a permanent one and parallel to that of the gas supply from the deposits of South-Eastern Mediterranean, primarily for reasons of security of supply and also for the development of gas use in other sectors such as shipping and small-scale LNG.

The Report was submitted by CERA to the Minister of Energy, Commerce, Industry and Tourism in February 2016.

On the basis of the CERA Report and recommendations, in June 2016 a Decision was taken by the Council of Ministers for the arrival of LNG in Cyprus the soonest possible as an exclusive supply option and then as an alternative to ensuring the security of energy supply. In addition, DEFA was commissioned to prepare a study on the options for the development of the gas market in Cyprus in order to use the most suitable solution for the introduction of LNG by 2020 at the latest.

The members of CERA taking into consideration the decision of the Council of Ministers, 18 May 2017, according to which the Minister of Energy, Commerce, Industry and Tourism was authorised to instruct DEFA to tender for long-term supply of LNG for electricity generation purposes and to find a strategic investor for the construction and subsequent operation of the necessary infrastructure including the floating storage and re-gasification technology, the anchor, the pipeline to the boundary of the Vassilikos power station and the natural gas storage system, decided to set the Basic Principles on Tariff Methodology of LNG Infrastructure.

According to the methodology, the allowed revenue will be submitted to CERA for approval on an annual basis. At the end of each year, auditing will be performed by comparing the allowed revenue with the actual cost, and subsequently the necessary adjustments will be made. For any differences arising and approved by CERA, an adjustment will be made to the allowed revenue for the following year.

The allowed revenue will include the capital and operating costs. The capital cost will include the depreciation of the average Regulated Asset Value (RAV) and the allowed return on the average RAV. The allowable return on the RAV will correspond to the Weighted Average Cost of Capital (WACC). The operating costs relate to the costs incurred for the operation of the LNG plant.

The efficiency of the operation of LNG facilities is an obligation of the investor. It is estimated that over time and by increasing the amount of LNG traded, there will be an increase in the efficiency of LNG facilities. When the project reaches a sufficient degree of maturity and as is the case for most energy systems with regulated tariffs, a methodology of incentive to reduce costs and therefore a reduction in annual charging is followed.

4.2.1.1. Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

By Regulatory Decision, the Members of CERA decided, on 7 October 2016, to apply provisions prohibiting abusive practices affecting the wholesale energy markets, which are in line with the rules

applicable to the financial markets and the proper functioning of those wholesale energy markets, taking into account at the same time their specific characteristics.

In particular, this Regulatory Decision introduces more specific legislative and regulatory arrangements that are deemed necessary for the issues related to Regulation (EU) No. 1227/2011 on the prohibition of insider trading, the obligation to publish inside information, the prohibition of market manipulation, implementation of prohibitions against market abuse and the imposition of related sanctions.

In addition, by Decision 128/2017, CERA decided to lay down the basic principles of the tariff methodology for Liquefied Natural Gas (LNG) facilities to be used in the setting of the regulated tariffs for the use of LNG facilities. The basic principles of the methodology were presented in section 4.2.1. above.

4.2.2. Retail market

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.2.2.1. Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.2.3. Recommendations on supply prices, investigations and measures to promote effective competition

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.3. Security of supply

Regarding the security of Natural Gas Supply, the Regulation (EU) No 2017/1938 concerning measures to safeguard security of gas supply is automatically applicable in the event a gas market exists and therefore any implementing measures are not required. Furthermore, CERA according to the Law regulating the Natural Gas Market is appointed as the competent Authority to ensure implementation of the measures laid down in Regulation (EU) No 994/2010 which was revised by the Regulation .(EU) No 2017/1938.

4.3.1. Monitoring balance of supply and demand

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.3.2. Expected future demand and available supplies as well as envisaged additional capacity

Currently, natural gas is not available in the island, therefore is not applicable as yet.

4.3.3. Measures to cover peak demand or shortfalls of suppliers

Currently, natural gas is not available in the island, therefore is not applicable as yet.

5. Consumer protection and dispute settlement in electricity and gas

5.1. Consumer protection

The **consumer protection measures**, including those set out in Annex I of the directives 2009/72/EC and 2009/73/EC, are **effective and enforced** through the Law Regulating the Electricity Market and the Law Regulating the Gas Market respectively, which transposed the provisions of the said directives.

CERA has also been granted the power to contribute to ensuring high standards of universal and public service in compliance with market opening, to the protection of vulnerable customers, and to the full effectiveness of consumer protection measures.

CERA ensures that consumers are provided with all necessary information concerning their rights, current legislation and the means of dispute settlement available to them in the event of a dispute.

CERA has prepared and issued in electronic and hard copy format all the information needed regarding consumer's rights. This information is available at CERA's Premises, at Citizens Service Centre and at the local district offices of the MECIT. The Office of CERA, the Citizens Service Centre and the MECIT shall constitute the **single points of contact** for consumer information purposes.

In summary, the energy consumers' rights that are covered by national legislation and comply with relevant EU directive can be classified in six categories:

- Universal service (i.e. the right to be supplied with electricity/gas of certain quality and price)
- Customer Information Requirements
- Change of supplier without imposing any charges
- Complaints handling and out-of-court settlement of disputes
- Protection of vulnerable consumers
- Fair commercial practices and general consumer rights

According to the law CERA shall ensure that electricity or natural gas suppliers or DSOs, in cooperation with CERA, take the necessary steps to provide all consumers with a copy of the **Energy Consumer Checklist** which contains practical information relating to energy consumer rights, which the Commission shall prepare in consultation with relevant stakeholders, including Member States, the national regulatory authorities, consumer organisations and undertakings, and shall ensure that the said Checklist is available to the public.

Moreover, the Members of CERA, based on the Decision of the Minister of Commerce, Industry and Tourism issued a Regulatory Decision (03/2016), by which CERA imposed on all electricity supply Licensees PSOs with respect to specific vulnerable groups of consumers, by including them in the special tariff (code 08) of EAC, which compared to the normal tariff (code 05) has reduced charges. They are also provided with financial incentives for participating in a plan for setting up a Photovoltaic system at their house, with a capacity up to 3kW with the net-metering method

The categories of vulnerable consumers defined in the Regulatory Decision are:

- The recipients of public assistance provided by the Social Welfare Services of the Ministry of Labour, Welfare and Social Insurance,
- The beneficiaries of guaranteed minimum income provided by the Welfare Benefits Administration Service of the Ministry of Labour, Welfare and Social Insurance,
- Families with more than 3 dependent children with an annual gross family income up to € 51.258. The income criterion of €51,258 for annual combined gross family income is increased by €5,126 for each additional child over the number of fourth,
- The Recipients of Severe motor disability allowance provided by the Department for Social Inclusion of Persons with Disabilities, Ministry of Labour, Welfare and Social Insurance,

- The recipients of care allowance in paraplegic individuals granted by the Department for Social Inclusion of Persons with Disabilities, Ministry of Labour, Welfare and Social Insurance,
- The recipients of care allowance in quadriplegic individuals granted by the Department for Social Inclusion of Persons with Disabilities, Ministry of Labour, Welfare and Social Insurance,
- The Recipients of the grant to blind granted by the Department for Social Inclusion of Persons with Disabilities, Ministry of Labour, Welfare and Social Insurance,
- Hemodialysis renal patients who receive a mobility allowance from the Department of Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance, and
- Individuals suffering from multiple sclerosis who are registered members of the Cyprus Multiple Sclerosis Association.

By Decision 145/2017 issued on July 18, 2017, CERA decided to approve DSO's proposal on the switching supplier procedure.

5.2. Dispute settlement

5.2.1. Electricity Market

CERA has the power to issue Regulations concerning the protection of the interests of the consumers of electricity requiring that any Supplier of electricity and the DSO, within a prescribed time period, propose and implement procedures for the submission of complaints by consumers, which allow consumers to register complaints and prescribing how any Supplier and the DSO shall respond to complaints received by consumers.

The Regulations may impose requirements on Suppliers and the DSO relating but not limited to:

- Procedures for the submission and, where appropriate, re-submission of proposed complaints procedures for approval.
- The timetable for the implementation of the complaints procedures.
- Penalties for failure to comply with the consumer complaints Regulations relating to the preparation or implementation or review of complaint procedures.
- A requirement that Suppliers and the DSO review their complaints procedures at intervals of not more than five years.
- Establishing procedures to deal with complaints from consumers that are not settled through complaint procedures to the satisfaction of consumers.
- Specifically, the following Regulations relevant to the above mentioned were enacted:
- Regulations on Regulating the Electricity Market (Procedure for Submitting Complaints) of 2005.
- Regulations on Regulating the Electricity Market (Performance Indicators) of 2005.
- The first of the above-mentioned Regulations determine the procedure for submission of complaints by consumers in cases were Suppliers of electricity and/or the DSO, are in breach of their obligations or duties and/or are acting outside the scope of their prescribed by the Law jurisdiction.

Specifically, the above-mentioned Regulations provide for the following, inter alia;

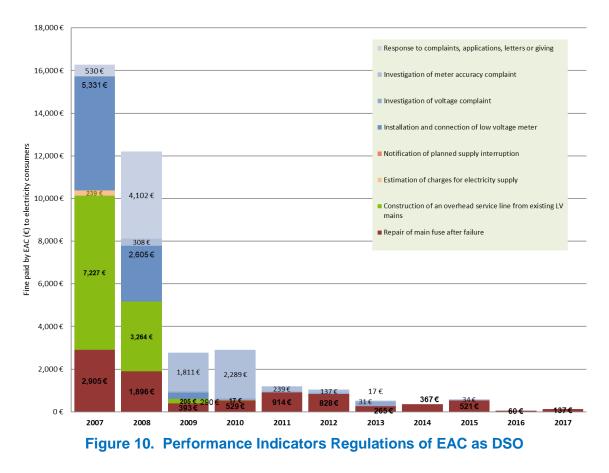
- Consumers' right to submit complaints to the Suppliers and/or the DSO.
- The obligation of the Supplier and/or DSO to respond to the complaints.
- The right to submit complaints to CERA and the procedure for examining complaints by CERA.
- The omission of the Supplier and DSO to comply with CERA's' decisions.
- The penalties provided for in the Regulations.

The second of the Regulations mentioned above, sets the minimum level of performance in relation to the performance indicators of the Supplier of electricity, which must be achieved by the Supplier and the DSO.

Furthermore, this Regulation provides for a Charter of Consumer Rights and sets the time limit within which a Supplier and the DSO must respond, determines the fines, the procedure of payment and the time at which the fines are to be paid in cases where a Supplier or the DSO fails to comply with the performance indicators set out therein.

By the implementation of these Regulations the rights of the consumers are safeguarded, their protection is secured, the procedure for the submission of consumer complaints is regulated in the event that Suppliers of Electrical Energy and/or the DSO are in breach of their obligations, competences and duties, the end result being the improvement of the services offered to consumers.

The following figures show the results from 2007 to 2017 of the penalties (\in) imposed to EAC as DSO and as a Supplier for failure to comply with the customer complaints regulation relating to the preparation or implementation or review of complaints procedures.



It is obvious from figure 10 that there is a major decrease in the total amount paid by the DSO in the last few years comparing with previous years, which may be considered quite satisfactory.

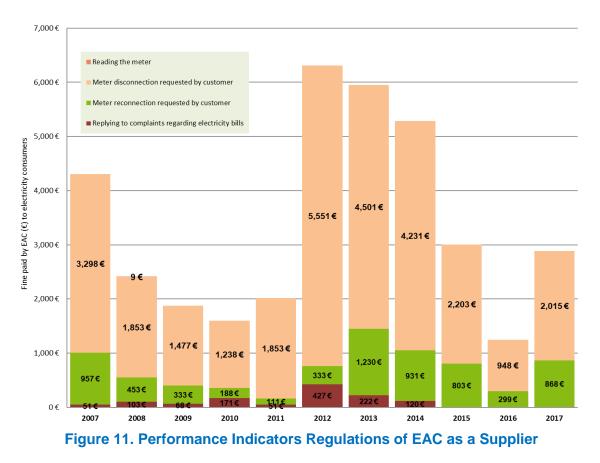


Figure 11 indicates that there is a minor increase in the total amount paid by the Supplier in 2017 comparing with the previous year, concerning the "Meter disconnection/reconnection requested by customer" Performance Indicators.

Regarding consumer complaints, which have been presented or formally submitted to CERA, it could be said that they were maintained within acceptable levels. Registered consumer complaints are shown in Figure 12 below. The majority of the above complaints were based on bill issues. CERA handled with care the above complaints, with the collaboration of EAC and TSO, leaving the consumers in most cases satisfied.

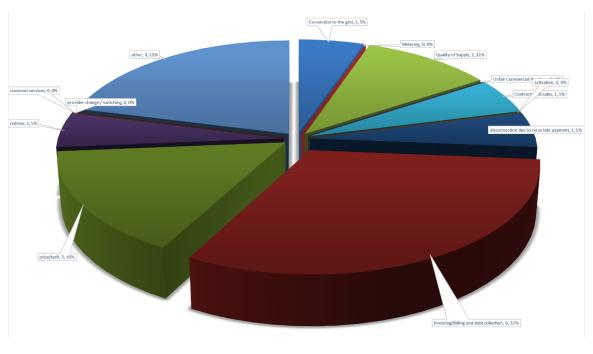


Figure 12. Complaints submitted to CERA in 2017

5.2.2. Gas Market

Even though there is no gas market in Cyprus, the provisions of the directive 2009/73/EC regarding dispute settlement are in place. Therefore, any party having a complaint against a transmission, storage, LNG or distribution system operator in relation to that operator's obligations under this Directive may refer the complaint to CERA which, acts as dispute settlement authority, and issues decisions within a specific period after receipt of the complaint. CERA's decision shall have binding effect unless and until overruled on appeal.

As mentioned above CERA is designated as the body (energy ombudsman or consumer body) which acts as an **independent mechanism** in order to ensure efficient treatment of complaints and out-of-court dispute settlements.