CA ESD
CONCERTED ACTION
ENERGY SERVICES DIRECTIVE

ESD implementation in Cyprus

In Cyprus, the implementation of the ESD is under the responsibility of the Energy Services Department of the Ministry of Commerce, Industry and Tourism. The "Energy end-use efficiency and energy services Law of 2009" (Law for the implementation of the EC-directive on energy services), has been approved by the House of Represenattives.

Legal context

The directive was transposed to national legislation by law 31/2009, approved by the house of Represenatives on 3rd April 2009. There is a number of secondary legislation, which has to be adopted mainly on energy auditors and ESCOs for the complete implementation of the directive. In this respect, the Concerted Action will provide significant assistance.

Status of the implementation

Cyprus has implemented to a substantial extend the directive details of which are listed on the table below:

Directive	Status
Article 1	Transposed in article 3 of Law 31/2009
Article 2	Transposed in article 4 of Law 31/2009
Article 3, part a	Transposed in article 2 of Law 31/2009
Article 4(1), 4(2)	Not transposed to Cyprus Law. (Incorporated in the NEEAP)
Article 4(3)	Transposed in RES Law.
Article 4(4)	Not transposed to Cyprus Law. (Incorporated in the NEEAP)
Article 4(5)	No implementation necessary

Directive	Status
Article 5	Action plan for the promotion of Green Public Procurement is implemented.
Article 6 (1)	Transposed in articles 5 and 6 of Law 31/2009
Article 6 (2)	Amendment of RES law or End-Use Energy Efficiency and Energy Services Law may be required. Furthur information is provided within the following text (Paragraph for Article 6)
Article 6 (3)	Transposed in RES Law.
Article 6 (4)	Not transposed to Cyprus Law.
Article 6 (5)	No implementation necessary
Article 7 (1)	Transposed in RES law and Action plan for the promotion of Green Public Procurement
Article 7 (2)	Transposed in RES law
Article 7 (3)	No implementation necessary
Article 8	Transposed in article 9 of Law 31/2009
Article 9	Transposed in RES law
Article 10 (1)	In line with laws of 2003 and regulating decision 01/2006 of CERA.
Article 10 (2)	In line with laws of 2003
Article 11	Transposed in RES law
Article 12	Transposed in article 9 of Law 31/2009.
Article 13 (1)	For full transposition supplementary legislation may be required for specifications of individual electricity meters (smart meters). The requirement of individual meter for other energy sources (other than electricity) does not apply to Cyprus. Furthur information is provided within the following text (Paragraph for Article 13)
Article 13 (2)	Implemented
Article 13 (3), 3a	Implemented
Article 13 (3), 3b, 3c, 3d	Implemented (Regulating Decision 05/2010 of CERA)
Article 14 (1-2)	Not transposed to Cyprus Law.

Directive	Status
Article 14 (3-5)	No implementation necessary
Article 15	No implementation necessary
Article 16	No implementation necessary
Article 17	No implementation necessary
Article 18	Implemented, law 31/2009
Article 19	No implementation necessary
Article 20	No implementation necessary

Table 1 – Implementation table

Article 4: Energy Savings Targets

The Energy Services Department of the Ministry of Commerce, Industry and Tourism (www.mcit.gov.cy) is monitoring the implementation of the energy savings targets. In carrying out this task, the Energy Servises Department is assisted by the Cyprus Institute of Energy (www.cie.org.cy). Its main objective is the promotion and implementation of EU energy efficiency, RES policy. The target adopted, is 10% (185,000 toe) in 2016 (higher than the 9% indicative of the directive) and the intermediate target is 3% (60,000 toe) in 2010.

Cyprus has achieved the energy saving targets that adopted in the 1st NEEAP. The average final consumption for the period of 2001-2005, was calculated to 1.842.730 toe considering all the assumptions that are reported in the 2nd NEEAP. In 2010 the energy saving was 65.641 toe, that corresponds to 3,56% of the average final energy consumption for the period 2001 - 2005. The energy saving for the final target of 2016, taking into account only the measures that have already implemented, is estimated to 190.663 toe or 10,35% of the energy consumption for the aforementioned mentioned period.

Article 5 Energy end-use efficiency in the public sector

Cyprus is harmonized with the article 5 (2006/32/EC Directive) through the Green Public Procurement. In the 2nd NEEAP there is a detailed description on the implementation and the contribution of the Green Public Procurement to the energy saving targets.

The measures which have been chosen in order to demonstrate the leading role of the public sector are b, c of Annex VI of the ESD Directive, which are as follows:

b) Requirements to purchase equipment and vehicles based on lists of energy – efficient product specifications of different categories of equipment and vehicles to be drawn up by the authorities or agencies referred to in Article 4(4), using, where applicable, minimised life-cycle cost analysis or comparable methods to ensure cost-effectiveness.

c) Requirements to purchase equipment that has efficient energy consumption in all modes, including in standby mode, using, where applicable, minimised life –cycle cost analysis or comparable methods to ensure cost-effectiveness.

In 2010 the Environment Department of Ministry of Agriculture, Natural Resources and Environment, revised the Action Plan of the Green Public Procurement incorporating new categories and criteria that has been proposed by the EU. That plan has been completed and promoted for approval by the Minister's Council in 2011.

By adopting the Green Public Procurement, a significant amount of energy can be saved in the public sector. Curently public sector consumes less than 5% of the final energy consumption in the country.

Article 6 Energy distributors, distribution system operators and retail energy sales companies

The energy distributors, distribution system operators and retail energy sales companies will have to comply with promoting and offering Energy Efficiency Improvement Measures to the final customers. The availability of Energy Audits to the final customers is currently under investigation. However, it is worth mentioning that the only energy distributor and distributor system operator in Cyprus (EAC) already offers advice for energy saving measures to its customers through energy bills, the website, by special energy savings guidebooks published and through daily energy saving spots on radio and TV. Energy savings companies also offer energy saving advice to their costumers through their websites. The Legal basis is the National Action Plan for the Energy Efficiency but further legal obligation for energy services that could be provided by energy companies is currently under investigation. Further information on could be found in 2nd NEEAP.

Article 7 Availability of information

Besides the relevant transposition through the RES law and the Action Plan for Green Public Procurement, further actions taken in compliance to this article which enhance the availability of information are described in 2nd NEEAP

Article 9 Financial instruments for energy savings

Since 2004, two Grant Schemes for the Energy Conservation and the utilization of Renewable Energy Sources are operating for providing incentives for potential investments in these fields:

1. Governmental grants, subsidies scheme for the promotion and encouragement of RES, energy saving investments (enterprises with economic activity) (details available on www.cie.org.cy)
2. Governmental grants/subsidies scheme for the promotion and encouragement of RES, energy saving investments (natural persons and enterprices without economic activity), (details available on www.cie.org.cy)

The Special Fund for RES and Energy Conservation, which is responsible for the operation of the Grant Schemes, has subsidized roughly 67 millions Euros during the period 2004-2010. Roughly 40 million of the Fund concern energy saving investments and the roughly 27 million concern RES investments. Some of the categories subsidized by the Special Fund are:

- Insulation measures in existing residential houses (roofs, windows, wall)
- Energy Savings in enterprises

- Household solar systems
- Space heating/cooling bysolar energy
- Autonomous photovoltaicsystems
- Central solar energy systems for heating domestic water
- Swimming pool water heating
- Hybrid vehicles
- Vehicles with dual propulsion systems
- Electric vehicles
- Vehicles with carbon dioxide emissions below 120g/km

The Grants Scheme is also in operation for 2011, providing grants and subsidies for all the above categories except vehicles.

More information about Grant Schemes and the energy savings achieved by each category are descriped in the 2nd NEEAP.

Article 12 Energy audits

Before the transposition of 2006/32/EC Directive to the national law, an energy auditing mechanism was not developed in Cyprus. After the adoption of basic Law (31 (I) 2009), Cyprus prepared Regulations for setting the legal frame regarding to the operation of the energy audit system in Cyprus.

These Regulations also set the terms and conditions on issuing, renewing, modifying and retracting an energy auditor's license. In addition, the scope of the Regulations is to prescribe and set the qualifications, the educational knowledge and the mechanism of attendance in specialised educational programs and examinations in order to qualify an energy auditor. Furthermore these Regulations describe the rules that should be followed by the auditors for providing their services, the energy auditor categories and the extent of work in each category of energy auditors. The Minister's Council has approved the above Regulations and it is expected that in 2011 they will also be approved by the House of Representatives. Regulations on the energy services companies are also expected to be published in 2012.

The Ministerial Decision for the "Determination of Methodology and other Requirements for the Realisation of Energy Audits", which will include the Technical Manual of Energy Audits, will be published immediately after the adoption of Regulations for the energy auditors by the house of Parliament.

The Technical Manual of Energy Audits will assign the processes, the general requirements, the practice codes and the directions that an energy auditor should comply with and apply for conducting an energy audit. It is noted that in later stage the Manual will be revised and replaced be the European Standard on Energy Auditing which is currently under development (CEN).

Article 13: Metering and informative billing of energy consumption

Cyprus has no physical energy links to other EU Members States, and it has a relatively small electricity market and no gas market. The electricity industry is dominated by the state-owned Electricity Authority of Cyprus (EAC)

that was established in 1952 as an independent semi-governmental vertically integrated electricity provider. EAC generates and supplies more than 90%of the electricity in Cyprus. Electricity is produced in three power plants owned and run by EAC and by one relatively big RES producer, some auto producers and many small RES producers. EAC also owns and operates the transmission and distribution networks. Electricity is transmitted through a high voltage Transmission System (132kV and 66kV) to the Transmission Substations where the high voltage is converted to medium voltage 22 kV or 11kV. Competition in the electricity market is weak, although there are some producers that have entered the generation sector by producing electricity for own use.

As from 1 of May 2004, 35% of the electricity market was opened to competition and this was extended to 65% (all non-domestic consumers) as of 1st of January 2009. Following the terms stated in the law, an independent Cyprus Energy Regulatory Authority (CERA), consisting of three members, was appointed in January 2004. The functions and responsibilities of the Energy Regulatory Authority cover the electricity and the natural gas sectors. CERA has executive duties and responsibilities in the energy sector such as recalling generation licenses, encouraging competition in order to achieve price reduction, and regulating prices and charges related to the production, transmission, distribution and supply of electricity.

The vast majority of electricity meters in Cyprus are individual (owned by the National Electricity Utility Company). The Frequency of Measurements and meter reading is for small consumers every 2 months and for Commercial / Industrial meters every month. The bills include, comparison of energy consumption between current and previous year, comparison with an average normalized or benchmarked user, and information sources on energy efficiency related organizations and advice and based on actual consumption. Currently 500,000 meters are installed. Gas and district heating is not available.

The DSO of Cyprus, that is part of EAC the vertically integrated utility of Cyprus, is currently working on a pilot project for installing 3000 smart meters. This project has started in July 2010 and is going to publish a cost and benefit analysis report by July 2012. The pilot project is scheduled to investigate all technologies available for achieving all the basic functions and the interoperability objectives of the European Commission using a communication architecture that will fully facilitate the evolution of smart grids on the island. The declared strategy underlines the objective of moving towards a full roll out for smart meters for all electricity customers in Cyprus that will be based on the findings of the pilot project that is currently in progress.

There is no legal framework for the provision of smart metering services in Cyprus but at the same time, the current legislation does not hinder the evolution of smart meters or smart grids on the island. More generally, the electricity market is regulated by a number of laws and regulations. The main element of the framework is the Cyprus Law on Regulating the Electricity Market that provides a framework of rules for the generation, transmission, distribution and supply of energy throughout the island. Following the implementation of this Law, competition in the production sector was introduced as well as in the supply for eligible customers. In addition, it allowed access to electricity networks, ensures public service obligations and introduces effective and independent regulation.

Cyprus is already on the road of meeting the European objective of replacing the existing damp meters with smart meters that will satisfy the expected functionalities that are currently under discussion within the various working groups of EU.

Art. 13 was transposed by the Law for energy efficiency and energy services N 31(I)/2009.

Addittional efforts

Cyprus has submitted in June 2007 the first National Energy Efficiency Action Plan in compliance with the Energy Services Directive 2006/32/EC. According to European Commission, the plan is overall acceptable, coherent, and realistic to achieve the target adopted with some minor remarks regarding over-estimating the energy savings from some specific measures. This situation verified by the evaluation of the 1st NEEP.

From the evaluation of the energy saving measures that have been implemented in 2004-2010, the bigger contribution in both targets has the Resisential Sector (mainly the building sub-sector) and follows the Tertiary Sector (enterprises, Public and wider public sector), the Transport and the Industrial Sector. As it was expected, the contribution of energy saving by the Residential Sector is the biggest in both targets.

The enterprises and the industries considerably contribute towards energy saving targets, however is realised that investments in these sectors are short term (specifically in industrial sector) and as a result many of these do not contribute in all targets. Regarding to the industrial sector, it is worth mentioning that for 14 energy saving investments in enterprises (that are under the Directive of Marketing Emissions and excluded by the Energy Saving Directive) have been subsidized and the energy saving in 2010 was 5.200 toe.

The building sector in Cyprus consumes roughly 37% of total needs in energy. According to studies of Energy Service and also from the experience that acquired by the operation of Grant Schemes, the potential of energy saving in building sector with thermal insulation is relatively high (25% to 50%, depending on the case). Apart from the thermal insulation measures, other important sub-sector for achieving energy saving in buildings is the the maintainance of heating and cooling systems.

The long-lasting absence of obligatory regulations for thermal insulation in new buildings in Cyprus resulted in having many buildings with high-energy needs. The implementation of the EPBD Directive and especially the regulation of energy performance of buildings is expected to have an important contribution in the reduction of energy consumption in building sector.

Since 1/1/2008 Cyprus applies minimum energy efficiency requirements for new buildings which consist part of the building authorisation procedure. It has to be noted that this is the first building energ code applied. In addition in 2010 started the implementation of the rest main provisions of the building directive, such as the energy certification of buildings and the mandatory maintenance and inspection of heating, air conditioning systems. An innovative new measure which has been adopted is the mandatory installation of a solar thermal system in new dwellings.

The transport sector is considered an important with contribution towards energy saving targets. However the energy savings achieved in this sector are consider inefficient compared to the saving potential, basically because of the insufficient implementation of some measures. Taking into account that a few measures were implemented or that their implementation just started in 2010, it should be noted that the public transport system is not yet well developed and many additional measures must be taken and implemented in this sector.

In this respect, a Law has been enacted in July 2009, which sets criteria and other contractual terms, aspects for establishing a new public transport system with buses. According to the new legislation 6 new consortium companies will be created. The bus service will cover all the regions of the island with new environmental, energy efficient buses with cheap fares. Note that the implementation of this measure begun in the summer of 2010. In general the main objective is a radically new bus system and associated infrastructure which will be effective and

assure the fast, safe, comfortable, environmental friendly and affordable mobility for the general population. As this measure is new at the moment there are no evidents, whether is considered successfully or not. According to International Road Federation, (2009, World Statistics 2009) Cyprus is the country with higher percentage of private cars per 1000 citizens (742 cars/1000 citizens). Therefore, the further development of public transportations is considered a very important task. According to the Ministry of Communications and Works, there is a target of increasing the percentage contribution of the public transportations from 2% to 10% in 2015.

Cyprus energy policy is aligned with European Energy policy and its core objectives: security of energy supply, competitiveness and protection of the environment. Main changes, which have taken place in the past years, are:

1) Electricity market is liberalised to 65% and has opened further since April 2009 in order to include all consumers except households. Complete opening of the market according to the exemptions given to Cyprus will be done by 2014. However, due to the absence of natural gas there is no competition in the electricity market since only one national producer exists.

2) It has been decided at a political level to import natural gas to Cyprus and use it mainly as fuel for power generation purposes. It is estimated that once an appraisal of our offshore hydrocarbon potential is performed through an exploratory drilling to take place in October 2011, the pipeline carrying natural gas to Cyprus could be constructed in five years time. The development of the local gas transmission network has been granted a €10 mln funding under the European Economic Programme for Recovery (EEPR). The total investment is anticipated to be around 60-70 million euros. In addition, an Open Season procedure to assess the local market demand for natural gas has been initiated and successfully completed by Cyprus Energy Regulatory Authority (CERA). CERA has given its permission to DEFA to proceed to the Open Season 2nd Step in order to facilitate DEFA in conducting the interested End-Users for further negotiations in order to sign a relevant gas supply agreement. Government has decided after long debates that natural gas will be introduced in Cyprus in the form of LNG via an on shore terminal. It is noted that present electricity production (oil based) is done with 32% efficiency by only one national company. Energy efficiency improvement in the transformation sector with the introduction of natural gas and the combined cycle technology in power generation is considered as the cornerstone for energy savings in the primary energy consumption.

3) During the period 1995 – 2009 total CO_2 emissions from the energy sector in Cyprus increased by 52%. In 2009, energy contributed 93% to the total CO_2 emissions of the country, compared to 91% in 1995. The energy sectors with the highest CO_2 intensity in 2009 were electricity production with 56% of the CO_2 emissions from the energy sector, and transport with 30% of the CO_2 emissions from the energy sector. The remaining emissions from the energy sector were distributed into 9% from industry, 3% by households, 1% by the tertiary sector and 1% by agriculture. These estimates do not take into consideration the electricity consumption in the sectors, i.e. only the fuel consumption in the sectors. In year 1995 the corresponding percentages were 46% from electricity production, 24% from transport, 7% from households, 21% from industry, 1% from services and 1% from agriculture. Cyprus has ratified the Kyoto protocol on 16/7/1999 but has no emissions limitation commitments.

Cyprus as a member, state of the EU is bounded by the obligations set out in the Emissions Trading Directive. Cyprus in compliance with the Emissions Trading Scheme Directive has prepared and submitted the national allocation plan for greenhouse gas emissions, for the second trading period (2008-2012). The scheme in Cyprus includes 13 installations (3 power stations, 2 cement industries, 8 brick / ceramics factories). The total amount of

emissions allowances allocated were 27,398,900, of which 1,149,259 were allocated for the set-aside and 2,174,165 for the new-entrants reserve.

4) With regard to the RES policy Cyprus has adopted an ambitious target of 13% in final energy consumption by 2020 .The target is mandatory according the EU RES Directive 2009/30/EC. The national potential is limited to solar, moderate wind and small biomass. In 2010, the first wind farm of capacity 82 MW begun to operate in Cyprus. In 2010 signed, five (5) contracts for the construction of wind farms of total capacity 75,5 MW. It is expected these wind farms to be constructed by 2013. Regarding the solar sector, in 2010 operated PV Systems of total capacity 6,62 MW. In addition, in 2010 submitted applications for the installation of PV Systems of total capacity 22 MW. Currently the signing of the contracts is pending. About biomass in 2010, the capacity of these systems was 7.9 MW.

5) Road transport is the most energy-consuming sector in Cyprus, basically because the public transport system is not well developed. Government has decided to create the <New strategy for public transport>. The objectives are to develop a completely new infrastructure for building an effective sustainable transport system, which will guarantee the fast, safe, comfortable, environmentally friendly and low cost mobility for the people. The new integrated mobility system includes new efficient buses with the possibility of other means, new stations, electronic ticketing, and bus lanes. The new system will cover all regions of Cyprus. The new public transport system has been regulated by a Law and has started to be implemented.

6) The most important EU energy policy Cyprus has to implement is the energy performance of buildings directive. Since 1/1/2008 minimum energy efficiency requirements for new/renovate buildings are applied for the first time. This will have a significant impact in energy savings because prior to the directive no building regulations existed in terms of energy efficiency.

Future planning

Cyprus joined the EU in 2004 and has transposed, is being implementing the aquis in energy efficiency. Prior to the accession, no significant energy efficiency policies existed. The end-use energy savings potential is large particularly from the buildings and transport sectors. In order to exploit this potential the priority is to implement the existing EU policies such as the buildings directive and secondly to develop an effective public transport system attractive to the citizens. In addition, the continuation of the Grant Schemes for the Energy Conservation and the utilization of Renewable Energy Sources, it is considered as a very important tool for achieving Cyprus the targets in both Renewable Energy Sources and Energy Efficiency National Plans.

Relevant information

More information regarding the situation in the Cyprus can be found at the following websites:

National Energy Efficiency Action Plan for Cyprus can be found at :
http://ec.europa.eu/energy/demand/legislation/doc/neeap/cyprus_cy.pdf

Ministry of Commerce, Industry and Tourism, Energy Department: www.mcit.gov.cy

Cyprus Institute of Energy: www.cie.org.cy