

The current policy of Greece in the fields of environment and energy management is driven by its European orientation (Greece has been a member of the EU since 1981), its International responsibilities (Greece has been one of the founding members of the UN since 1945), its bi/multilateral agreements and its national economic, social and environmental concerns.

An overview of the current state of Greece as well as recent initiatives, news and legislation regarding the environment and energy management are described below.

## A) Recent historic background and current state

Based on the EU Sustainable Development Strategy (2001) and in view of the World Summit in Johannesburg, 2002, Greece adopted its National Strategy for Sustainable Development, in June 2002, initiating the environmental dimension in all its main national policies. The main environmental objectives are the confrontation of climate change, the reduction of air pollutants, the reduction of solid waste, the rational management of water resources, the confrontation of desertification and the protection of biodiversity and ecosystems. To this end, the country has signed and ratified a series of related UN Conventions and Protocols, recognizing, at the same time, the importance of monitoring the implementation of the undertaken commitments.

One of the most known UN Conventions, the United Nations Framework Convention on Climate Change, was also signed by Greece and was followed by the signature and the ratification (May 2002) of the Kyoto Protocol. In the framework of the common European policy, Greece -which produces 2 ‰ of the global GHG emissions- is committed to limit its greenhouse gas emissions to no more than 25% increase (mean of years 2008-2012) as compared to the emissions of 1990. Greece is one of the four European countries which are projected to achieve their targets.

Beside other methods of action (reducing the emissions of the industries, recycling, treatment of solid waste etc) the reform and diversification of the energy offer and the rational use and conservation of energy are among the basic sectors of action for combating climate change.

The energy mix of Greece currently includes the use of coal (domestic production), imported oil, imported natural gas and renewable energy resources (RES). Greece has already signed a major agreement with Russia and Bulgaria for the construction of the "Burgas-Alexandroupolis oil pipeline" expecting to deliver soon huge quantities of crude oil from the Black Sea to the South East Europe. The construction of a Turkey-Greece natural gas pipeline, as part of the TGI Interconnector, is fully operated and will be completed with the construction of the under the Ionian Sea interconnection of Greece with Italy (an agreement signed by the Italian President Mr Prodi and the President of the Hellenic Parliament Mr Dimitrios Sioufas, at his former capacity as Minister of Development) piping Azeri gas to Europe, in line with the general scope of the European energy security policy (diversification of suppliers).

The increase of the RES penetration in the energy market is of high priority for Greece. According to the EU directives, Greece should target at 18% RES consumption by 2020. Other sectoral targets are the 20,1% electricity consumption from RES and the 5,57% biofuels' consumption by 2010. In 2006 the share of RES in electricity consumption was 12,1%. The hydro power has been holding the biggest share in the RES market (6.048 GWh) while the wind energy was of 1.699 GWh capacity. Some developments have been also noticed in the biomass sector (114 GWh). While the photovoltaic capacity is pretty low (1GWh in 2006), Greece is ranked among the top 10 countries for solar hot water installation per-capita. The penetration of RES in the Greek energy market was supported by the governmental "incentives" policy" (subsidisation of businesses investment cost, taxation exemptions etc) as well as the feed-in tariffs (FIT) which were initiated in Greece in the early '90s and currently regulated by L. 3468/06.

# B) Recent initiatives

#### National level

Greece is in the phase of having completed all the details and starting implementing a pilot project for covering the energy needs of the northern Aegean sea island Agios Eutratios (an island of 250 inhabitants, included in the European Union's Natura 2000 network of nature protected areas due to its well-preserved ecosystem) by 100% RES (solar, biomass and wind generated energy). The oil saving is estimated to be around 260 tn yearly and will constitute a great experience for further promoting the idea to other autonomous energy systems in island areas. The project will be completed with the replacement of all transportation with electric-powered vehicles.

The Hellenic Ministry of Development, has recently signed a Memorandum of Cooperation with HELEXPO SA (private company) for the creation of "the House of New Energy Technologies" which is aimed at forming a point of reference, exchange of information, building contacts between all key actors (private companies, investors, ministries, local authorities etc) supporting the promotion of new technologies in the field of energy and enhancing the entrepreneurship. In a permanent basis, the center will host exhibitions and thematic events (seminars, conferences etc) on renewables, energy efficiency systems, natural gas, hydrogen, etc.

## Regional level

Greece, due to its geostrategic position on the periphery of Europe and its traditionally good neighboring relations, has been a strong supporter of the Euro-Mediterranean cooperation. Within this framework, the President of the Hellenic Parliament Mr Dimitrios Sioufas, has launched an initiative for the establishment of the Euro-Mediterranean Energy Community on the model of his former initiative of the Energy Community of the South East Europe. The primary aim of this project is the acceleration of the harmonization of the markets and the institutional frameworks, ultimately targeting at the creation of one single liberated but well regulated energy market in the Mediterranean region encompassing a diversified energy mix (gas, oil, renewables). The initiative has been supported by the European Parliament (resolution on the Second Strategic Energy Review, 3/2/09) as well as all regional parliamentary assemblies (EMPA, PAM).

In addition, Greece has enthusiastically endorsed the French initiative for the Union for the Mediterranean and is committed, as one of the members offered a seat in the Secretariat, to contribute to the achievement of ambitious results, among other sectors, in the field of energy (Med Solar Plan). It is worth mentioning that Greece has proposed, in parallel to the centralized power production from RES (mainly CSP or photovoltaics), the development of a well balanced portfolio of small and medium sized decentralized renewable energy technologies, focused on solar air conditioning and solar thermal systems.

# C) Recent Legislation

Driven by its EU membership's commitments, Greece has been transposing into national law series of relevant EU directives targeting at the reduction of GHG emissions, the increase of the energy efficiency, the use of RES, and the security of energy supplies. For example, the Hellenic Parliament recently amended the existing legal framework on biofuels, providing for specific regulations lifting the complexity of the production and the disposal process as well as monitoring of the smooth operation of the market, fully complying with the related EU directive.

In January 2009 a photovoltaic law was passed, introducing new FIT (about 400-450 euros per MWh) guaranteed for a 20 years period. These prices will remain unchanged until the beginning of 2012. Applications for permits already filed (more than 3 GWp) will be served until the end of 2009. Additionally, the law provides for a 40% grant for investments of 100.000 euros and above. Moreover, the law provided for a program for rooftop PV systems (up to 10KWp for both residential users and small companies) with different FIT. In June 2009, a ministerial decision was entered into force, setting the new FIT for small rooftop PV at 0.55euros/kWh guaranteed for 25 years providing, in addition, for a 20% tax deduction for small residential applications (cap at 700 euros).

The above mentioned legislation acts, are only a few of the overall provisions initiated by the Greek government. Above all, and despite existing problems and drawbacks, it is worth highlighting the political will of the Greek government for contributing to the global efforts for saving our planet.