

## HELLENIC ENVIRONMENTAL POLICY

### KEY ISSUES

by

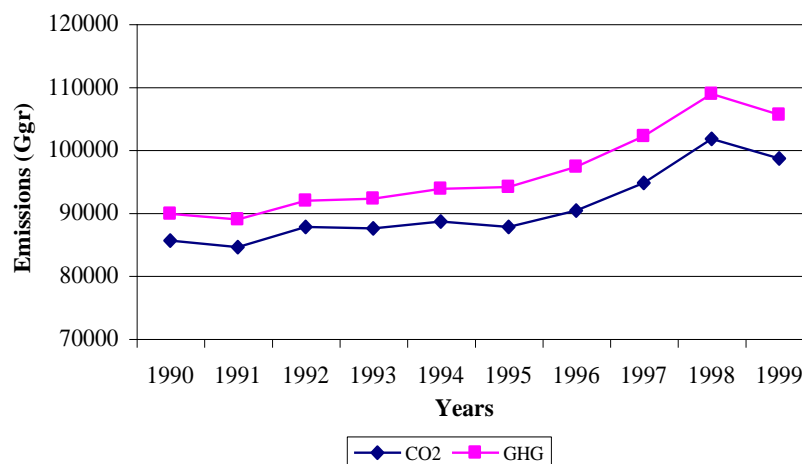
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#### National Emissions

During the last decade and particularly during 1990 and 1998 there was an increase in the greenhouse gas emissions in Hellas. However, since 1998, a decreasing trend in the emissions can be observed. This reduction is due to CO<sub>2</sub> abatement measures taken by the Hellenic government.

Carbon dioxide emissions present the same trend, as they constitute the majority of the total greenhouse gas emissions. More specifically, CO<sub>2</sub> emissions represent the 81% of all the greenhouse gas emissions. The trend of greenhouse gas and CO<sub>2</sub> emissions for the 1990-1999 period can be observed in the following figure:



**Figure.** Annual changes of Greenhouse gas and Carbon emissions for the years 1990-1999

According to the latest emission data (year 1999) the majority of CO<sub>2</sub> emissions (51%) is produced by the electricity sector. The transport sector follows with a 22% share, while the industrial and residential sectors both have a 12% share to the emissions. Finally, the refineries contribute by 3% to CO<sub>2</sub> emissions. The emissions inventory is taken from the National Observatory of Athens and the most recent data come from the year 1999. Data from the year 2000 are expected to be published in 2003.

#### Obligations of Hellas

The United Nations Framework Convention on Climate Change (FCCC) established as a target for the industrialised/developed countries of the world the return of greenhouse gases emissions at 1990 levels, by the year 2000.

The Hellenic government signed the United Nations Framework Convention on Climate Change, in 1994. Under the requirements of the Convention, the Greek Action Plan (GAP) was submitted as the 1<sup>st</sup> National Communication to the FCCC, in February 1995. The objective set out in the Plan was to restrict the total increase of CO<sub>2</sub> emissions to 15%±3%, during the period 1990-2000, compared to 1990.

Following, with the establishment of the Kyoto Protocol on December 1997, and under the Burden Sharing Agreement (1998), Greece is allowed to increase the greenhouse gas emissions by 25%, during the period of 2008-2012.

### **National climate change policy**

The National climate change policy that has been developed in the light of carbon dioxide emission reduction, involves the adjustment of the national legislation, as well as the implementation of programmes and plans. In the absence of any abatement measures, CO<sub>2</sub> emissions were estimated to have been increased by 27%, by the year 2000.

#### **1. Laws**

The legislative framework that determines the Hellenic environmental policy can be summarised in the following laws:

**Law 2244/94:** *Electricity generation from Renewable Energy Sources (RES) and conventional fuels*

This legislation makes available favourable electricity tariffs to self-producers and independent producers of electricity and combined electricity/heat. These tariffs are particularly advantageous in autonomous island grids, where the potential of renewable energy sources, such as wind, is significant. Furthermore, the law extends cogeneration investment opportunities to manufacturing units and enterprises of the tertiary sector.

**Law 2364/95:** *Introduction of natural gas and creation of Energy Control & Design Body*

The objective of this law is to promote the use of natural gas and renewable energy sources. The incentive provided for this purpose was the 75% tax reduction of the expenses for the purchase and installation of domestic appliances or systems using natural gas or renewable sources.

**Law 2773/99:** *Liberalisation of electricity*

This law promotes the transformation of the national electricity sector from a closed public industry, i.e. the public power corporation (DEI), to an industry open to competition. In the frame of this law a regulatory authority for the national electricity market (RAE) was established to control the operation of the liberalised electricity market.

In addition, the exercise of any electricity business, defined as the activities of generation, transmission, distribution and supply of electricity, requires a licence. The licences are granted by the Minister of Development with the recommendation of RAE. Finally, DEI retains the ownership and the right to operate and exploit the distribution network

#### **2. Programmes – Plans**

##### **National Action Plan**

The National Action Plan was elaborated under the responsibility and supervision of the Ministry of the Environment, Physical Planning and Public Works (MEPPPW), in collaboration with the Ministry of Development and the Ministry of Transport and Communications.

The most important measures concerned the sector of electricity generation (*supply-side*) and involved the introduction of natural gas, the modernisation of the existing power system, the development of cogeneration units in existing and planned power stations and the large-scale exploitation of renewable energy sources.

Other measures concerned the *demand-side* and were focused primarily on the introduction of natural gas in the industrial, tertiary and residential sector, energy conservation measures in buildings and manufacturing units – especially the ones with high energy consumption – as well as measures affecting energy consumption in the transport sector.

### ***Energy 2001***

The Energy 2001 programme was developed by the Ministry of the Environment, Physical Planning and Public Works and was launched in 1997. This programme, focused on energy conservation in the building sector. More specifically, it included measures for the promotion of renewable energy sources in household and commercial sectors, as well as energy savings in the energy sector, and particularly in DEI, refineries, and industries.

### ***Attica SOS – Thessaloniki SOS***

In these programmes the objectives were the improvement of the traffic conditions, the improvement of the public used vehicles, land and town planning for a viable city, and the control and reduction of urban pollution.

Various actions were taken for the above objectives. The major ones were the construction of new metro lines in Athens, the creation of new parks within the cities, and the imposition of fines to those that pollute, including industries and vehicles.

### ***Operational Programme for Energy***

The Operational Programme for Energy covered the period of 1994-1999 and was developed by the Ministry of Development. The objectives of the programme were energy efficiency and conservation in the energy sector, which represents installations of electricity generation, industries, heating in commercial, domestic and public buildings, and fossil fuel consumption in automobiles and other vehicles.

Some of the measures taken for the achievement of these objectives concerned the construction of electricity generation facilities and the upgrading of DEI, the support of energy conservation mainly in the industrial and tertiary sector and the exploitation of renewable energy sources. Finally, systematic research and investigation was carried out for the potential of the exploitation of mineral resources.

### ***National Planning of Waste Management.***

According to this plan, waste management is undertaken in the industrial and residential sectors, and in the hospitals. The main goals to be achieved are the prevention or reduction of the amount of the produced waste, and the minimisation of the hazardous content of waste. Other goals include the exploitation of waste, through recycling and energy recovery, the disposal of waste in a safe manner, as well as the restoration of landfills. Finally, the best available techniques (BAT) are applied in waste management, in cases where this is technologically and financially feasible.

### ***Operational Programme “Railways, Airports, Urban Transport”***

This programme was commenced in 2001, by the Ministry of Transport and Communications. The aim is to improve the functioning and the credibility of the means of transportation and at the same time achieve energy efficiency. Some of the measures taken for this purpose include the construction of new energy efficient buildings used by the Ministry of Transport and Communications, and the use of contemporary vehicles, such as buses and trains.

### **Conclusions**

Concluding, the environmental policy that Hellas has adopted, resulted in the restriction of the increase rate of CO<sub>2</sub> emissions to 15.24% in 1999, compared to 1990. This percentage is within the predetermined national target.

Further to the aforementioned environmental measures and policies, Hellas has implemented and will implement the EU environmental policy. However, there is a need to introduce additional measures in order to comply with the future requirements of EU legislation.