

PRESS RELEASE

Athens - Ptolemaida, 25th of February 2008

Installation and operation of the First Reformate Hydrogen Fuel Cell Power Generator producing 1kWe nominal electric power from Methane which is being produced from an anaerobic digester



The whole construction of the 1kW Methane Fuel Cell System & the 3.000lt Anaerobic digester took place on Tropical's Laboratories. From the right hand side can be seen the Reformate PEM Fuel Cell System, then the Anaerobic digester and finally the methane buffer 2.000lt storage tank.



Methane is produced from wastes which are stored on an Anaerobic Digester & then is supplied to the fuel processor where it is reformed & hydrogen is extracted and fed to the PEM fuel cell that can produce 1kW electricity.



After the completion of the installation of the system. From the right hand side is: Professor K. Athanasiou, Tropical Director of H2 Technologies, Mr. G. Kaplanis, Tropical Chairman Mr G. Lagios, Professor G. Marnellos and from Helbio S.A. Mr. A. Basagiannis

With great success has been concluded the installation as well as the operation of the **First Reformate Hydrogen Fuel Cell Power Generator producing 1kWe nominal electric power from Methane** which is being produced from poultry & agricultural wastes being digested on an Anaerobic Digester being designed by Tropical S.A.

Tropical S.A. in cooperation with Helbio S.A. delivered successfully a complete fuel cell power system at the "Centre of Environment" at Ptolemaida, Northern Greece, on the framework of the INTERREG III C. Methane (primary biofuel) is produced from wastes which are stored on a 3.000lt Anaerobic Digester and then is supplied to the fuel processor where it is reformed and hydrogen is extracted and fed to the PEM fuel cell that can produce 1kW electricity. Because of its silent operation as well as its compact size, these types of power generators are ideal for ups systems as well as on several applications.

It must be noted that these types of **Reformate Hydrogen Fuel Cell Power Generators can use widely available liquid fuels such as propane, LPG, NG while on the other hand with some small conversions can use all type of Biofuels.** The main applications of these generators are focused on wineries, distilleries, multi-family dwellings, caravans/RVs, yachts, special vehicles, waste treatment plants, large industrial complexes, cottage houses, military applications & bases, universities, research institutes & laboratories, telecommunication & meteorological stations, hotels, hospitals, etc

Having always as first priority the reduction of environmental pollution, Tropical S.A. plays the leading part for one more time trying to improve our quality of life. Greece as well as Tropical S.A. is one of the leading countries of Europe on research & development on Hydrogen + Fuel Cell Technologies which is considered to be the fuel of the future with hundreds of products being at a pre-commercialization stage.

In order to reduce the pollutants that are responsible of causing the greenhouse effect and brought into the light the last years all these climate changes, Tropical S.A. disposes a well equipped research laboratory where "green" ecological products are being developed, most of them related to Hydrogen + Fuel Cell Technologies as well as on Renewable energy sources.