

# PRESS RELEASE

Patra, 04<sup>th</sup> of December 2008

## Installation and operation of the First Reformate Hydrogen Fuel Cell Power Generator from Ethanol with 5kWe nominal electric power at a wine distillery.



On the above photo is the **Ethanol Reformer** that has been used on the wine distillery. From this Ethanol Reformer, hydrogen is extracted and feeds the PEM Fuel Cell System



On the above photo is the fully automated **5kW powered PEM Fuel Cell System** that uses as fuel Reformate Hydrogen from the Ethanol Reformer.

With great success has been concluded the installation as well as the operation of the First Reformate Hydrogen Fuel Cell Power Generator from Ethanol with 5kWe nominal power at the wine distillery of “B. G. Spiliotopoulos S.A.” near the city of Patras.

Tropical S.A. delivered successfully at the “B. G. Spiliotopoulos S.A.” wine distillery on the framework of the project “Production of Biofuels & Energy with Fuel Cells through Hydrogen”. Hydrogen is extracted from the Ethanol (primary biofuel) in the fuel processor and feeds a PEM fuel cell that can produce 5kW 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 consider 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.