


Renewable Energy in Thessaloniki - Greater Thessaloniki, Greece

Keywords	Renewable Energy Sources, Electric Power from Biogas
Pictures	
Objectives	<p>The Association of Local Authorities of Greater Thessaloniki, by constructing this unit, managed to deal with two main issues. First, to eliminate the odour from the main landfill by collecting the produced biogas, which also contributes to the greenhouse effect and, second, to ease the burden from the growing bills of electricity having also revenues from the sales of electricity to the national network.</p>
Description	<p>The Association of Local Authorities of Greater Thessaloniki is the main agent responsible for the management of the urban solid waste in the Prefecture of Thessaloniki . After a public procurement a company was commissioned to construct and operate a power producing unit by biogas from the main landfill of Thessaloniki. The capacity of the unit is 5MW and the operation started in November 2006. The total cost of the unit (including collection system, pipes, wells) was €6.35 millions. The breakdown of the financing presents 40% grants (programme Competition) and 60% private funds. The Electricity Public Company buys the produced energy and transfers it to the national grid.</p> <p>It is noteworthy that this is the second unit constructed, following an experimental one build in 1997 (240 kW).</p>
Results / Achievements	<p>From the social point of view,</p> <ul style="list-style-type: none"> - The investment created at least 5 new jobs and more are expected with the expansion of the unit. <p>From the financial point of view,</p> <ul style="list-style-type: none"> - The Association receives 11.1% of the gross income from the sales, for a period time of 33 years. - Due to healthy cash flow payback time is short. - Presently (November 2007) 30,000,000 kWh have been produced. <p>From the environmental point of view,</p> <ul style="list-style-type: none"> - The collection of the biogas caused the elimination of the odour from the areas in proximity - Future possibility for supply of hot water to near-by villages.
Friendly advice for replication	<p>If you intent to invest in such a unit, you have to consider that:</p> <ul style="list-style-type: none"> - The unit should be in proximity to a power sub-station (cost-benefit reason). - You should seek grants from special European Programmes (the capacity of the unit must be at least 2MW). - The depth of the deposit wastes must be over 40m (biogas of better quality and/or problems with leachate in case of less depth).
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