From 31\textsuperscript{st} of May to 2\textsuperscript{nd} of June 2011, the ISWA Conference was held with wide participation (300 people) and great success in Moscow, Russia. The Conference entitled "SOLID WASTE TREATMENT AND DISPOSAL: LEADING EDGE TECHNOLOGIES", took place at the International Exhibition Center “Crocus Expo”. The President of SYNERGIA-WTERT Greece, Dr. Efstratios Kalogirou from the Earth Engineering Center, Columbia University successfully participated in the ISWA Conference.

To begin with, Dr. Kalogirou was the chair of the session entitled: ‘Waste-to-energy technology development.’ The co-chair of the session was Mr. Meloni, President of the Finnish Solid Waste Association.

Dr. Sofia Bethani opened the session with her presentation on: ‘The production of synthetic aggregates for use in structural concrete from combustion ashes’, followed by Mr. Robert Daschner from WTERT/Germany, who gave a presentation regarding: ‘Waste-to-Energy: Current Situation and Development in the EU12’.

Afterwards, Dr. Tugov made his presentation on ‘The Solid Waste energy recycling potential in Russia.’, followed by Mr. Athanasios Bourtsalas, who presented SYNERGIA’s paper entitled : ‘The potentials for waste-to-energy in countries with inadequate waste management system: The cases of Greece and Egypt.’

Further to Mr. Bourtsalas, Mr. Degre, gave a presentation on: ‘The co-processing of wastes as alternative resources in the cement industry’, followed by Mr. Meloni, who presented: ‘The Waste incineration is advancing in Finland.’
Then, Mr. Kling, presented: The use of household waste for heat and power’, followed by the presentation of Mr. Meller on: ‘The management process optimization of solid waste incineration in the grate furnace (the definition of air flow)’. The session ended with the presentation of Mr. Tukhto on: ‘Steam plasma devices and the prospects for their application to the MSW thermal treatment technologies.’

The conclusion was that Waste to Energy is a well promised solution for MSW and countries like Russia have to develop such renewable energy projects. Today 7 WTE Plants exist within Moscow metropolitan area. However there is a lack of information so the role of WTERTs is critical in that point. Notable is the fact that, Mr. Manders, Vice President of the Confederation of European Waste-to-Energy Plants (CEWEP) attended this session.

**TECHNICAL VISIT OF EVN WTE PLANT IN MOSCOW**

A Technical Visit was scheduled in EVN’s thermal waste utilisation plant in Moscow. This plant (MSZ3) incinerates a part of the household waste accumulated by the population of Moscow.

Moscow produces 8,2 million tons of solid household waste, most of which has previously been dumped. At the throughput capacity of 360,000 tons/year (3 lines), ENV’s incinerator in Moscow makes a considerable contribution to the plans for ecological household waste treatment.

- The project will remain in privet interests until 2019 and afterwards will become property of the city of Moscow.
- The WTE Plant project involved an investment of 190 million Euro (BOOT model). The Gate fee is 50 €/ton guaranteed by the government
- The WTE Plant is located in the Biryulyovo industrial zone in the south of Moscow in a site of 2.5 hectares length.
The previous facilities were built in 1983 and were reformed using state-of-the-art incineration technology with an all-comprising flue gas cleaning system.

The garbage yields a calorific value of about 7.5MJ/Kg, which produces some 115 tons of steam per hour. This corresponds to the output from 10,000 litres of fuel oil per hour, which can be saved through the incineration of garbage.

The energy extracted from the waste, supplies 48,000 households in Moscow with clean energy for heating and hot water.

WTE Plant’s technical details:

Location: Podolskich Kursantov Str., Biryulyovo Industrial Zone, Southern District

Plot size: 2.5 hectares

Capacity: 360,000 tons per year

Firing: Grate firing at 850-1,000°C

Flue gas retention time in the furnace at t > 850°C : >2 s

Response to the composition of solid household waste in the City of Moscow: Effective incineration of solid household waste regardless of moisture, composition and season for the following reasons:

Combustion air is heated up, bunker waste water is evaporated, afterburner zone is lined with c. 400 mm brickling, furnace is lined with refractory concrete of low heat conductivity

Flue gas cleaning: 3 stages as follows: injection of activated carbon in the flue gas flow for absorption, quasi-dry absorber conveys and sprays hydrated lime to absorb acidic gases, fabric filter to precipitate fly ash and dust, deNOx plant

Measuring of emission rates: CO, O2, HCl, HF, NOx, SO2, dust, dioxins, furans, CO2, H2O, Corg, Hg, Hg compounds

Combustion and gas cleaning control: Automated control system that prevents feeding of solid household waste before the furnace temperature reaches 850°C
Exploitation of the energy potential included in solid household waste: Heat and electricity generation: ca. 370,000 Gcal/year in heat and ca. 38,000 MWhr/year in electricity (5 MWe)