A successful example of advanced Anaerobic-Aerobic Integrated System

ACEA is a modern Italian multiutility company, which currently provides services for Municipalities, private companies and citizens.

In more than 150 years (Acea finds his origin in 1856, when the first Italian-French society for gas supplying was established) the company has continued its territorial growth and the current Group, established in 2003, operates in 47 Municipalities situated in the North West of Italy and serves a user base of 150.000 inhabitants.

The ACEA group works to ensure sustainable development in three main fields environment, water and energy - finding ways to combine economic growth and the legitimate expectations of the stakeholders.

In the environment sector ACEA manages the entire waste cycle from waste collection, street sweeping and cleaning to the development and administration of different waste treatment plants (including an ISO 14001 certified landfill and an ISO 14001 and 9001 Compost plant).

The Waste Treatment Plant of ACEA Pinerolese Industriale SpA has been realised with the main intent of achieving an environmentally correct management of solid waste. By means of advanced technologies, the plant increases the possibility to make use of renewable energy (through digestion), and soil conditioner (through composting), with the consequently reduction of waste material in landfills.

The entire process is based on the connection of four different treatment plants (anaerobic digestion, composting plant, wastewater treatment plant and the landfill), where both anaerobic and aerobic digestion take place, starting from pre-selected organic waste from households and industries.
The raw bio-organic municipal solid waste obtained by separate source collection, mostly organic humid refuse recovered from town bins, is normally contained in plastic bags. These are first shredded by means of a bag opener and then separated in a disc screen. The finer matter is mechanically treated in **FlorawivaMORE™** facility, in order to separate inert material as bones, stones, heavy objects and residual plastic material to yield the bio-organic fraction to be fed to the anaerobic digester kept in thermophilic condition. The biogas released from the anaerobic digestion is conveyed to a storage tank. The digestate from the anaerobic digester is sieved to remove residual non biodegradable scraps such as wood and nut shells, then treated in a dewatering station to separate the solid material from the process water. The biogas is then transformed into electrical energy and heat. The digested sludge is led to the composting plant, where an aerobic process (slow and accelerated maturation) of 90 days takes place. The final product is an High Quality Compost, which obtained the national Quality Mark of C.I.C. (Consorzio Italiano Compostatori) in 2005 and is now entering the market.

The plant currently accepts waste from almost all the Turin area, providing to the increasing demand of the territory an acceptable and innovative answer in terms of economy, social and physical structure of the country and environment . First built in 2002, the plant is now one of the most advanced anaerobic-aerobic integrated treatment facility in Italy.

FOR FURTHER INFORMATION...

ACEA Pinerolese Industriale SpA - Corso della Costituzione, 19 - 10064 Pinerolo (TO) - Italy
Web site: http://www.ambiente.aceapinerolese.it
e-mail: area.ambiente@aceapinerolese.it

ACEA Pinerolese Industriale S.p.A.