

## PEAT Launches Plasma Gasification Plant in China

Colorado Springs, Colorado – Illinois-based PEAT International announced at the Gasification Technologies Council 2013 annual meeting here the commissioning of one of its “Plasma Thermal Destruction and Recovery” (PTDR) gasification systems in Shanghai.

The 60 kilograms per hour PTDR system – designed for medical waste and oil refinery sludge – was installed for Abada Plasma Technology Holdings, an Asia-based renewable energy project developer, according to PEAT.

The PTDR single-stage plasma-thermal process “transforms hazardous waste through molecular dissociation at 1,500°C (2,732°F) into recoverable, non-toxic end-products, synthetic gas and heat, metals and a vitrified glass matrix,” according to the company.

“Emissions are below the most stringent environmental standards used anywhere,” according to the company. However, PEAT can customize the system to meet various local emissions standards, as PEAT Business Development Manager Daniel Ripes explained.

While the main purpose of the device is waste destruction rather than maximizing energy output from waste, the system employed in China yields 1 million British thermal units per hour of syngas, which potentially could offset most of the power requirement for the plasma system, he showed.

Asked for further details about this application, Ripes told *Gasification News*: “The main goal is waste destruction and any syngas generated improves the economic model. As such it is important for PEAT to sell or utilize this syngas in a beneficial manner.

“During the acceptance test runs for the China plant, we measured the syngas at approximately 1 million Btu per hour. If we assume a heat rate of 18,000 Btu per kilowatt-hour – which is something we have seen with a gas engine we have in California – thus we would get around 55 kilowatts [kW] from the syngas, which is close to the power consumption of 61-kW that was averaged during operations from the electrode power supply” at the Shanghai project, he explained.

– Jack Peckham

## PowerHouse Posts Loss for 1H 2013

U.K.-based waste-to-energy technology developer PowerHouse Energy Group announced September 24 a US\$403,000 after-tax loss for first half 2013, an improvement over the US\$2.9 million loss in 1H 2012.

Commenting on the results, PowerHouse Executive Chairman Keith Allaun said: “I am pleased to report that

PowerHouse has continued to take positive action in the recovery and expansion of the group.

“During the first six months of 2013, PowerHouse made significant progress towards its goal of becoming a global force in the waste-to-energy market.

“This time was marked by a tremendous effort on the parts of both of the PowerHouse and the Pyromex teams in achieving the completion of the PowerHouse acquisition of Pyromex AG, and on the part of the engineering, manufacturing, and commercial teams to finalize the Pyromex Ultra-High Temperature Reactor (UHTR) development.

“The efficiency of the Pyromex UHTR system is such that it is extremely favorable when compared with other renewable options on the market. This efficiency, coupled with the economic advantages of diverting waste from landfills, and cleanly generating electricity makes the PowerHouse/Pyromex solution very compelling to our potential customers.

“Waste-to-energy is a growing, vibrant market in which demand is clearly outpacing supply. There are lucrative, long-term, rewards for companies with economical solutions to an ever-growing waste stream with which we are faced.

“The problem of waste continues to grow as first-world economies grapple with the reality that one can only achieve so much by reducing, reusing and recycling. The time has come to ‘recover.’

“By diverting appropriate waste streams from landfill, and engaging the PowerHouse process, we can recover as much as 90% of the energy that was being thrown away – cleanly, economically and sustainably.

“With the acquisition of Pyromex successfully completed in August 2013 we are only beginning to fully realize the commercial potential of the Pyromex UHTR gasification technology.

“During the final few months of 2013, we will continue working on the finalization of commercialization of the technology, stress-testing, commissioning, and customer demonstrations. We continue to aim at first unit deliveries by early 2014 and are pushing aggressively to achieve that goal,” he added.

## TECHNOLOGY

### Air Products to Build Hydrogen Plant for Shell’s Alberta Oil-Sands Upgrader

Air Products announced October 16 that it will build a new, 150 million standard cubic feet per day (MMscfd) hydrogen production plant adjacent to Shell’s Scotford oil-sands upgrader near Edmonton, Alberta.