



PYROTECH ENERGY



Reinforcing Sustainability in Modern Societies through Innovative Technology



CHRISTOS KARANTONIS
MANAGING DIRECTOR

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Harnessing Biomass to Generate Clean Energy

There is a serious danger in our reckless attitude towards petrol, diesel, coal and other fuels that our planet can only replenish over millions of years. As we excessively depend on fossil fuels, we are thrust closer into a possible energy crisis, across the world. A feasible solution is presented by pyrolysis technology—an eco-friendly means to produce biofuels, electricity and heat from organic raw materials or biomass, agricultural residues and wastes. If more and more people can access and use pyrolysis technology, we would have an opportunity to practice a much deeper sustainable way of living.

In Australia, organic materials are bountifully available but the high CAPEX and OPEX costs including equipment, labor and transportation make biomass energy impractical to practice widely. This is exactly where ‘Pyrotech Energy’, a clean tech organization with its special pyrolysis technology, wants to make a difference. The company propels and popularizes innovative eco-friendly solutions and aims to foster a culture of sustainability in modern societies. It is also a leading technology licensor and developer of equipment, engineering support and service to the waste-to-energy industries.

Mobile Pyrolysis Plant: A Successful Means to Harness Biomass

The company’s Managing Director, Christos Karantonis believes that the centralized design of conventional biomass systems is the main problem. “We believe the opposite way, small scale, flexible, portable and decentralized units that can be scaled up according to demand. Decentralized applications that promote environmental education, green smart technologies and local security with job growth—this is our journey and path”, Mr. Karantonis says.



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To provide a renewable alternative to fossil fuels, Pyrotech Energy has fully designed and developed advanced pyrolysis technology on mobile platforms. These lightweight plants can access very remote areas such as farms or forests and work very quickly, are affordable, non-polluting, automated and have a high energy output. This design is a success as it's economically, socially and environmentally viable. "Our technological platforms as solutions provide the opportunity to convert waste streams that can be an expense delivering to the landfill to an energy-saving and carbon sequestration application saving expenditure on running operations or even eliminating their power bills and becoming positive to feed the grid", Mr. Karantonis adds.

"Fossil fuels have formed from biomass in nature over millions of years. Pyrolysis oil and bio-chemicals can be produced by mankind in only seconds. Pyrolysis liquids can be stored, traded, transported and applied universally, just like mineral oil", Mr. Karantonis says. This method to mimic nature is made possible by the world's first "2nd generation flash pyrolysis technology". The concept was originally developed by the company's business partner 'NettEnergy' who is a global leader in thermal energy conversion technology. The mobile plants can efficiently convert biomass feedstocks into environment-friendly and useful products: bio-crude oil, biochar, wood vinegar, syn-gas, and hydrogen. These products have many uses in diverse industries and can be further processed to generate thermal or electrical energy.

State, central and federal governments, non-profit organizations, corporations, and the forestry and agricultural sectors can reap many benefits from Pyrotech Energy's novel technology. Along the way, the

company wants to help its partners and customers earn more revenue and also cultivate bright employment opportunities in the environmental sector.

A Mission to Replace Fossil Fuels with Renewable Energy

Pyrotech Energy aims to rescue endangered ecosystems by reinforcing sustainability in modern societies through technology. The company firmly believes in reusing, recycling what society discards as wastes and synthesizing such waste streams into clean energy and bio-chemicals. Their biggest vision is to nudge society towards independence from fossil fuels and petrochemical-based industrial or commercial practices.

Employees critically support Pyrotech Energy to consistently uphold values to clients and guarantee positive results. "We believe happy and engaged employees will produce happy customers, which results in positive business return. This is a virtuous cycle that always begins with our own employees. We work to attract and inspire talented team members who are passionate about transforming this industry with best-in-class products and innovations", Mr. Karantonis says.

Mr. Karantonis firmly believes that renewable resources of energy are the only effective replacement for traditional fossil fuels. As the natural supply of fossil fuels gradually diminishes, people can begin to adopt pyrolysis technology as a meaningful and positive step towards the solution. "I am happy to see that a lot of companies are interested in partnering with us to work on upgrading their operations by utilizing their waste streams and converting it into renewable energy, biofuels and bio-chemicals", he concludes.