

# Answering the Green debate

First Power Limited

newsletter#3



In response to false claims over environmental concerns we would like to clarify a few points in relation to the Stein Pyrolysis process.

The Stein Pyrolysis process is a pure pyrolysis system – which means that no oxygen is present – making combustion, and the formation of dioxins, impossible.

## Does Stein Pyrolysis produce CO<sub>2</sub>

Yes, but typically less than 20% of the waste is combusted, so only 1/5 of the CO<sub>2</sub> is produced.

## No technology can make everything disappear

There are many ways of dealing with waste. A priority should be to render it safe and not to make further problems such as dangerous liquid, solid or gaseous emissions. The only by-product of the Stein Pyrolysis process is a harmless, inert vitrified slag, that can itself be used by the construction industry.

## Pyrolysis is combustion in disguise

No. Three elements are needed for combustion: fuel, heat and oxygen. As the Stein Pyrolysis Process is a pure pyrolysis system – which means no air or oxygen is present – combustion cannot take place.

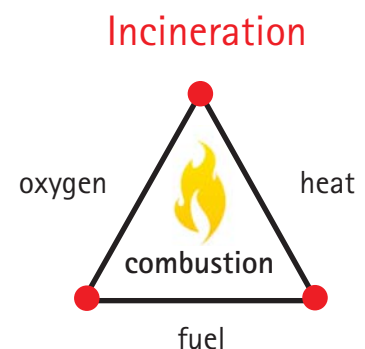
The illustration opposite demonstrates that by removing oxygen, combustion cannot take place.

## Pyrolysis plants are large

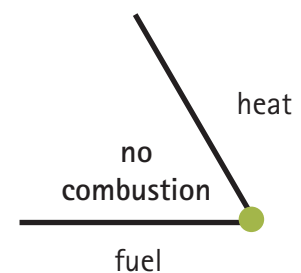
They need not be. The Stein Pyrolysis Unit is less than 8m tall.

## Pyrolysis of waste is unsustainable

There will always be waste, and equally there will always be a need for energy. The Stein Pyrolysis Process has a lower carbon footprint and lower emissions than incineration.



## Stein Pyrolysis



### Pyrolysis is just another form of combustion and produces dioxins

No. As no oxygen is present at the moment of Pyrolysis, no combustion takes place, which means that no dioxins are formed.

The illustration opposite shows that to produce dioxins heat, chlorine and oxygen must all be present. In the Pyrolysis Unit, the absence of oxygen makes dioxin formation impossible.

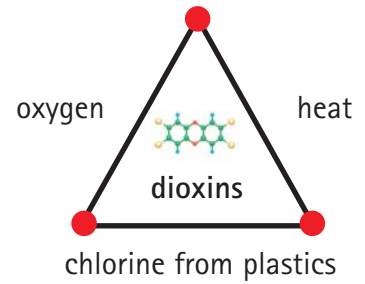
### Pyrolysis is a disincentive to environmentally-friendly recycling, pollution prevention, green energy and green technologies

Conversion of waste to energy is a last resort but it is better than landfill as landfill releases greenhouse gases as the waste decays. Stein Pyrolysis uses waste constructively to provide energy and create a usable material.

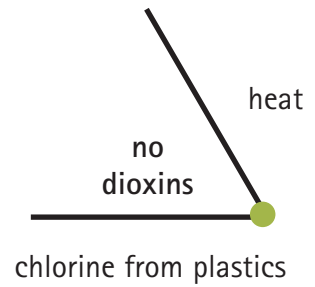
### Pyrolysis plants are noisy

No. The plant has few moving parts and is designed for low noise operation.

### Incineration



### Stein Pyrolysis



A working example of the Stein Pyrolysis Unit is in operation at our East London factory. Site visits are held regularly and visitors get to see the simplicity and effectiveness of the design.

register for updates at [www.firstpowerlimited.eu](http://www.firstpowerlimited.eu)

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