



**Hybrid Green Energy
Power Station**

EXECUTIVE SUMMARY

International Clean Energy Pty Ltd (ICE) is able to provide a turn key solution capable of generating power through a unique Waste to Energy Power Generation Plant as a Non-Network Alternative Solution to the Network Options, such as Diesel Generation.

This plant is designed to and operates most efficiently when run on a 24/7 basis.

The production of this power uses our Hybrid Green Waste to Energy System, which generates no measurable level of toxic by products, only a small and manageable amount of inert char. This char can be utilised as a fertiliser substitute. It therefore represents a green energy generation solution.

As the source of the power is a process of converting Waste for example Municipal Solid Waste (MSW) to Energy there are additional benefits to the community which we outline below. This process **does not involve the incineration** of the feedstock, and therefore falls well within the EPA guidelines.

The process will not generally result in the dislocation of any workforce presently engaged in managing the MSW. This plant is modular and mobile and can be easily relocated to any other site in the future. The lead time is around 4-5 months.

The Installation can supply the needs of a small town or business but also increasing the number of units it is capable of operating successfully in a city with a much larger population and therefore feedstock.

ICE HYBRID PROPOSAL

What is a Waste to Energy Plant?

Waste to Energy gasification plants have been around in Europe for 30 - 40 years. These plants have been used to convert Municipal Solid Waste, Sewage Bio Solids, and many other waste streams into a synthesis gas (Syngas), which is combusted in an oxidizer to create steam. Traditionally the steam is then used to heat buildings etc. The units we are using are modular and portable.

ICE has married this proven and reliable technology with a steam turbine. The plant is designed to run 24/7.

A breakdown of the Waste to Energy plant is as follows:

- A specially designed hopper with Auger to feed the bio solids and MSW into the pyrolysis chamber;
- This hopper will facilitate 24 hour fuel supply for the system;
- Bio Solids & MSW is then gasified in to the pyrolysis chamber and syngas is created;
- The feedstock options for this plant is immense;
- The syngas is then heated in an oxidiser and waste heat boiler is utilized to produce steam (in a closed loop system). Waste heat will be utilised for either pre-drying feed stock where required or to produce further power;
- The steam is used to generate power with a steam turbine;
- Each turbine can produce up to 700kW or 2.5MW/hr, depending on their individual size;
- Feedstock can include MSW, Medical, Coal, Green Waste and Tyres.

Benefits of ICE Solution

- Efficient power generation located where it is needed most;
- Mitigation of transmission loss through poles and wires;
- A non network environmentally friendly alternative solution to non environmentally friendly Diesel Generators or poles & wires;
- Creation of jobs;
- Removal of council's waste Bio Solids and Municipal Solid Waste;
- Reduction in landfill and MSW at refuse site;
- Alleviation of some of the power load off the Grid;
- Assistance in meeting its renewable energy targets;
- Provision of possibility to negate any future poles & wires augmentation;
- Ability to expand as the towns grows;
- Possibility to expand this technology;
- A unique opportunity to have mobile systems available for emergency power provision; and
- Provision to the customer with an opportunity to show case their foresight in proactively utilising unique and eco-friendly green power generation.

Uniqueness of ICE

ICE has access to very new and unique technology. The power provision proposed relies on proven technology.

Most Waste to Energy plants require substantial capital investment, have long construction lead times and require a substantial continual supply of feedstock. The ICE proposal has substantially less lead times (typically less than six months), lower capital commitments and feedstock requirements as multiples of ½ and 2 tonne, depending on the specific plant combination selected.

Expressions of Interest

If you would like to discuss this further please contact Jason Meiklejohn on
Phone +61 7 32093273
Mobile +61 414184794
Email jason.m@icenrg.com.