



***Vortex Energy Group LLC***

simplifying Energy

# Sustainable technology available now

Offering your business the energy resources you need



We provide a pollution-free combustion source for energy recovery systems using alternative and renewable fuel sources.

*ThermoMAX™* is a grateless combustor that utilizes ultra high temperatures (2000°F and above). The combination of tangentially-forced fuel, air and waste mixture, creates a 90 mph vortex “tornado” that more efficiently burns the shredded material. This material then moves through the chamber towards the back wall, where (through a patented and proprietary method) it is re-introduced back into the vortex for continuous burning.

This process is known as “synergistic iteration.” As the waste material burns in suspension, it becomes its own fuel, mixing with controlled amounts of air (oxygen) to achieve complete and perfect combustion. Current technology systems allow the waste to sit or rest on a grate while burning, which produces the harmful emissions, gases, fly ash, and smoke, because of incomplete combustion. *ThermoMAX™* does not produce these same harmful outputs, and does not require expensive and complex exhaust cleaning or scrubbing.

## TYPES OF FUEL

Our waste-to-energy (WtE), biomass-to-energy (bioenergy), and other energy production using fuels derived from alternative or renewable sources, offer clean, pollution-free electricity generation at a fraction of the cost of other methods.

Examples of available fuel sources:

### WtE:

- *Municipal solid waste*
- *Hazardous waste*
- *Medical / infectious waste*
- *Active / closed landfills*

### Bioenergy:

- *Woody biomass*
- *Agricultural waste*

### Alternative:

- *Tire disposal*



## ENERGY PRODUCTION

This system can be used as part of an energy recovery system, where the super-heated exhaust can be directed to a heat recovery steam generator, or boiler, and then to a steam turbine for the production of electricity.



## Some of our unique applications include:

- Cruise ships
- Military bases (domestic and overseas)
- Disaster 1<sup>st</sup> response
- Bonded disposal programs



## flexible solutions - great benefits



### Benefits of this program:

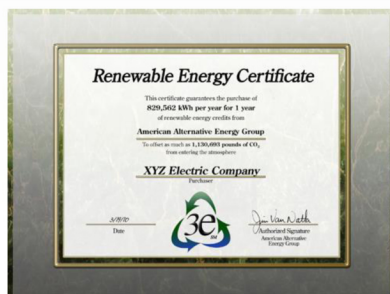
- The first and most important benefit is the **green energy** production
- Federal and state **production tax credits** for renewable energy
- **Sale of the electricity generated** - Rates vary by state, fuel type, and capacity
- Sale of **Renewable Energy Certificates (RECs)**- helps utilities satisfy requirements under the Renewable Energy Portfolio Standards
- Public relations benefit that would arise from a company initiating this type of green energy program

### Examples:

Assuming a 24 hour operation, producing 6 MW of energy (6,000 kWh), selling at **7 cents per kilowatt hour ( kWh)**, would generate revenues of \$ 10,800 per day, or **\$ 3,679,200 per year.**

Federal **energy production tax credits** will vary between **1.0 and 2.1-cents per kWh** for the first ten years of a renewable energy facility's operation, depending on the fuel source. State tax benefits vary greatly. For exact tax credit availability, please consult a tax professional.

According to the EPA's *Green Power Network*, the median price for RECs is **\$20 per MWh**, and assuming a 24 hour operation, producing 6 MW of energy, revenues would equate to \$120 per hour, \$2,880 per day, **\$1,051,200 annually.**



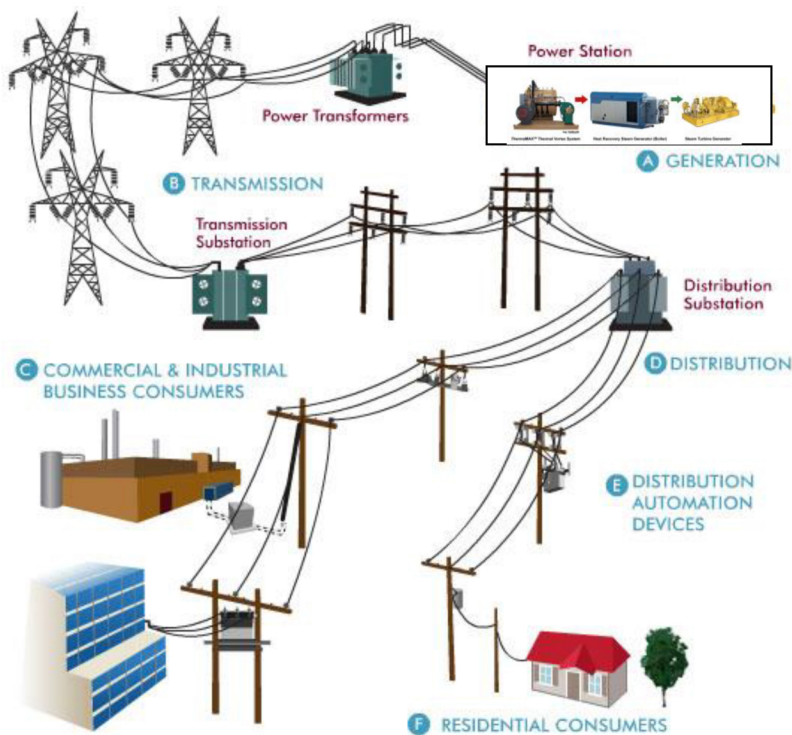
*These are not guarantees but examples of currently available rates or sales figures. These amounts will vary for each site, depending on state, fuel source, capacity, and other factors.*







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**CLEAN**  
**RENEWABLE**  
**ALTERNATIVE**  
**SUSTAINABLE**

Words used to describe energy

We have become used to certain words, phrases, and sound bites that describe our current issues related to energy and our environment.

We need to ensure that our programs are relevant to our existing needs and allow us to take advantage of sources and technologies that are available now, and will address the important aspects of:

***Energy Independence***  
***Economic Strength***  
***Environmental Health***

For more information on our 3e Certification<sup>SM</sup> program, go to:  
[www.VortexEnergyGroup.com](http://www.VortexEnergyGroup.com)

