

TALLAHASSEE, FLORIDA PROPOSED PLASMA ARC GASIFICATION FACILITY UNPROVEN

(The following information was obtained by Bradley Angel, Executive Director of Greenaction for Health and Environmental Justice. It was forwarded to NAB by Jeffrey Morris <jeff.morris@zerowaste.com>. More can be learned at Greenaction's website: <http://www.greenaction.org/>)

Green Power Systems is proposing to build a plasma arc gasification facility in Tallahassee for solid waste. On their website they say "Green Power Systems, LLC is a Jacksonville, Florida based company organized to develop electric generating facilities utilizing plasma arc technology. . . . Hundreds of thousands of tons of waste materials can be diverted from landfill disposal to electric generation."

On January 22, 2008 I contacted Ingo Krieg, President of Green Power Systems. It was an interesting and alarming phone conversation as it demonstrated clearly that the proposed plasma arc gasification project lacked facts to back up some of their key claims, and other claims are simply untrue.

Mr. Krieg claimed that they were "just permitted in Tallahassee" which is incorrect as they do not have permits yet. When I pointed that out he changed his statement to "we are seeking permits."

I asked what their model facility was and first he said they had "no model." But then he said that the Hitachi Metals facility in Utashinai, Japan was successfully using plasma arc for auto shredder residue and some garbage.

He admitted the **Hitachi facility is much smaller than the proposed facility in Tallahassee** and using a smaller plasma torch.

We challenge reliance on the alleged experience of the small Hitachi facility for a much larger 1000 tons per day facility proposed in Tallahassee.

Mr. Krieg admitted that there "**still can be some improvement**" in the technology, and compared the technology they would use to an old airplane.

In a startling and important admission he said that **“We are four props, not a jet engine.”**

I asked him if there was a stack and he admitted **“There is a stack and we do have emissions. The stack would be 90-100.”** **“The syngas goes to a boiler that has a stack”** – asked if it was one stack he responded **“more or less.”**

The admission of a stack contradicts their website which claims: “The reactor has no need of stacks since there are no emissions from the gasification process.”

The website also includes a process flow diagram for their “PGV Process” (Plasma Gasification Vitrification) that completely leaves the stack out. That diagram also refers to “clean gas” when in fact – without a doubt - the syngas would contain toxic chemicals.

He admitted there would be emissions but could not provide that data, first saying it was proprietary and could not be made public. I pointed out that this would be unacceptable, so he then asked me to email a request which I have done. He has not responded yet with data or a confirmation I will receive this data. I am seeking independent test data from whatever facility they claim to be a model. There does not appear to be any data from a similar facility because it does not appear that there is a similar facility of the scale proposed for Tallahassee.

He said **“emissions are as low as natural gas.”** In a newspaper article the company is said to claim emissions are lower than natural gas, so which is it?

I asked him about what documentation do they have to show they can generate energy. He did not have any such documentation and it is not on their website. He said we should talk to Tom Gdanick from Westinghouse Plasma in Pittsburgh.

According to a power point produced by Geoplasma (I found this on

Google), the Hitachi facility in Utahsinai only generated 4.3 net megawatts of power – a very small amount of energy. Even if one multiplied the size of the facility to the proposed 1000 tons per day facility, energy generation would still be minimal using the Hitachi model.

According to news reports, Green Power Systems is seeking over \$150 million in loans, a huge amount that would be risked for a project that has no successful similar models to point to. There does not appear to be any large scale plasma arc solid waste facilities anywhere.

Green Power Systems and similar companies claim that their technology is “renewable energy” but garbage is not renewable energy and should not be considered to be that. We believe that calling the heating of garbage and the burning of the resulting waste gases (“syngas”) “renewable” is greenwashing at its worst.

If our governmental bodies start giving money or loans to incinerators in disguise that claim they are “renewable energy” technologies, then real renewable energy projects using solar and wind will not receive the financial support they deserve.

In addition, using plasma arc for solid waste disposal will seriously harm legitimate recycling programs, as people will be told that the plasma arc is recycling and therefore don't bother doing “reduce, reuse and recycle.” This is a real threat and several industry consultants and officials from certain companies are already saying traditional recycling is no longer necessary. This could have disastrous implications for zero waste programs.

Please refer to the “Incinerators in Disguise Report” produced by Greenaction and the Global Alliance for Incinerator Alternatives and available on our website <http://www.greenaction.org/incinerators/documents/IncineratorsInDisguiseReportJune2006.pdf>

for case studies on the only two commercial plasma arc facilities in the U.S. – both have had huge problems with the plasma arc technology. One is the Hawaii Vitrification Facility in Oahu that has been plagued with problems including being closed for an extended period due to damage to the refractory

of the kiln – resulting in the illegal stockpiling of medical waste. The other is ATG in Richland, Washington that closed after several years of failed attempts to operate at capacity due to equipment problems.

Also please see our power point presentation about Incinerators in Disguise on the Greenaction website. This includes information about the giant Ebara gasification plant in Nagareyama, Chiba prefecture, Japan

<http://www.greenaction.org/incinerators/documents/GAIAPresentationIncineratorsInDisguise100907.pdf>