



ULTURNAGEN, INC. Alternative Energy Solutions

Presentation for
Greensboro City Council
Greensboro, NC
July 24, 2009

ULTURNAGEN, INC.

ULTURNAGEN is a privately owned company specializing in:

- ❖ **Alternative and Renewable Green Energy**
- ❖ **Worker/Human Resource Training and Education**
- ❖ **Machine –to –Machine Solutions**

Our Value Proposition

The City of Greensboro will be able to:

- ❖ **Utilize and began reclaiming the former White Street Landfill to eliminate the costs of transporting trash out of town and disposal at a distant facility by the end of the current contracts in 2011.**
- ❖ **Process and destroy banned items that are not currently possible under state restrictions.**

Our Value Proposition

- ❖ **Have access to streams of revenue producing activities and worker development options such as:**
 - **Biodiesel and Bio Jet Fuels;**
 - **Electrical Energy for sale or use;**
 - **Green and Alternative Energy;**
 - **Improved Building Materials;**
 - **Technical and Personal Development.**

Immediate Economic Impacts

- ❖ **Trash Disposal in the City of Greensboro will move from a multi-million dollar cost item to a multi-million dollar income stream.**
- ❖ **New Jobs created (2500 within the next two years) with over 300 jobs in the new technologies brought by the partnership, of which 75% do not require advanced degrees.**

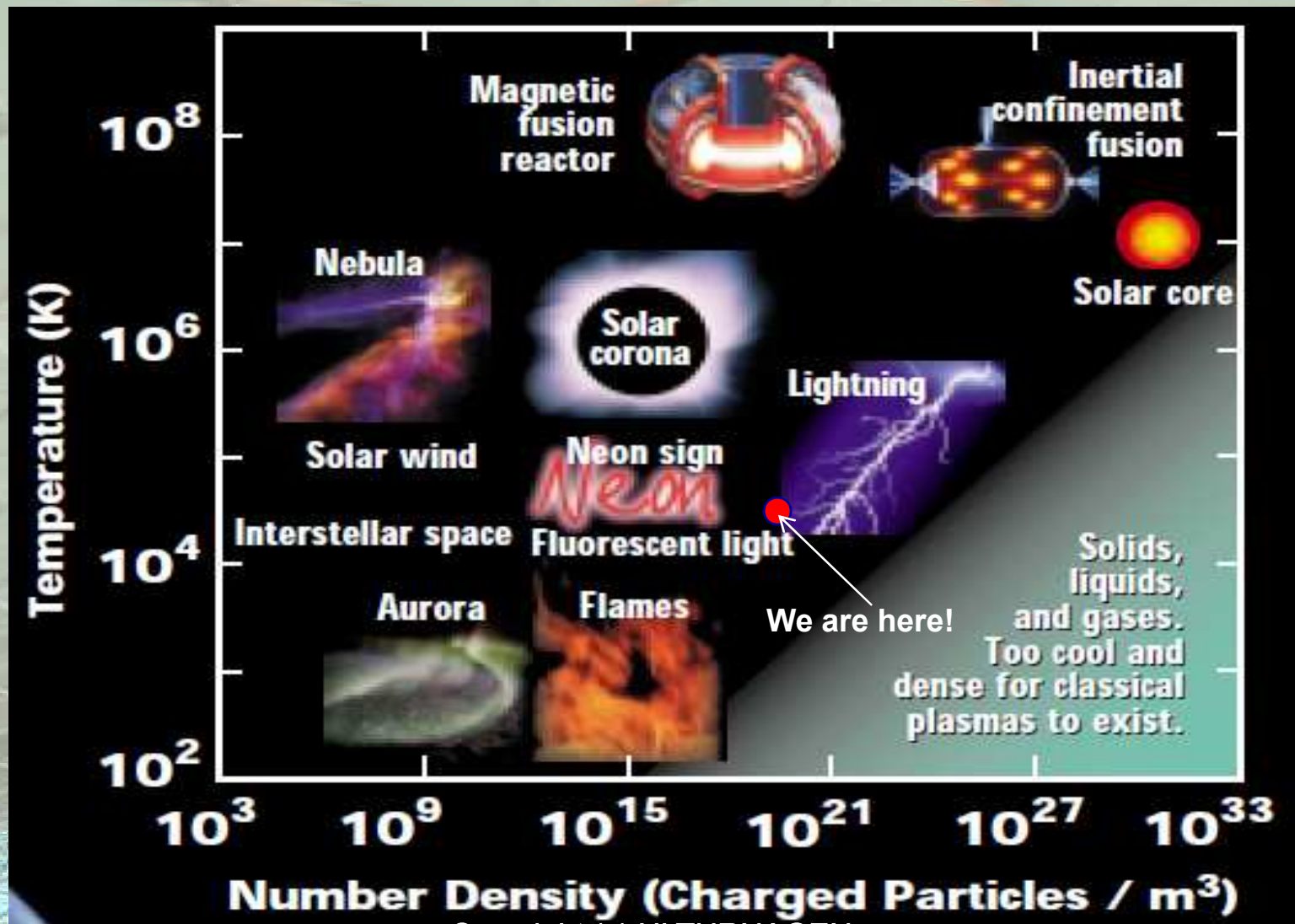
Immediate Economic Impacts

- ❖ **Implementation of a New Jobs Training Program associated with the partnership that will train over 360 participants per year (starting immediately) in the areas of our value proposition.**
- ❖ **Establishing the Greensboro Energy Complex at the former White Street Landfill that will transform the area (nearly 1000 acres) socially and economically.**

Plasma (4th State of Matter)

Plasmas consist of freely moving charged particles (electrons and ions) and plasmas have unique physical properties, distinct from solids, liquids and gases. Plasmas conduct electrical energy and have densities and temperatures that vary widely.

Plasma (4th State of Matter)



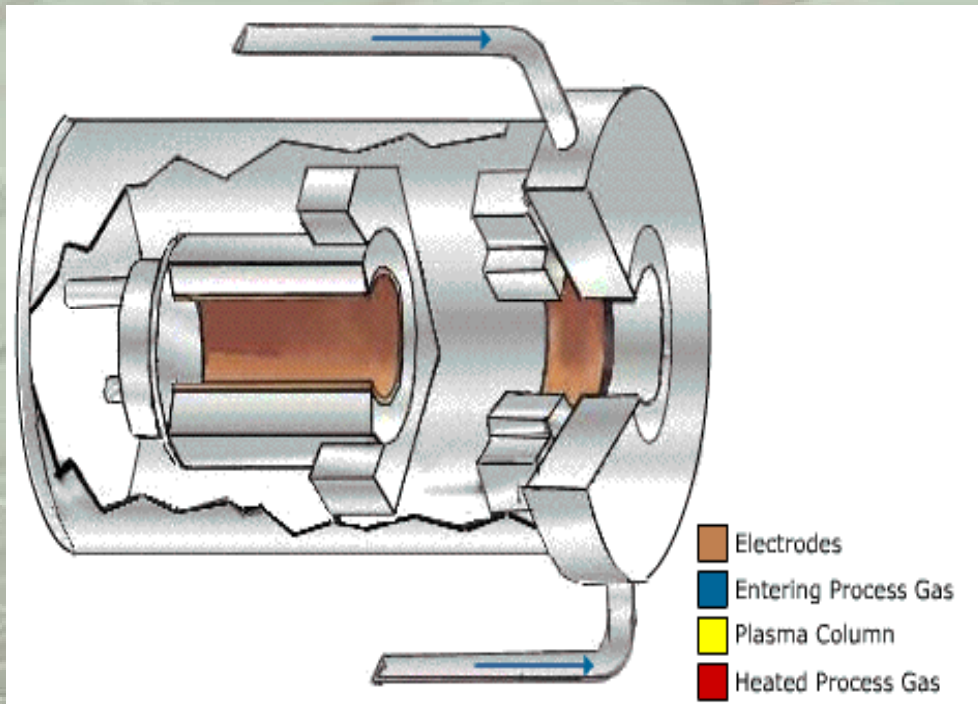
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A Terrestrial Plasma Display



Lightning is a common example of terrestrial plasma, typically having currents of 30 kA and a potential difference exceeding 100MV. The temperatures of these plasmas can exceed 30,000 °C.

Man-made Sustained Plasma Generators (Torches)



Temperatures $4,000^{\circ}\text{C}$ to over $7,000^{\circ}\text{C}$ are achievable and sustainable, the torch produces high energy densities (up to 100 MW/m^3) and the torch operates with most gases (including air). A gasification process is induced (Not an incineration process).

The Plasma Gasification Process



A short video clip
On the Plasma
Gasification Process.

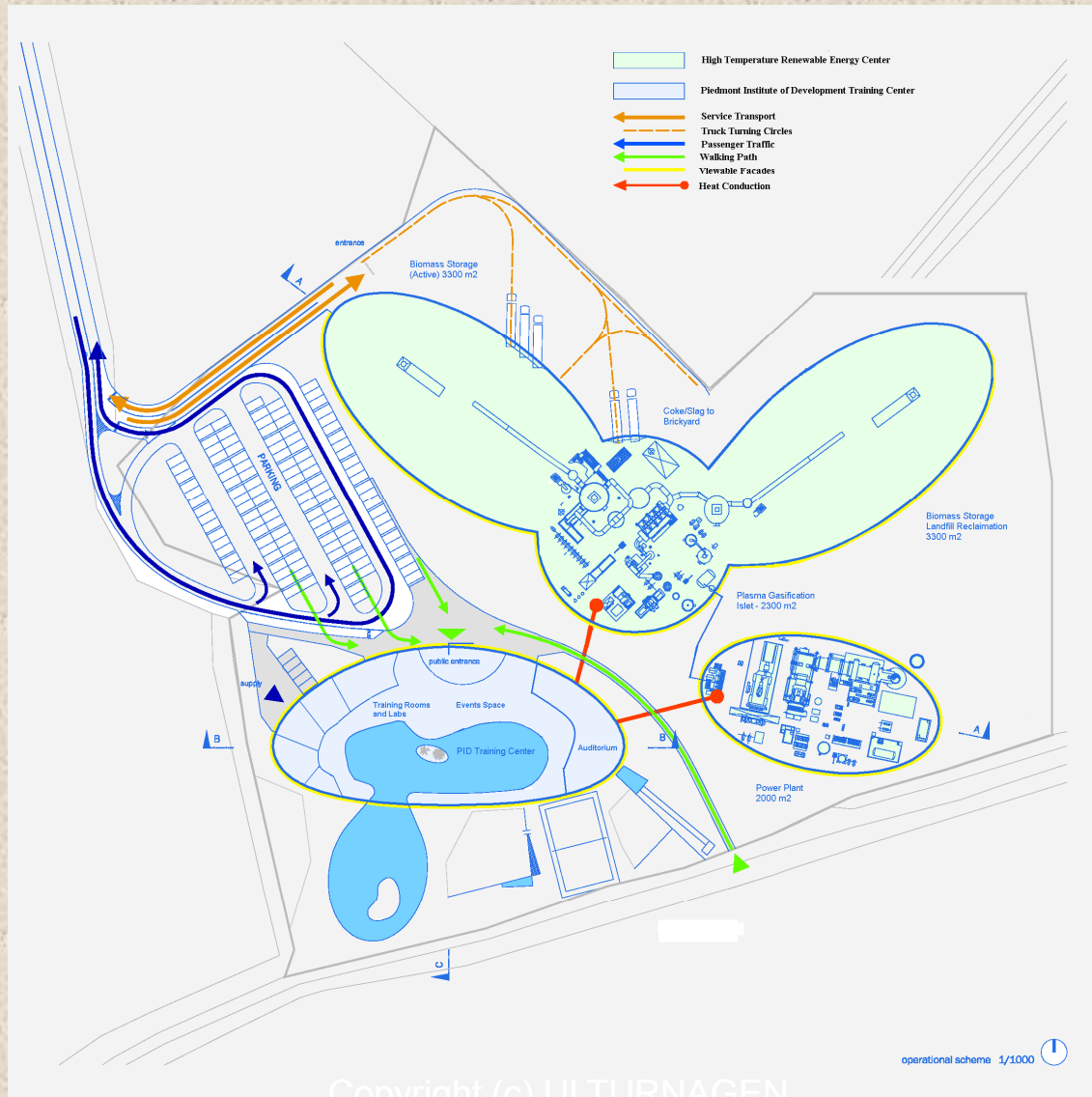
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A New Vision for White Street *Greensboro Energy Complex*



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Greensboro Energy Complex



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Greensboro's input into the Partnership

- ❖ **Use of city bond rating to borrow funds to construct the facility.**
- ❖ **Tipping fees from landfill to be used to pay training costs and facility management costs.**
- ❖ **A twenty year lease whereby ULTURNAGEN manages the landfill and receives the municipal waste (biomass) without additional fees or charges.**

Greensboro's input into the Partnership

- ❖ **A waiver of all impact fees, licensing fees, and permit fees for the Greensboro Energy Complex (GEC).**
- ❖ **The city will pay for Health Hazard and Environmental Studies associated with the GEC.**
- ❖ **The city will establish high tech Asphalt and Concrete Plants onsite to utilize the slag and vitreous slurry from the plasma process.**

Our Commitment

Our partnership with the City of Greensboro will be driven by:

- ❖ **Delivering measurable value;**
- ❖ **Understanding and quickly resolving challenges;**
- ❖ **Minimizing risk and lost opportunity;**
- ❖ **Positioning the city for improved growth and efficiency.**

Leveraging Our Core Competency

Ulturnagen can fully leverage its knowledge, expertise, and people in the following areas by deploying leaders in their respective fields:

- ❖ **World-class software to dynamically monitor jobs creation and training programs;**
- ❖ **Provide highly trained systems integration team;**
- ❖ **Measurement of quantifiable benefits;**

A Proven Methodology

Uturnagen's ability to deliver consistent, reliable solutions is based on a time-proven methodology that places your needs above all other considerations:

Phase 1

Signing Letters of Engagement & Final Budgets

Phase 2

Front-End Engineering & Design /Training

Phase 3

Construction & Entrepreneurial Spinoffs

Phase 4

Plant Operation and Land Reclamations

Next Steps

After validating your business needs and priorities, we will ensure that our business objectives align with your needs. From this perspective, we will propose cost-effective solutions that deliver measurable value to you and the citizens of Greensboro.

- ❖ Start Phase-1 by July 24, 2009 (1/2 mo.)
- ❖ Start Phase-2 by August 10, 2009 (6 - 12mo.)
- ❖ Start Phase-3 by August 9 ,2010 (18 mo.)
- ❖ Start Phase-4 by February 10, 2012 (5 -7 yrs.)