

State of Florida



ORIGINAL

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

RECEIVED-FPSC

MAR - 6 PM 4:04

COMMISSION
CLERK

-M-E-M-O-R-A-N-D-U-M-

DATE: March 6, 2006

TO: Blanca Bayo, Director, Division of Commission Clerk and Administration

FROM: Cayce Hinton, Chief Advisor to Commissioner Deason *CH*

RE: Docket No: 060000 – Undocketed Filings for 2006

This office has received the attached correspondence from Biomass Investment Group, Inc. during a meeting that was on February 21, 2006.

Please place the attached memorandum and materials in Docket No. 0600000 – Undocketed Filings for 2006 immediately.

CHH:mm

- CMP _____
- COM _____
- CTR _____
- ECR _____
- GCL _____
- OPC _____
- RCA _____
- SCR _____
- SGA _____
- SEC 1
- OTH _____

DOCUMENT NUMBER-DATE

01937 MAR-6 06

FPSC-COMMISSION CLERK

State of Florida



Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

RECEIVED

MAR 6 2006
Florida Public Service Comm.
Commissioner Deason

DATE: March 6, 2006
TO: J. Terry Deason, Commissioner
CC: Lisa Polak Edgar, Chairman
Isilio Arriaga, Commissioner
Matthew M. Carter, II, Commissioner
Katrina J. Tew, Commissioner
FROM: Richard D. Melson, General Counsel *RDM*
RE: Meeting With Biomass Investment Group

On February 21, 2006, you met with Schef Wright and Kevin Mills, representing the Biomass Investment Group. The meeting was a technical briefing on their proposed development of biomass projects in Florida. Toward the end of the conversation, Mr. Wright mentioned that Biomass would be applying for QF status in Florida, possibly sooner than 90 days, but did not discuss the merits of that request.

Section 350.042(1) prohibits a Commissioner, with certain exceptions, from initiating or considering ex parte communications regarding the merits of a pending proceeding. That section also precludes an individual from discussing with a Commissioner the merits of any issue that he or she knows will be filed with the Commission within 90 days

Because there is no pending proceeding, and because the conversation did not involve the merits of a potential QF status issue, it appears the conversation was not prohibited by Section 350.042.

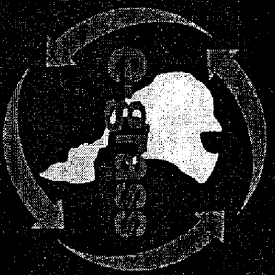
Nevertheless, in an abundance of caution, I recommend that a short memo regarding the meeting, and a copy of any meeting materials, be placed on the public record pursuant to Section 350.042(6). Since there is no pending proceeding at this time, but one may be filed within 90 days, I recommend that:

- 1) the materials be placed immediately in Docket No. 060000, which relates to undocketed filings for 2006; and
- 2) if a docket addressing these matters is opened within 90 days, the materials be placed at that time in the docket file.

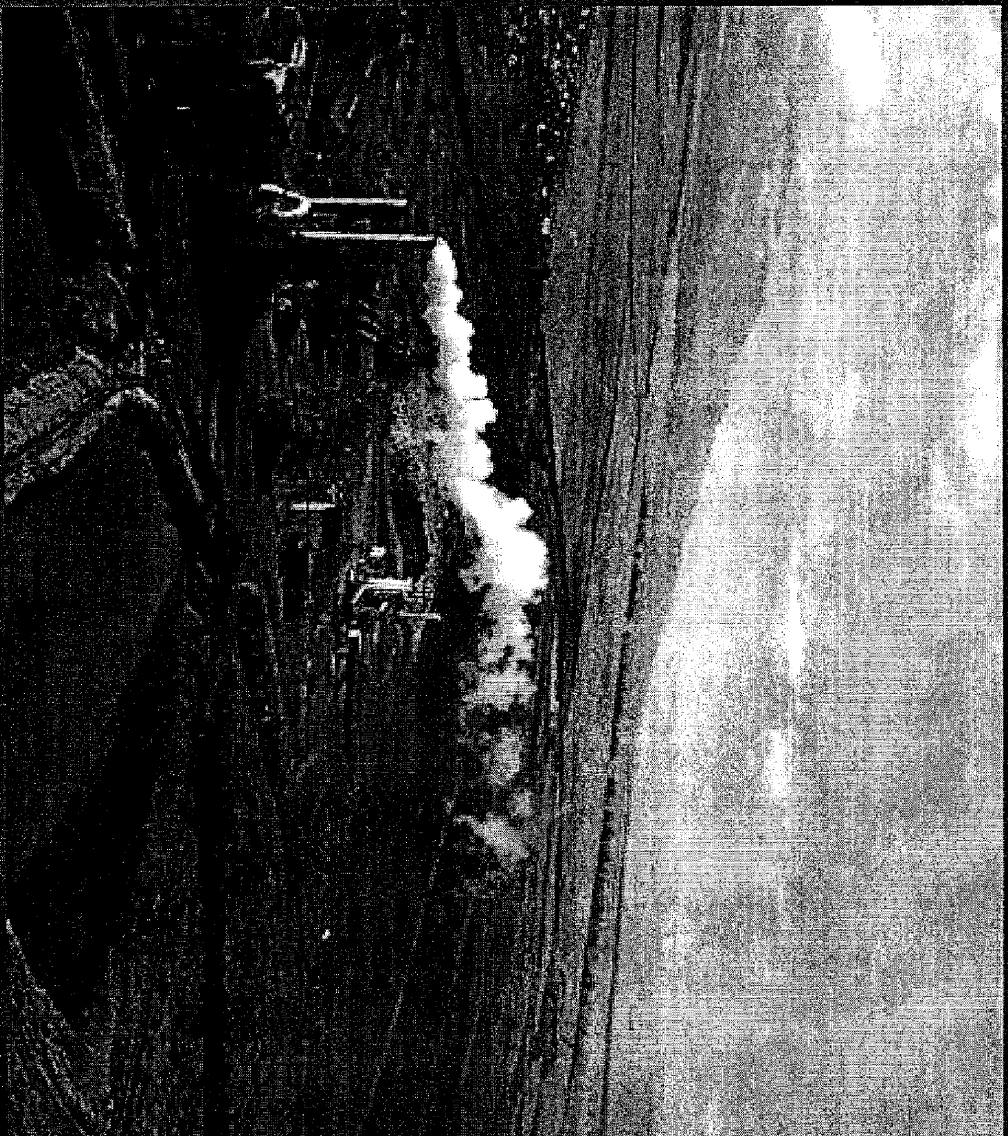
RDM/mee

Meeting Brief
February 21, 2006

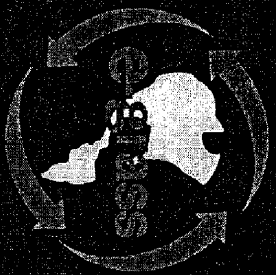
Commissioner Deason met with Schef Wright and Kevin Mills, representing the Biomass Investment Group. This meeting was a technical briefing on their proposed development of biomass projects in Florida. For the most part the discussion addressed the technical operation of e-grass biomass generation plants. However, towards the end of the conversation, when describing their permitting process, Mr. Wright mentioned that they would be applying for QF status in Florida. When asked when they would make this request, the Commissioner was informed for the first time that they could be requesting QF status within weeks. Commissioner Deason expressed his concern that they were not to discuss any matter that could be filed at the Commission within 90 days, to which Mr. Wright replied that he had purposely stayed away from any discussion of the merits of their request for QF status. He believed that without discussing the merits, he was not violating the 90 day prohibition. There was no discussion of their potential request for QF status beyond that. No docketed items were discussed.



Biomass Investment Group, Inc. “BIG”

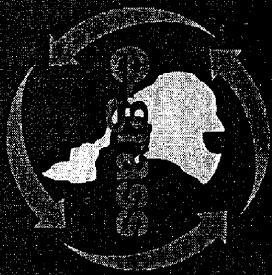


**A Biomass
Farm
Producing
Renewable
Electricity**



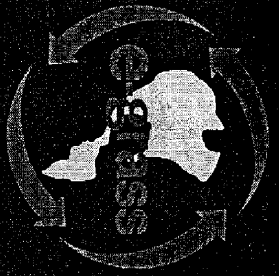
Mission Statement

- ▶ To reduce dependence upon foreign oil and other fossil fuels.
- ▶ To improve air quality by reducing harmful emissions.
- ▶ To create new jobs and business investment.
- ▶ To earn a good return on capital invested while producing renewable electricity and improving the environment.



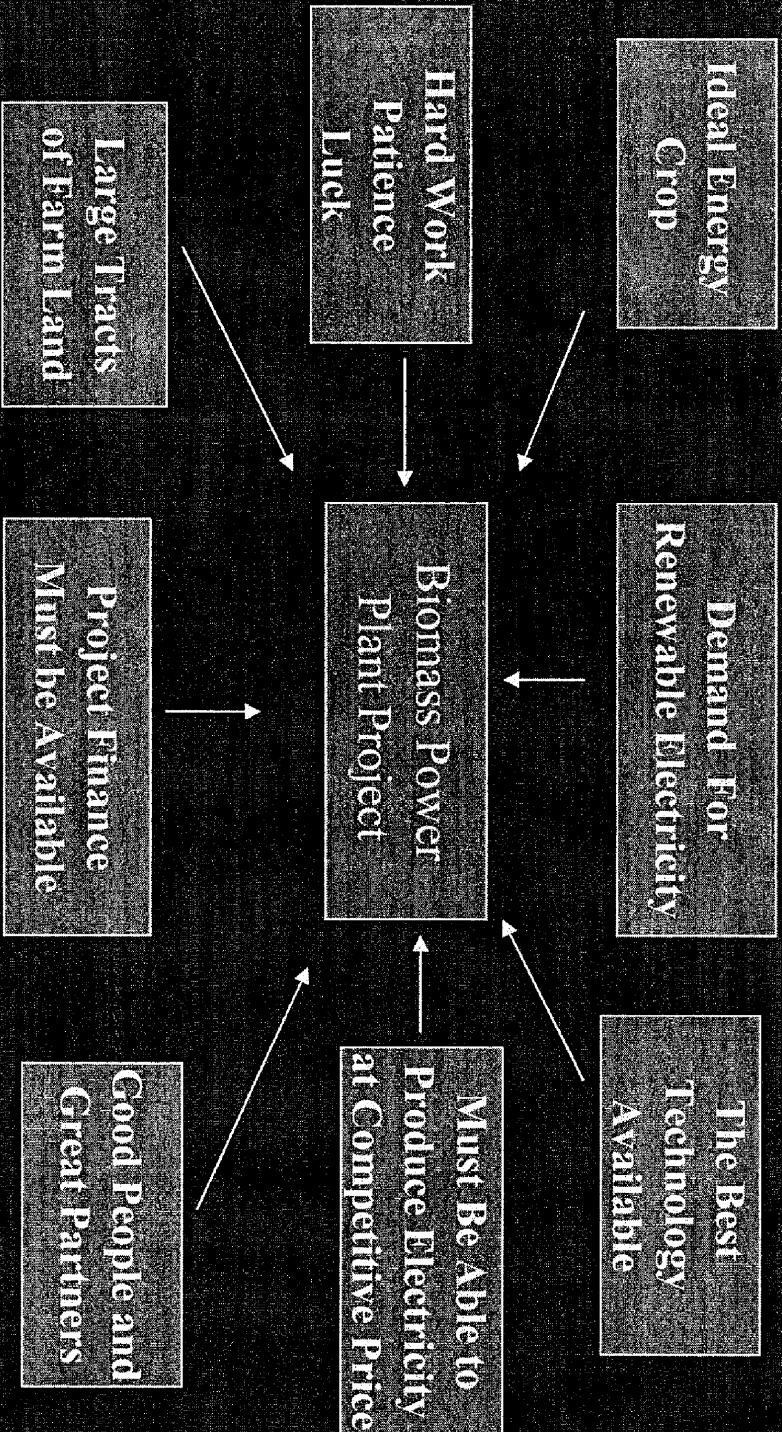
The Business Model

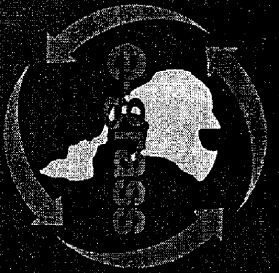
We can meet the objectives of our Mission Statement by utilizing the Business Model that we have developed.



Business Model

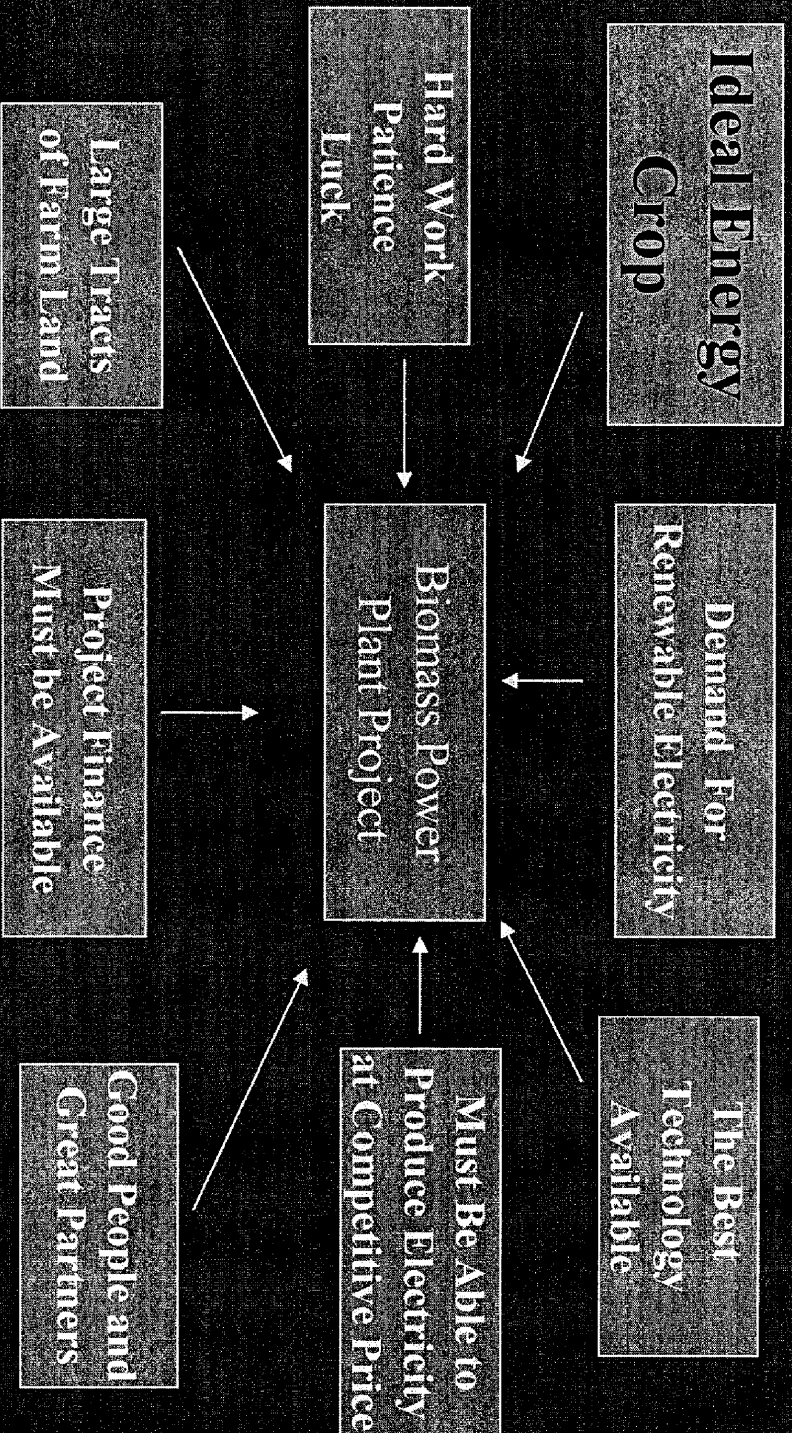
A SUCCESSFUL BIOMASS POWER PLANT PROJECT

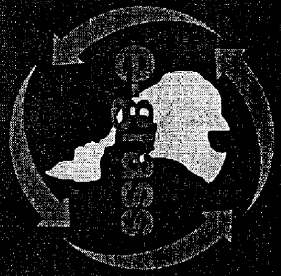




Business Model

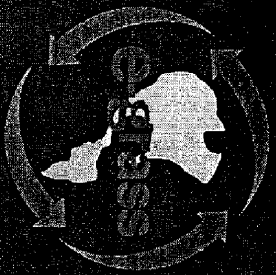
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





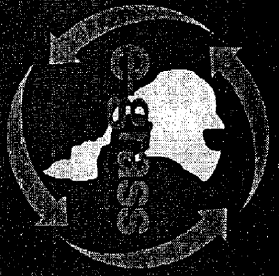
E-Grass™ - The Ideal Energy Crop

- ▶ High yield per acre.
- ▶ High BTU value per pound.
- ▶ Low maintenance cost.
- ▶ Easy harvest and storage.
- ▶ Not vulnerable to disease and pests.
- ▶ E-Grass is the Ideal Energy Crop.

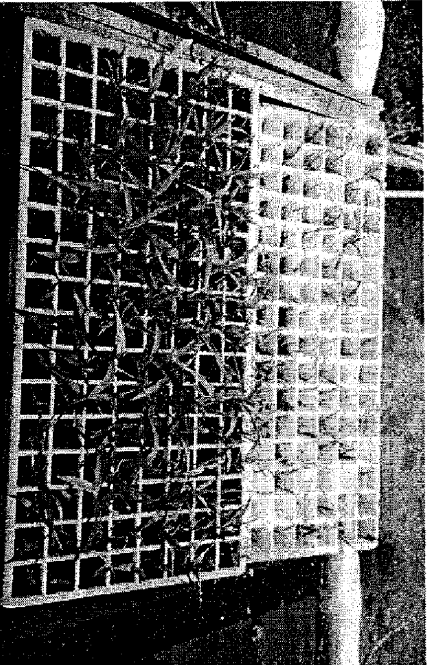
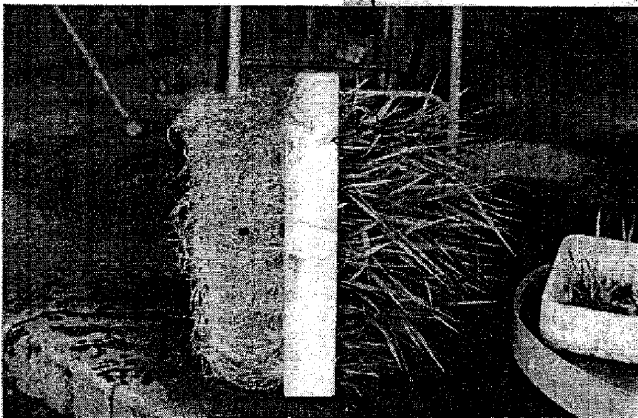
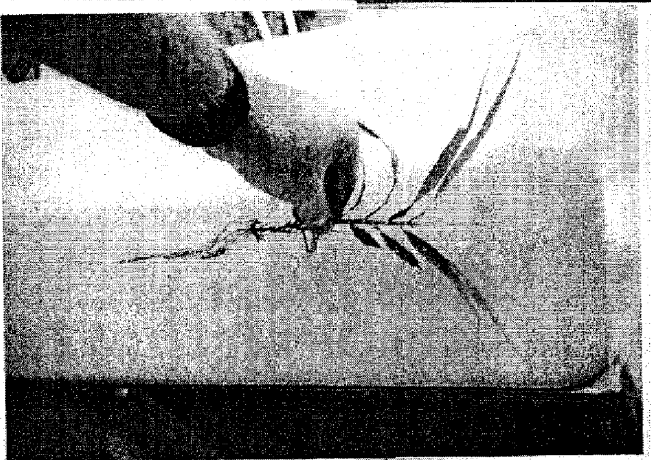


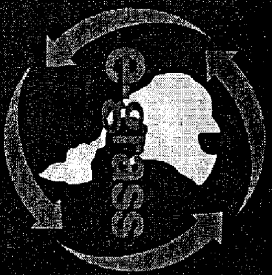
E-Grass™ – The Ideal Energy Crop

- ✓ Yields 15-20 dry tons per acre per harvest.
- ✓ You can get two harvests per year in warm climates with adequate rainfall.
- ✓ Approximately 8,000 BTUs per pound.
- ✓ The Company has obtained a proprietary method of tissue culturing plantlets.
- ✓ You can use conventional methods for harvesting the crop.
- ✓ The crop is basically free of plant disease and insect infestation.



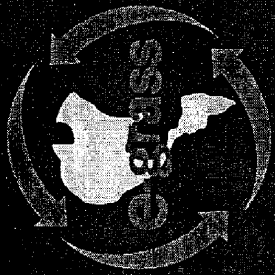
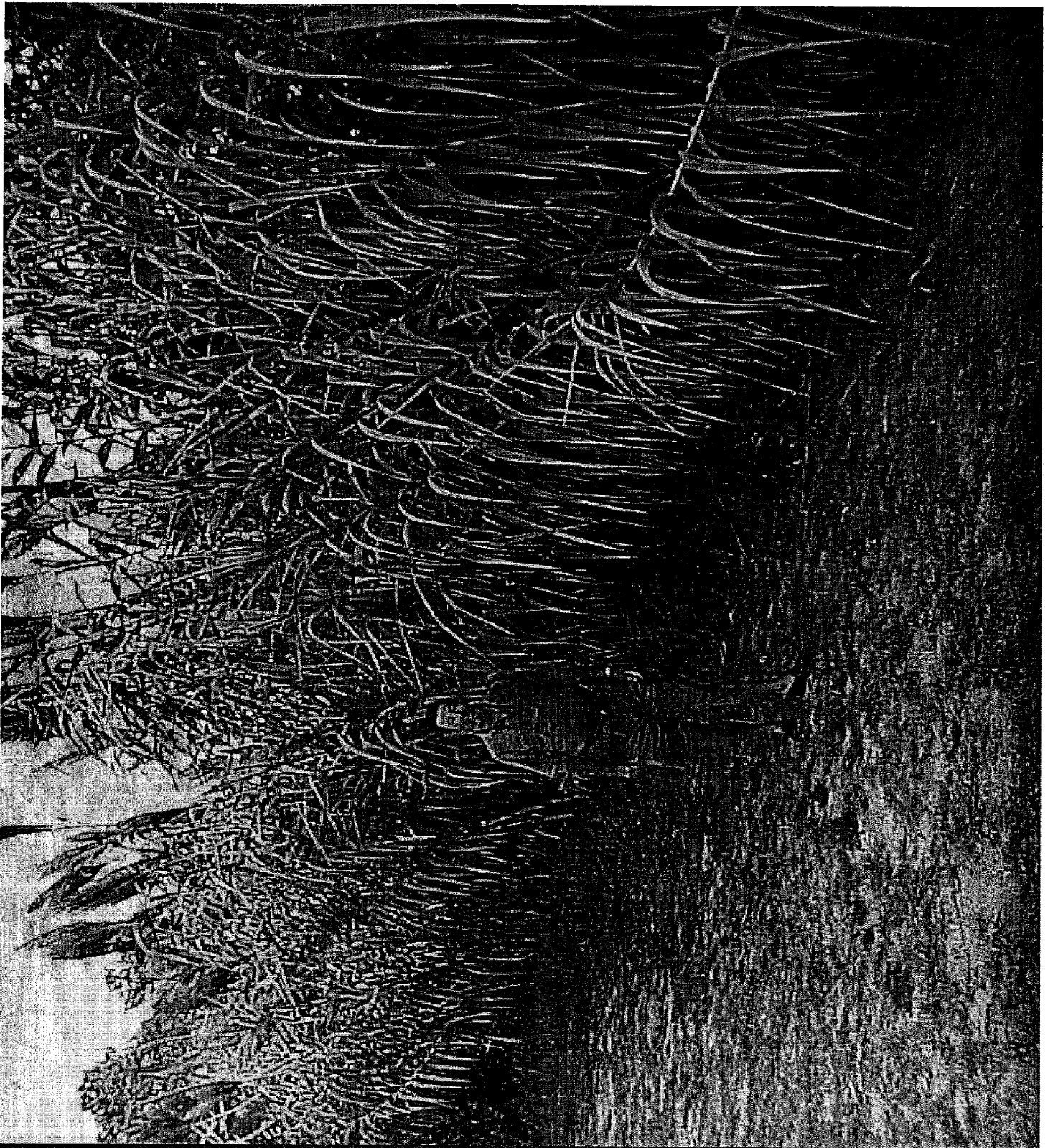
E-Grass Plantlets

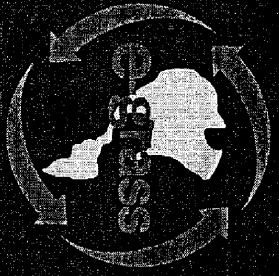




**Mature E-Grass produces a full
crop every 5-6 months**

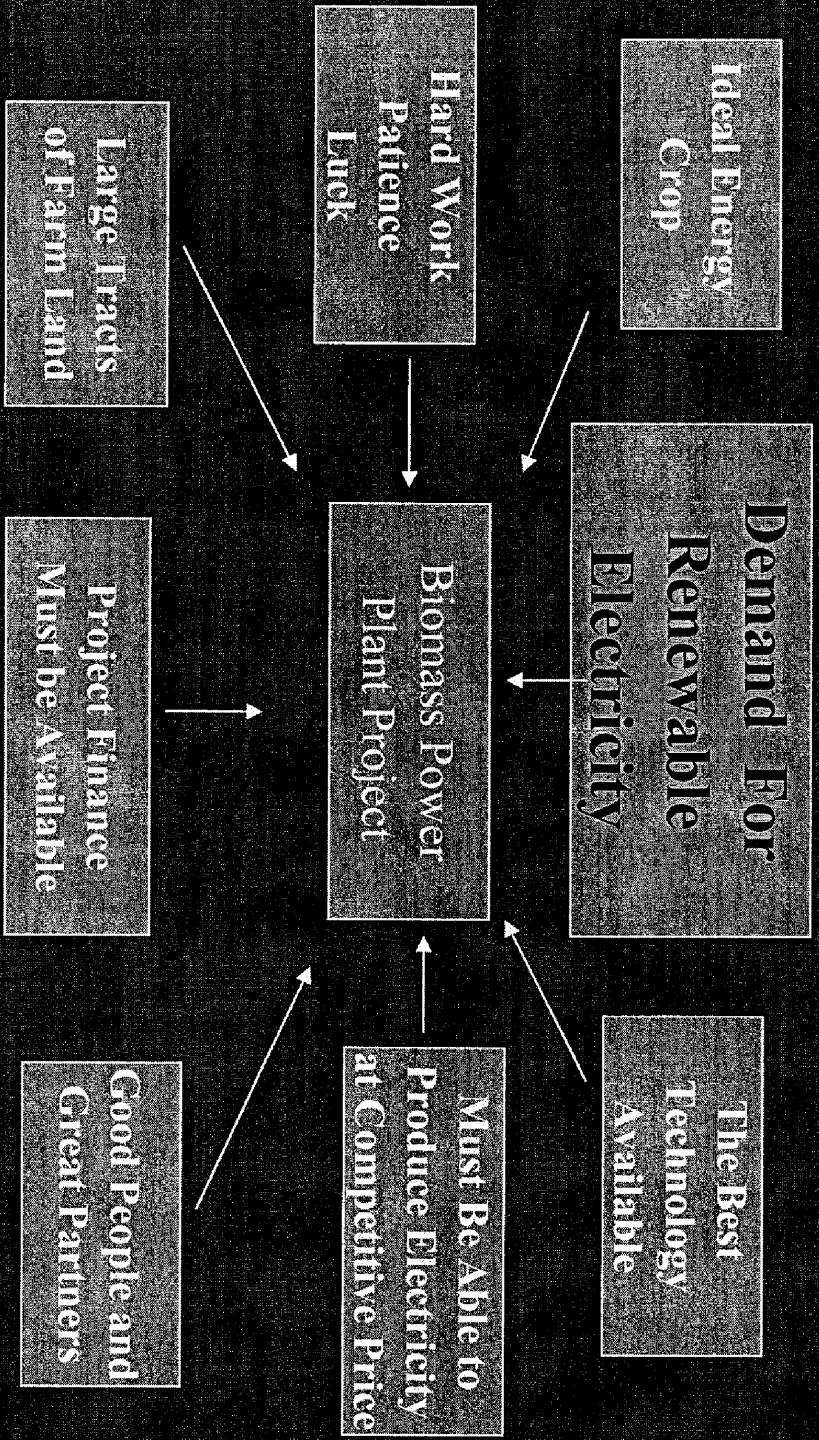


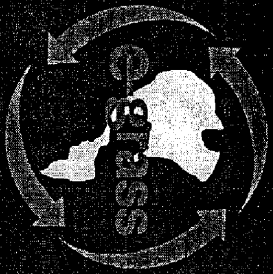




Business Model

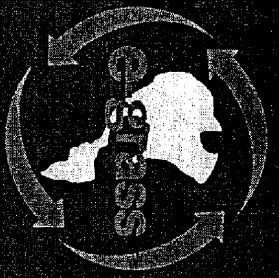
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





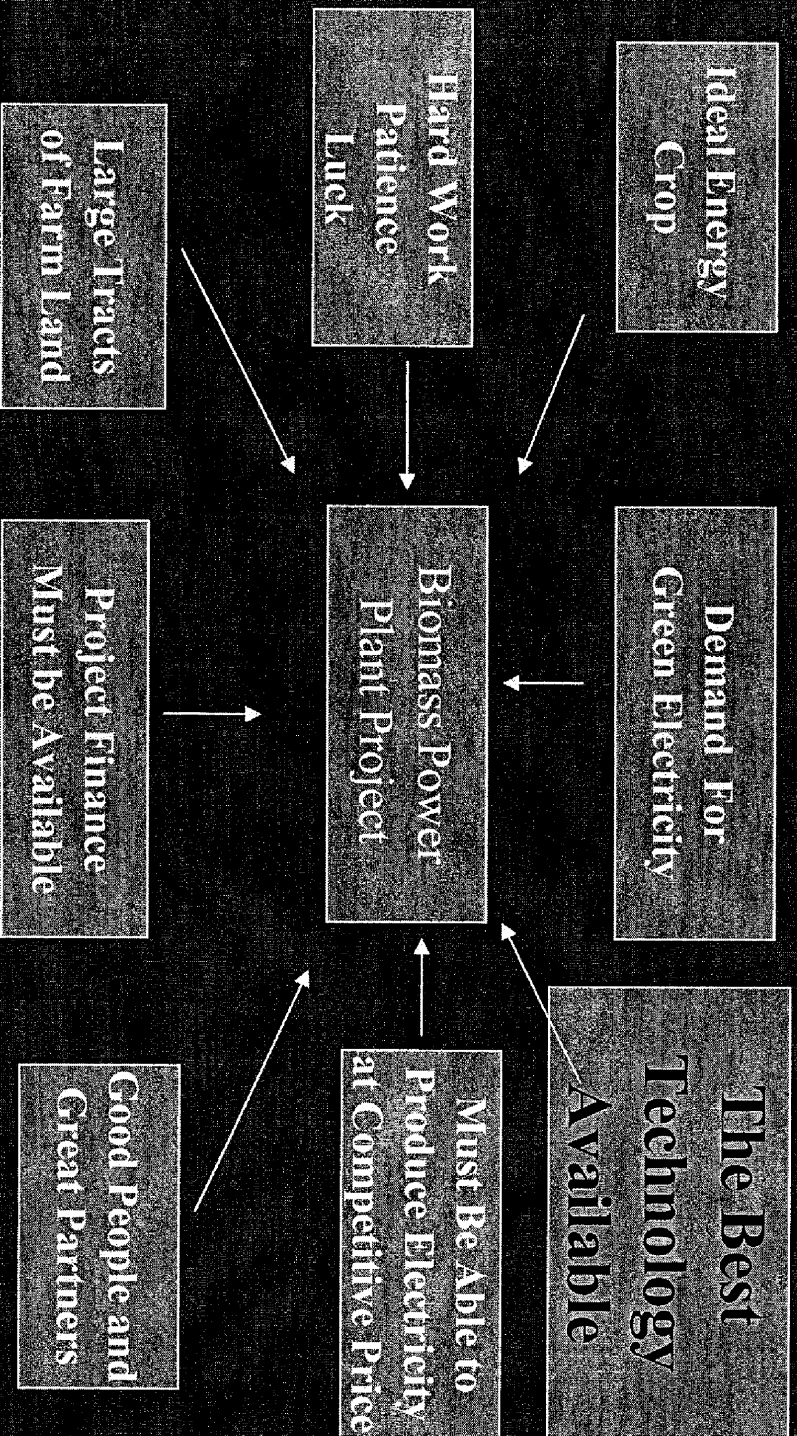
Demand for Renewable Electricity

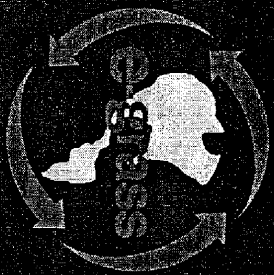
- ✔ Currently, 21 states have adopted portfolio requirements.
- ✔ The US military and many US governmental agencies have adopted goals for the utilization of renewable electricity.
- ✔ Many municipal and other power distribution systems have established green electricity programs.
- ✔ Almost all electric utility companies are seeking better and more stable fuel costs.



Business Model

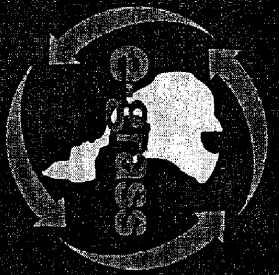
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





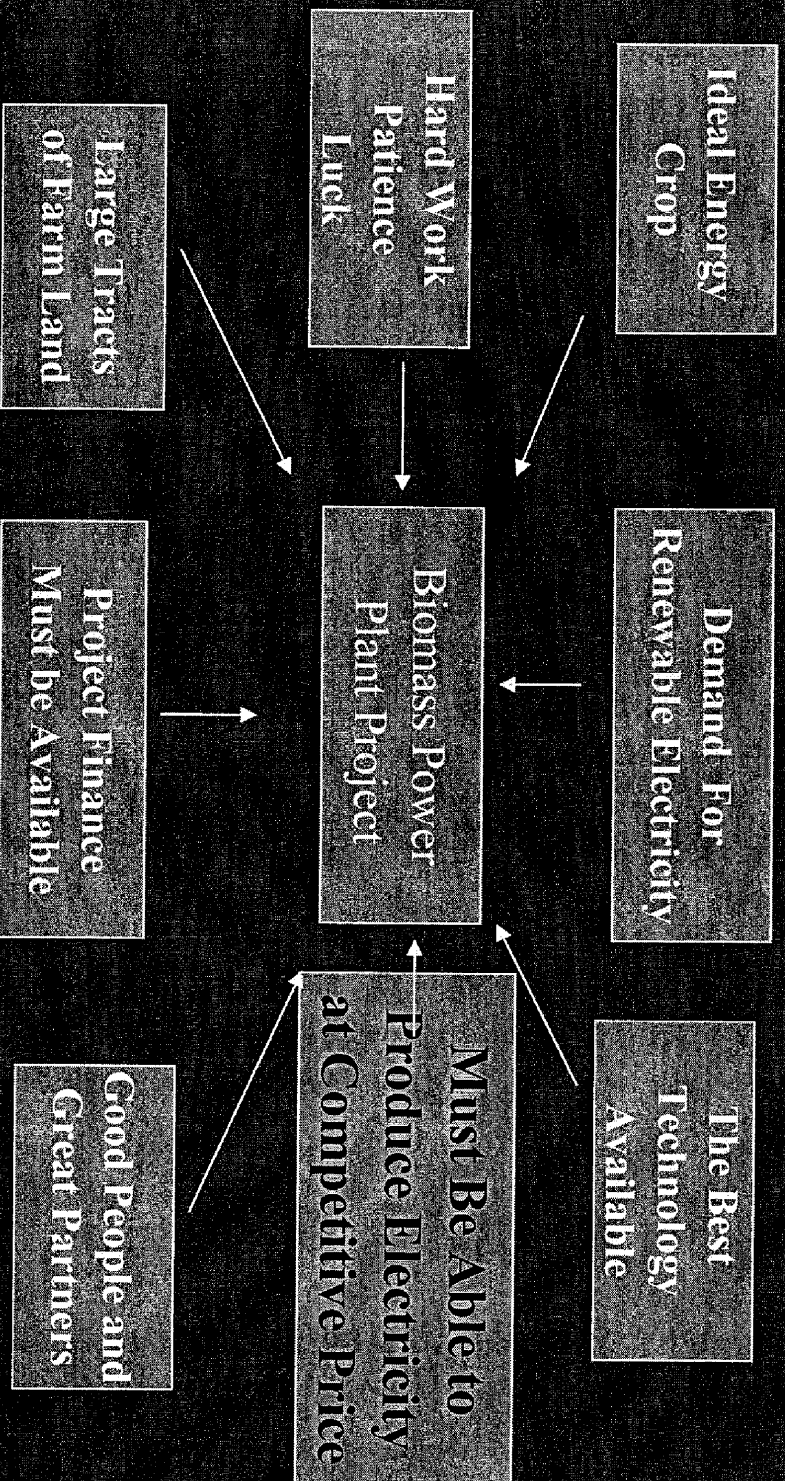
You must Use the Best Technology Available

- Older technology consists of burning biomass in a furnace in a simple cycle process.
- By using a process (fast pyrolysis) that can convert the biomass into a gas or oil, you can use the gas or oil as fuel in a gas turbine as part of a combined cycle process for increased efficiency.
- BIG has developed proprietary fast pyrolysis technology that allows it to convert E-Grass into a bio-oil and use it in a combined cycle process.
- Using this process enables BIG to be able to produce renewable electricity at competitive prices.



Business Model

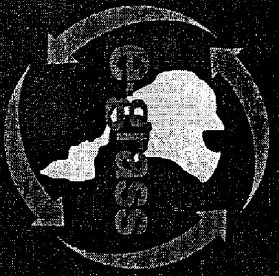
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





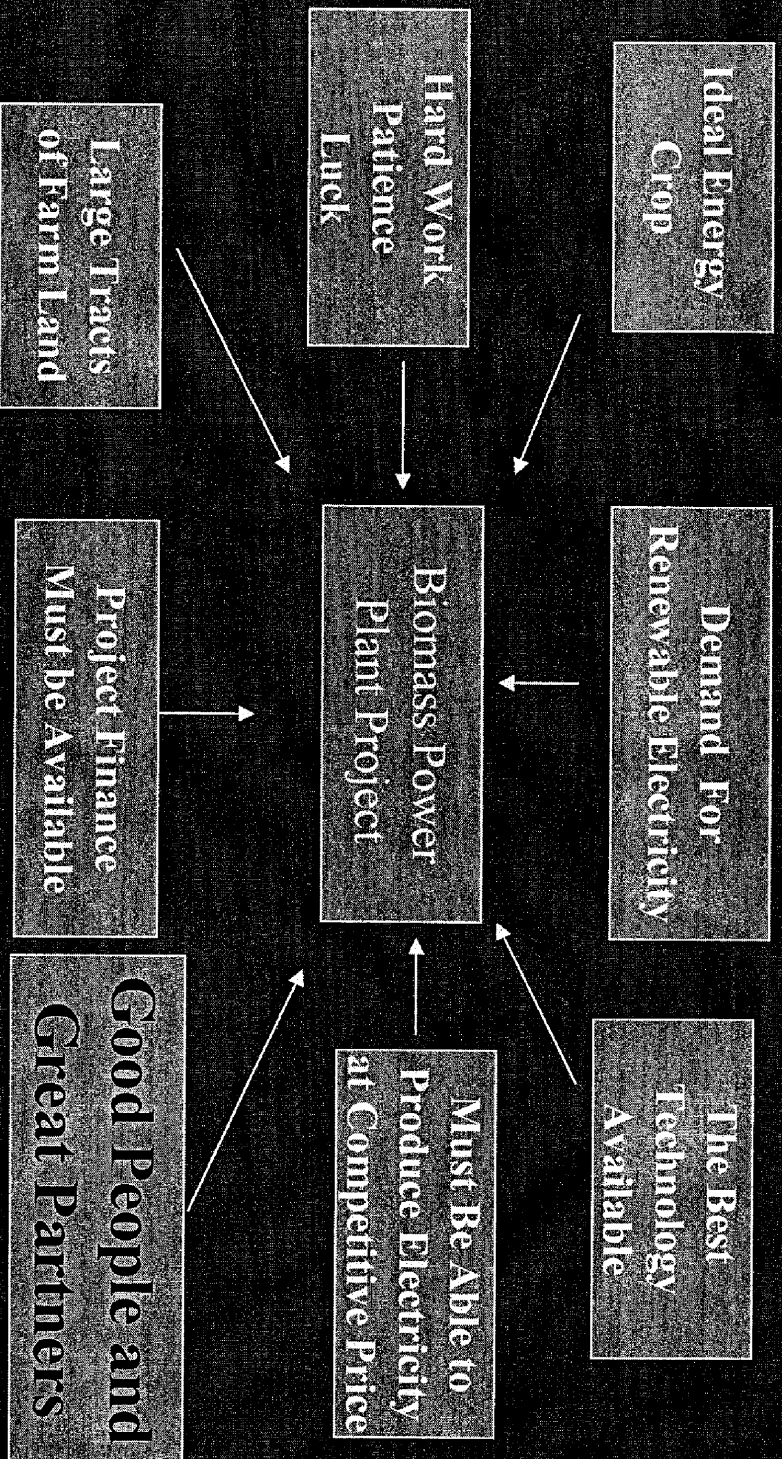
You must be able to produce electricity at a competitive price

- ✔ You must plant, grow and use the ideal energy crop. (BIG has E-Grass)
- ✔ The power plant must utilize a combined cycle power plant. (BIG will utilize fast pyrolysis as part of a combined cycle power plant)
- ✔ The power plant must be located on or near the biomass farm to reduce fuel transportation costs.
- ✔ Recent increases in fossil fuel prices has resulted in BIG being able to use biomass to produce electricity at prices lower than electricity produced from fossil fuels



Business Model

A SUCCESSFUL BIOMASS POWER PLANT PROJECT





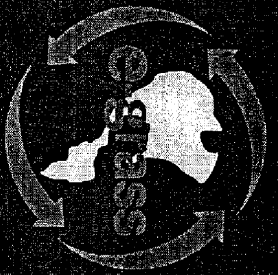
You must have good people and great partners.

✓ Company People

Engineers with proven track records, farm manager with years of experience growing our energy crop, experienced top level management, etc.

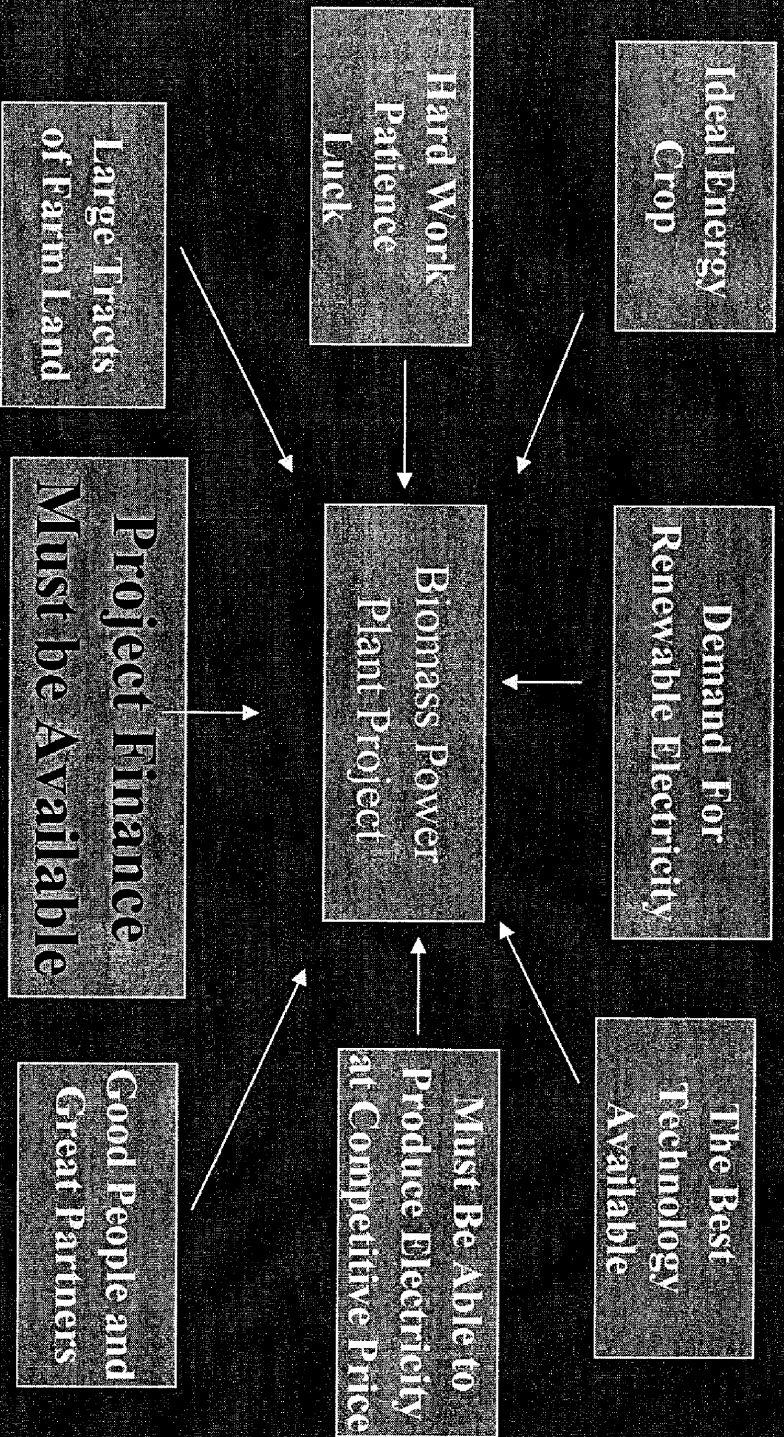
✓ Partners

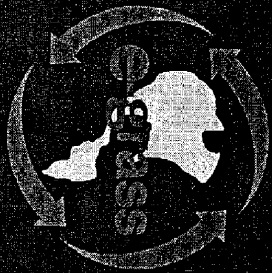
GE (turbines); Willbros Engineering (EPC contractor); Troutman & Sanders Law Firm (corporate); Wachovia Bank (limited partner); Ernst & Young (auditors); Young von Assenderp Law Firm (licensing); Cummings & Barnard (project engineers); ECT Engineering (permits).



Business Model

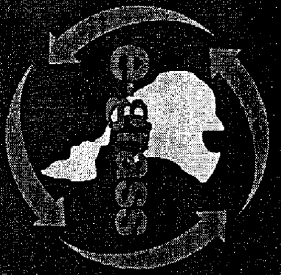
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





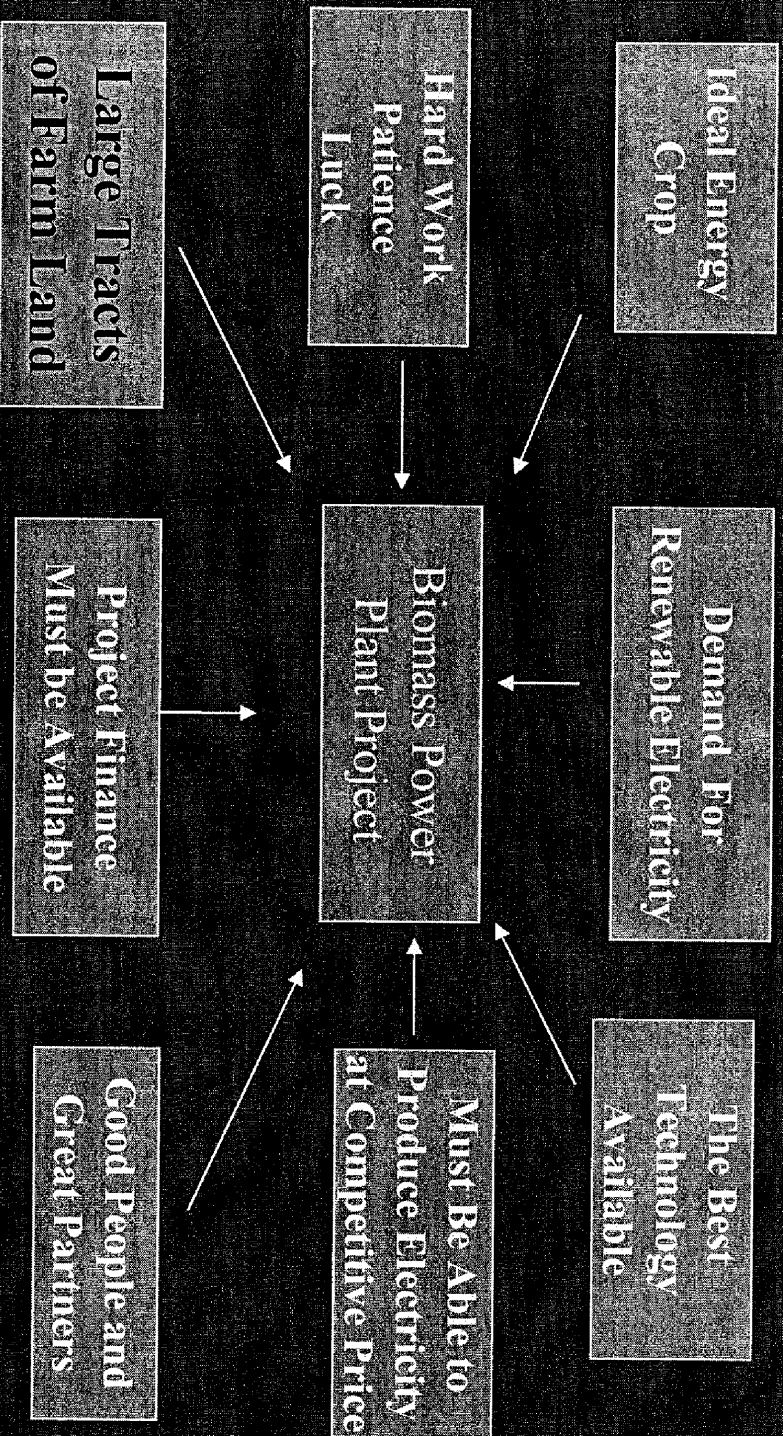
Project Finance Must Be Available

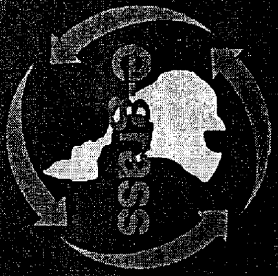
- ✓ Must have a long-term PPA with a credit-worthy purchaser.
- ✓ Must have an EPC contractor that will guarantee price and performance.
- ✓ Project must be able to stand on its own financially; i.e. income to debt service ratio.



Business Model

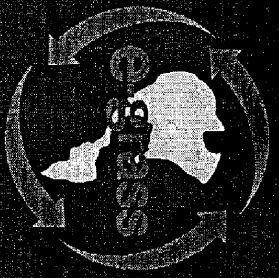
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





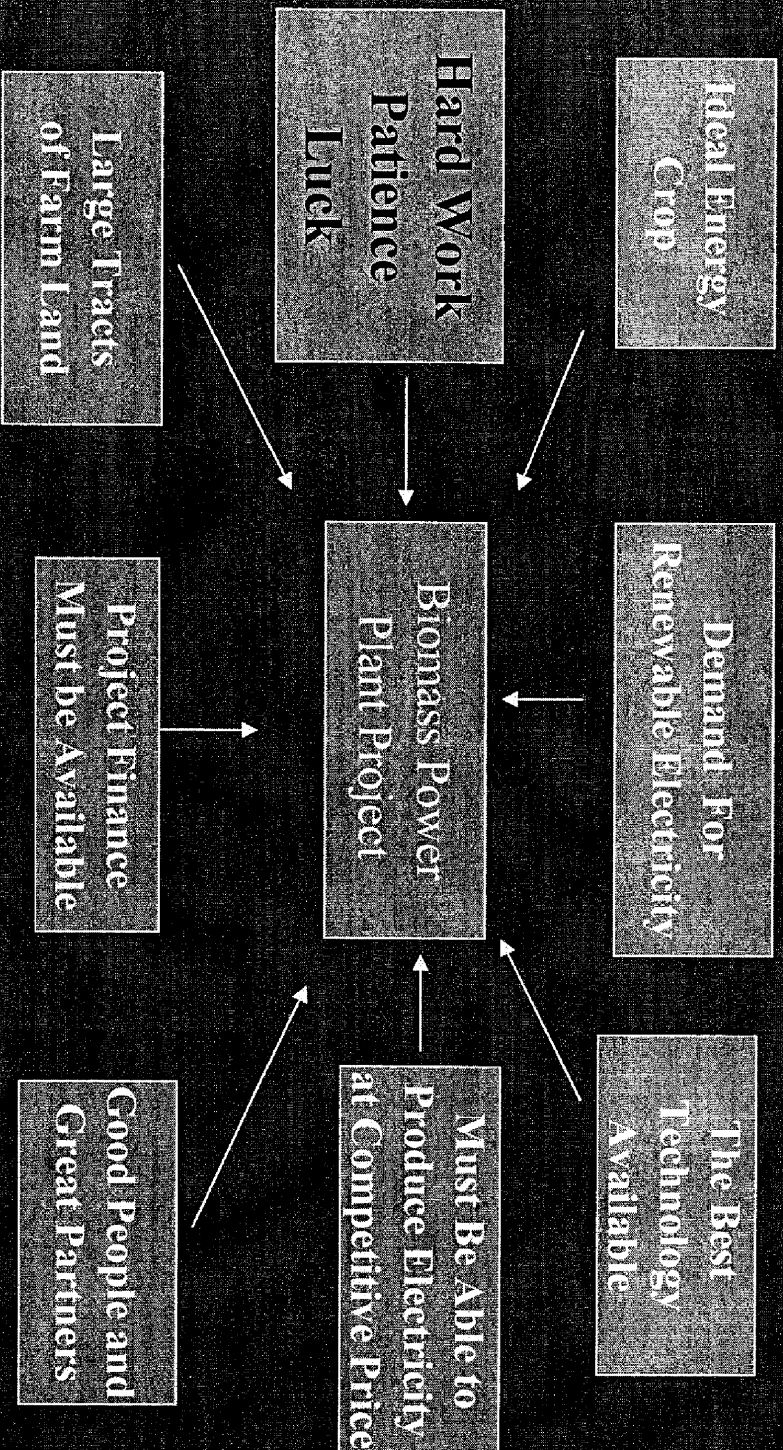
Large Tracts of Farm Land Available

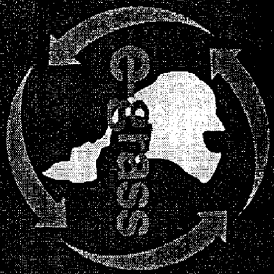
- ✓ We need a 15-20,000 acre farm for our standard 120MW power plant.
- ✓ We have tracts of farm land that meet this requirement available to us in the southeastern part of the US well as in Mexico & South America.
- ✓ These farms are available for purchase and/or lease and meet our farming requirements.



Business Model

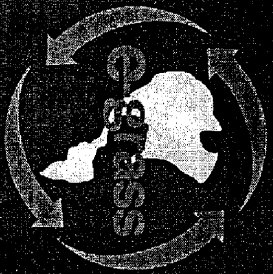
A SUCCESSFUL BIOMASS POWER PLANT PROJECT





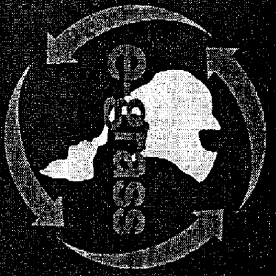
Hard Work, Patience & Luck

- ✔ This has been a 24/7 project for the past 5 years.
- ✔ We have developed the best system available today to convert biomass into electricity.
- ✔ We have identified the best energy crop in the world and developed a method of producing plantlets at a reasonable cost in an efficient manner.
- ✔ Due to the high cost and price volatility of fossil fuels, the demand for renewable energy sources is at an all-time high.
- ✔ “Hard work is the mother of luck!”



Our Plans

- ▶ Develop 2-3 standard 120MW biomass projects (biomass farm with a power plant) in Florida over the next 4 years.
- ▶ Develop several projects in the northeastern area of the US over the next 5-7 years using bio-oil from our biomass farm(s) in Mexico as the fuel.
- ▶ Develop several projects over the next 5-7 years in other countries around the world to help them meet their energy needs with biomass rather than foreign oil.



Biomass Investment Group, Inc.
1198 Gulf Breeze Parkway Suite 6
Gulf Breeze, Florida 32561

850-916-1300

For more information contact:

Allen Sharpe, CEO

Jim Wimberly, President

Kevin Mills, VP Process Operations

IPCC Technology Overview

Biomass Investment Group



Co-Located Farm and
Integrated Pyrolysis
Combined Cycle



Discussion Outline

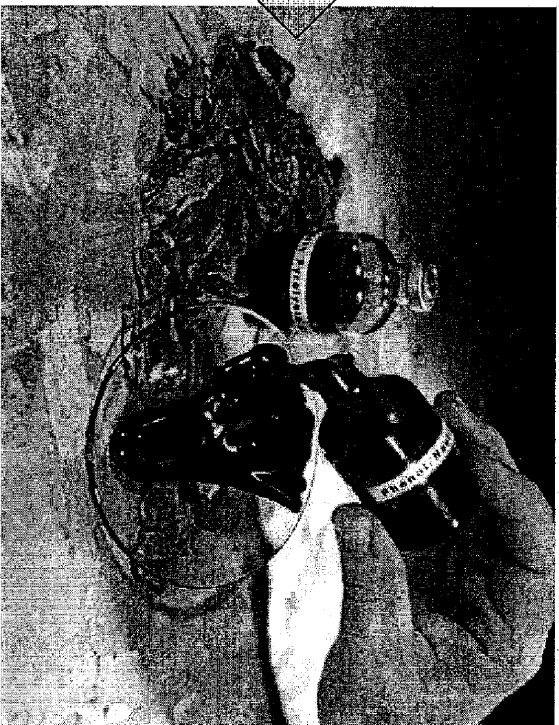
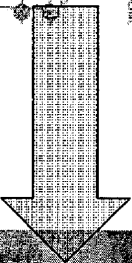
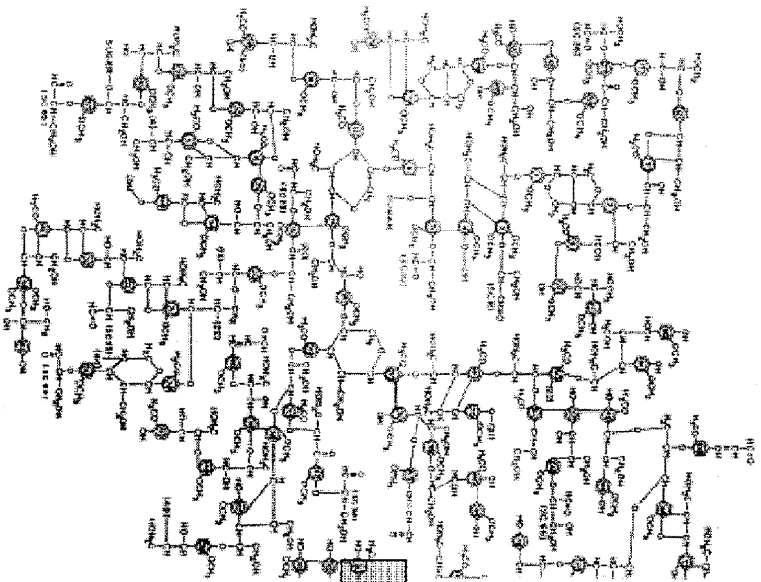
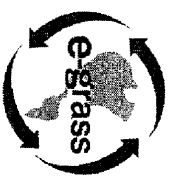
- Biomass Renewables Past Impediments
- Pyrolysis
- Process Overview
- Project Team
- Permitting & Licensing



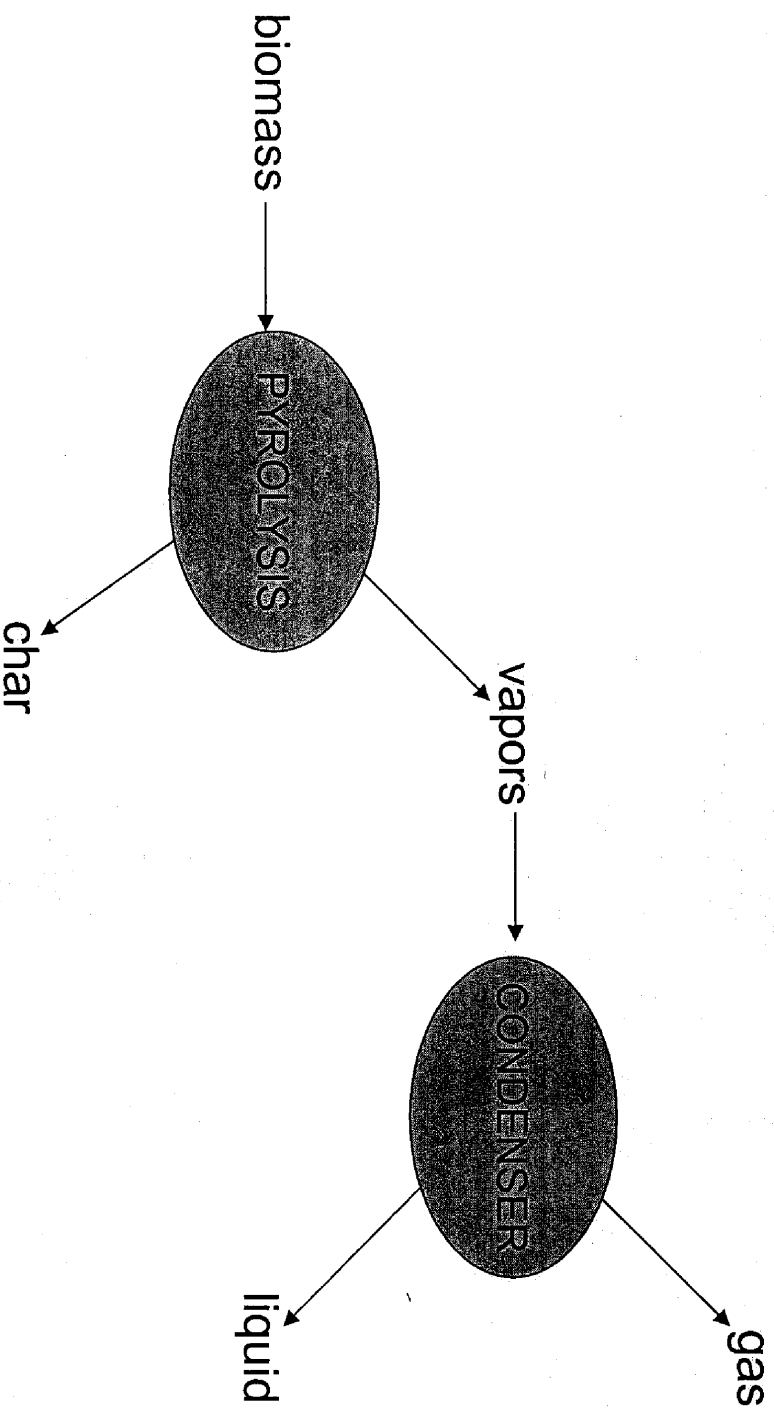
Past Impediments

- Standard Offer Contract
- Unreliable Fuel Supply
- Operational Issues

Pyrolysis

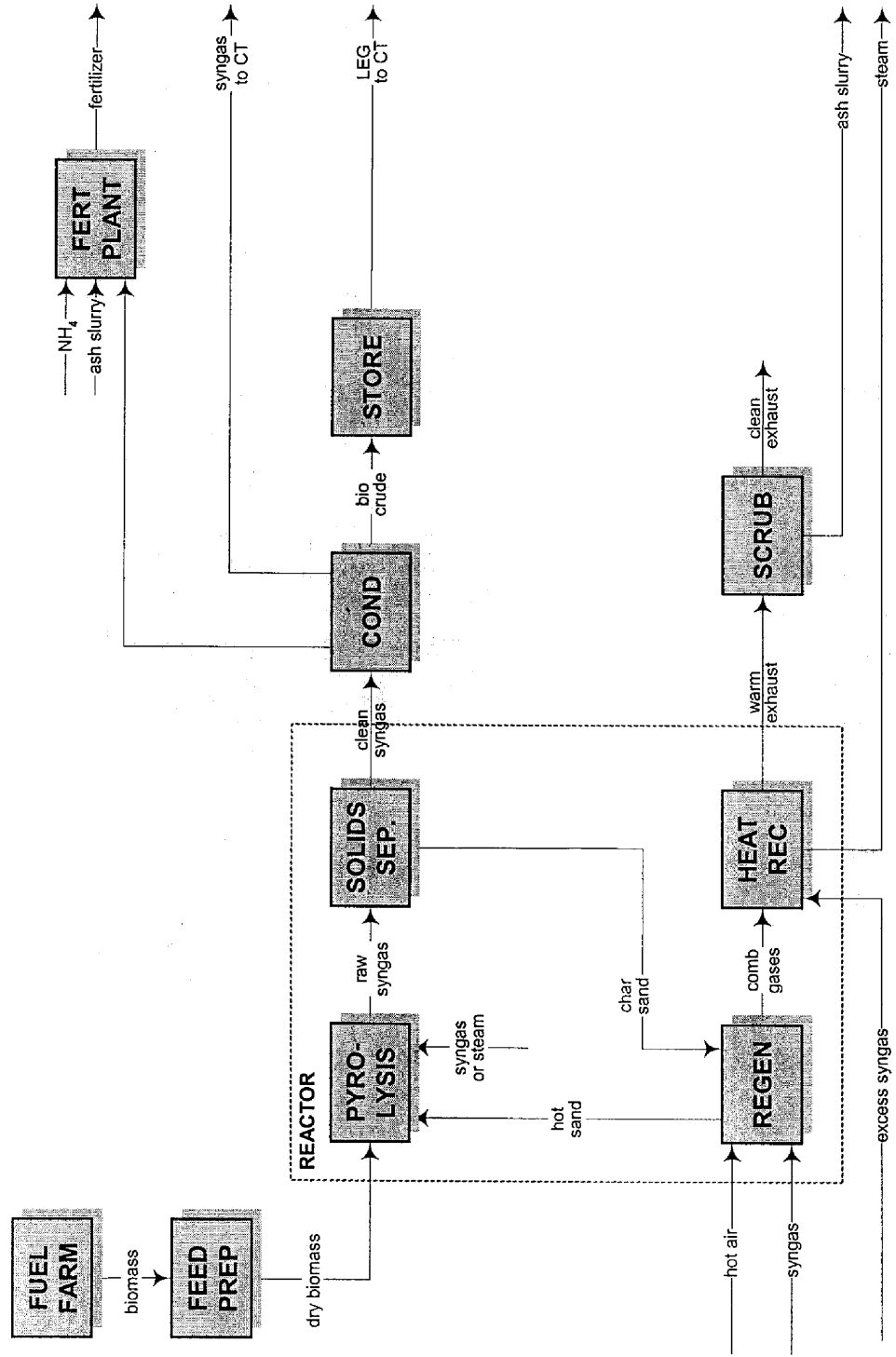


Pyrolysis





Process Overview



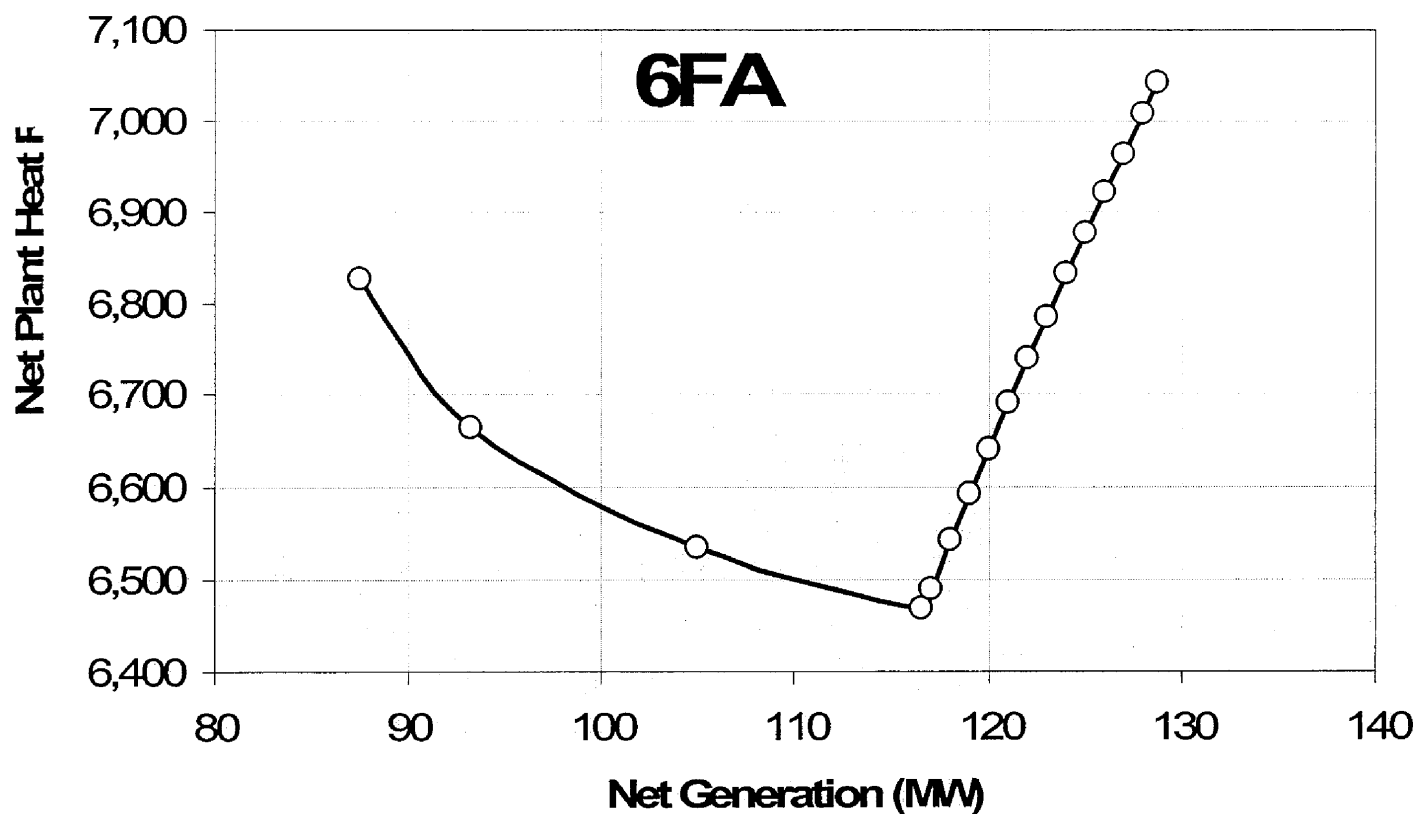


Project Team

- Willbros Engineering Inc. (EPC)
- Environmental Consulting & Technology (permitting)
- Young van Assenderp (siting & licensing)
- Fieldstone (financial advisors)
- PIC Mareubi Energy Group (O&M)
- Invensys (enterprise IT architects)
- Cummins & Barnard (owner's engineers)



Gas Turbine (GE PG6111FA)



(Siemens & Alstom offer competitive machines)



Permitting Overview

- No Siting < 75 MW Steam Turbine & PPA
- Requesting State QF Status
- Water Use – within existing farm permits
- Storm Water Runoff – within existing farm permits
- Air Construction – 100 km from Class I
- ERP – existing farm already has
- Zoning Change – local is supportive



Criteria Air Emissions

UNCONTROLLED

▪ NOx	175 tpy
▪ SO ₂	390 tpy
▪ Particulate	190 tpy
▪ CO (15 ppmv uncontrolled)	205 tpy
▪ VOC	120 tpy

CONTROLLED

▪ SO ₂	195 tpy
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Synthetic Minor PSD Permit

Questions ???

