

## INTRODUCTION

At the direction of the City Commission, Utilities Purchasing issued a Request for Proposal for a biomass-fueled generation facility on October 15, 2007. The RFP was posted on the GRU website and announced to all known interested parties. In addition, the RFP was advertised in the Wall Street Journal and Public Power Weekly. A non-mandatory pre-bid meeting was held at the Deerhaven Generating Station on November 9, 2007.

The RFP included a two step process to encourage innovation and broad participation from prospective respondents. Because proposals for such a project are resource intensive to develop, binding proposals were not required in the first step of the evaluation process. The second step of the process allows up to three selected respondents to be invited to submit binding proposals, one of which would be recommended for project development.

There were fourteen evaluation criteria in the RFP with pre-established scoring weights. Grouping these criteria into three main categories resulted in the following overall weightings: 1) Economics - cost effective renewable energy and capacity (31%); 2) Environmental - environmental attributes consistent with community values identified by the City Commission (34%); and 3) Risk and Reliability - exposure to financial loss, enhanced and reliable electrical supply (35%).

On December 14, 2007 eleven (11) proposals were received in response to the RFP. The proposals are posted on [www.GRU.com](http://www.GRU.com) under "Future Power Supply". Two proposals were deemed non responsive because they either did not meet the RFP's requirements for allowable fuels or the requirements for demonstrated technology. The proposals have been evaluated by eight Utility staff members based on their areas of expertise, which include: power plant design, construction and operation; power supply economics; emission control and regulation; forestry management; fuel purchasing; utility finance; and contract risk management.

Staff's review and analysis are summarized in the accompanying materials. Attachment A is a summary table comparing key aspects of the proposals, such as capacity and technology. Attachment B provides an overview of the contract terms and conditions associated with each proposal. Attachment C describes the methodologies used to score each proposal on the fourteen evaluation criteria. Attachment D summarizes the evaluated scores by major category, and Attachment E contains the detailed evaluation matrix. At the regularly scheduled Commission meeting on January 28, 2008, Staff will present its recommendations and anticipates a decision at that time.

**Attachment A: Summary of Biomass Proposals Received <sup>1</sup>**

<b>Company</b>	<b>Covanta Energy Corporation</b>	<b>Envortus Inc.</b>	<b>Green Power Systems</b>	<b>Horizon Energy Group</b>	<b>Krebs &amp; Sisler</b>	<b>Nacogdoches Power, LLC</b>
<b>Net MW</b>	50	17.6 scalable to 35	35	36	87	100
<b>GRU Take %</b>	100%	100%	100%	100%	na	50-100%
<b>Technology</b>	Fluidized Bed	Gasifier/Steam Turbine	Plasma Arc/Steam Turbine	Molten Metal Gasification Process, Syngas to Combined Cycle	Patent Stage Only	Bubbling Fluidized Bed/Steam Turbine
<b>Availability Factor</b>	90%	90%	High	94%	na	>90%
<b>Fuel Used<sup>2</sup></b>	Mostly Biomass, some Tires, Wastewater Treatment Plant Biosolids, Post-recycled Municipal Solid Waste Option	Biomass, Construction & Demolition debris, Cardboard	Biomass, Wastewater Treatment Plant Biosolids, Tires, Municipal Solid Waste	Municipal Solid Waste	na	Mostly Biomass, supplemented by Tires, Construction & Demolition debris
<b>Fuel Acquisition</b>	Covanta Energy Corporation	Envortus Inc.	Green Power Systems	Horizon Energy Group	na	Nacogdoches Power, LLC
<b>Ownership of Renewable Energy Credits (RECs)</b>	100% GRU	100% GRU	100% GRU	50% GRU	na	Additional Cost
<b>Emission Equipment</b>	Selective Non-catalytic Reduction, Scrubber, Powder Activated Carbon, Bag House	TBD as minor source emitter	Plasma Arc, Precombustion Scrubbing	"Near Zero Emissions"	na	Selective Non-catalytic Reduction, Baghouse

<sup>1</sup> This summary is for informational purposes only. The information contained in the table was not used in the evaluation of the proposals.

<sup>2</sup> Some information in this summary was amended from the matrix originally posted on GRU's website. The cells with amended information are shaded in gray. These amendments were made on January 16, 2008.

**Attachment A: Summary of Biomass Proposals Received <sup>1</sup>**

<b>Company</b>	<b>NRG Energy Inc</b>	<b>Railex Merchant Energy Infrastructure Group</b>	<b>Sterling Planet</b>	<b>Taylor Biomass Energy, LLC</b>	<b>Timberland Harvesters, LLC</b>
<b>Net MW</b>	108 (or 64 if Transmission Limited)	80 (2x40)	28 - 30	35	32.4
<b>GRU Take %</b>	100%	100%	100%	100%	100%
<b>Technology</b>	Gasification Process, Syngas to Combined Cycle	Fluidized Bed/Steam Turbine (2 trains)	Bubbling Bed/Steam Turbine	Municipal Solid Waste Sorting and Refining Process, Gasification, Syngas Combined Cycle	Bubbling Fluidized Bed/Steam Turbine
<b>Availability Factor</b>	85%	na	approx 90%	92%	91%
<b>Fuel Used<sup>2</sup></b>	Mostly Biomass, Municipal Solid Waste	Biomass	Biomass	Municipal Solid Waste, Biomass	Biomass
<b>Fuel Acquisition</b>	NRG Energy Inc, tolling option	GRU	Sterling Planet	Taylor Biomass Energy, LLC	Timberland Harvesters, LLC
<b>Ownership of Renewable Energy Credits (RECs)</b>	100% GRU	TBD	Split to be Negotiated	To be Negotiated	100% GRU
<b>Emission Equipment</b>	Precombustion Scrubbing	Selective Non-catalytic Reduction, Baghouse, Dry Scrubber	Electrostatic Precipitation, Burner NOx control	Precombustion Scrubber, Bag House	Bag House and Selective Catalytic Reduction

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<sup>2</sup> Some information in this summary was amended from the matrix originally posted on GRU's website. The cells with amended information are shaded in gray. These amendments were made on January 16, 2008.

**Attachment B: Summary of Proposed Contract Terms and Conditions  
GRU Biomass RFP No. 2007-135**

**1. COVANTA ENERGY CORPORATION**

- **Project Description**
  - Design, build, and operate a 50 MW biomass- fueled generating facility.
  - Fluidized bed combustion and boiler technology combined with steam driven turbine fueled by woody biomass, post-recycled MSW, and other approved sources such as tires.
- **Contract Structure**
  - Base load capacity and energy will be provided to GRU via a long-term, firm priced, take and pay PPA of up to 15 years or more.
  - Pricing structured as “all in” energy charge with indexing.
- **Risk Mitigation**
  - Redundant fuel systems are being considered.
  - Performance guarantees will be included in the terms of the PPA.
  - 90% availability guarantee.
  - No liquidated damages or payment for replacement power is offered, however Covanta is open to discussing possible mechanisms for replacement power or capacity as part of binding proposal.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - All currently existing environmental offsets and renewable attributes will be retained by GRU.
  - Covanta proposes to share any future attributes 50/50 with GRU as they become available.
- **Project Financing**
  - Plans to use financing approach similar to other projects, seeking to employ tax-exempt financing where possible.
  - GRU input to financing structure not addressed.

**2. ENVORTUS, INC.**

- **Project Description**
  - Develop, construct, and operate a net 17.6 MW continuous base load facility with expected availability of 85-90%; scalable to 35 MW as additional sources of waste are identified and contracted.
  - Facility would recover energy via gasification from 400-500 dry tons per day of biomass from urban wood, C&D, yard waste, cardboard, and land-clearing waste.
- **Contract Structure**
  - Proposing 20-year energy-only “take or pay” PPA, but willing to explore:
    - Build, operate, transfer model.

- Joint-venture arrangement.
    - Demand and energy pricing.
  - Project proposed as “must-run” facility; if GRU wants dispatchability, demand and energy pricing will be required.
- **Risk Mitigation**
  - Envortus expects the PPA to address liquidated damages and remedies with market-based terms.
  - Would agree with GRU to reasonable market based terms and conditions for performance guarantees and other risk mitigants.
  - Envortus recommends that GRU propose a term sheet for the PPA that includes performance security requirements.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - GRU retains 100%.
- **Project Financing**
  - A special purpose entity will be formed for the purposes of entering into all of the requisite agreements and will house all of the project’s contracts, operating agreements, permits, etc.
  - Funding will be a combination of equity and debt.
    - Envortus will source the equity funding required from USRG, a renewable energy fund formed to invest in renewable energy products; USRG has reviewed the terms of the RFP and has committed to providing the equity required for the project.
    - Balance of the funding to be secured from a third party lender.
  - Envortus states that it will “maintain flexibility in its financing strategy to ensure it can secure the lowest cost capital for the Project.”

### 3. GREEN POWER SYSTEMS, LLC

- **Project Description**
  - Two 500 ton per day Westinghouse plasma arc reactors combined with a series of package boilers and a steam turbine to produce 35 MW net output.
  - Fuel stream to include MSW, bio-solids from sewer treatment plants, tires, and yard waste.
- **Contract Structure**
  - 30-year take and pay PPA with single energy fee starting at \$68 per MWh with an escalator.
  - Must run base load unit, GRU must take output.
- **Risk Mitigation**
  - Green Power is prepared to provide a performance bond, letter of credit, or other surety to provide for replacement power if the plant does not meet an 85% capacity factor.

- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - GRU retains 100%.
- **Project Financing**
  - Green Power intends to use 100% private financing through the Controlsud International Group, the investor that is also financing the Tallahassee project.
  - No GRU financing participation is required.

#### **4. HORIZON ENERGY GROUP**

- **Project Description**
  - Design, build, and operate a 36 MW MSW-fueled facility based on an exothermic process that creates hydrogen and carbon monoxide syngas, which is cleaned and sent to a gas turbine/steam turbine combined cycle to produce energy.
- **Contract Structure**
  - 20-year take and pay PPA with a tariff rate of \$55/MWh for the equivalent of 8,000 of annual full-power operations; escalation on the tariff rate would be capped at 2% per year.
- **Risk Mitigation**
  - Horizon guarantees 283,000 MWh of annual output from the project, which is a 90% capacity factor.
  - If contract MWh cannot be supplied from the plant, Horizon will supply replacement power for remainder of commitment; any difference in cost will be Horizon's responsibility.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - Horizon would like to negotiate a 50/50 sharing of environmental attributes.
- **Project Financing**
  - Horizon will form BioDeerhaven, LLC and will provide and obtain all equity and financing for the project.
    - Equity: use one of the existing Horizon Energy Group and NY Energy Group financial resources in US and Europe; this will range between 10-51% of project development cost.
    - Debt: same source as equity; if not competitive, Horizon will leverage the equity to secure debt financing from one of its other sources.

#### **5. KREBS & SISLER**

- Response did not meet demonstrated technology criteria.

## 6. NACOGDOCHES POWER, LLC

- **Project Description**
  - 100 MW biomass facility with fuel handling system, bubbling fluidized bed boiler, condensing steam turbine generator with evaporative cooling towers and auxiliary support equipment.
- **Contract Structure**
  - Proposes to sell GRU 50-100 MW of capacity, renewable energy, and environmental attributes under a 20-year PPA.
  - PPA charges on a capacity and energy basis rather than an “as-delivered” energy basis.
- **Risk Mitigation**
  - Standard performance guarantees to assure that minimum performance targets are met.
  - Draft PPA will be provided if NP is selected for the short list.
- **Title to Excess Energy or Capacity**
  - If GRU purchases less than full output of Project, NP would sell remaining capacity, energy, etc., to another entity under a long-term PPA with dispatch and control rights to be negotiated accordingly.
- **Ownership of Environmental Attributes**
  - 100% to GRU with cost included in PPA.
- **Project Financing**
  - Financing through combination of non-recourse project debt and equity.
  - Will seek to use tax credits where available to reduce financing costs.
  - Nacogdoches would work with GRU to optimize the financing strategy.

## 7. NRG ENERGY INC.

- **Project Description**
  - Develop, build, own, and operate a nominal 108 MW Plasma Gasification Combined Cycle plant.
- **Contract Structure**
  - Project to provide GRU with base load power with an 85% net capacity factor via a 20-year capacity and energy payment, must-take, take and pay PPA.
  - Indicative pricing would be revised if GRU wished to retain full dispatch rights.
  - A Fair Market Purchase Option at the initial end of the PPA can be provided.
  - NRG proposes two alternative financial options to the Base PPA:
    - Option A: Tolling Agreement – GRU is fuel supplier and would be buying service of converting fuel into energy. NRG would continue to sell capacity and ancillary services and

GRU would be able to take advantage of lower fuel costs available in the area and any fuel switching opportunities.

- Option B: Pre-pay PPA – GRU pre-pays the PPA capacity charges up front on day one. NRG asserts that GRU’s tax-exempt financing makes this a desirable option because the pre-payment could be financed by issuing municipal bonds.

- **Risk Mitigation**

- Natural gas is available as a backup fuel for the GTCC; the GTCC can be configured to co-fire natural gas for normal operations or the gas turbine can be reconfigured to fire 100% gas on a long term basis if there is an extended outage of the Plasma Gasification System.
- Will consider operating performance standards for the capacity payments portion of the PPA if fully dispatchable or heat rate guarantee for a tolling agreement; no liquidated damages considered at this time.
- NRG touts **optionality** embodied in the proposal as additional risk mitigant:
  - Feedstock optionality between biomass and other waste streams as well as natural gas for both backup and fuel-switching.
  - WPC Plasma Gasification can gasify any carbonaceous material and yields lower overall heat rate and emissions profile than conventional combustion technology.

- **Title to Excess Energy or Capacity**

- GRU retains 100%.

- **Ownership of Environmental Attributes**

- GRU retains 100%.

- **Project Financing**

- NRG intends to form a Delaware LLC specifically to build, own, and operate the project. The principal shareholder will be NRG Energy, Inc. with minority interest held by strategic shareholders. Construction will be funded by a blend of cash equity and non-recourse project financed debt.
- NRG encourages GRU to take advantage of low cost of capital to finance and pre-pay capacity portion of the PPA.

## 8. RAILEX POLYGEN

- **Project Description**

- Design, build, finance, and operate Energy Products of Idaho (EPI) fluidized bed system consisting of two 40 MW-rated Siemens SST-600 steam turbines using 30% moisture content wood waste with waste heat boiler.

- **Contract Structure**
  - Offers GRU a specified “Energy & Capital Cost” of energy, blended with fuel tolling @ \$55.57-59.40 per MWh subject to 25-year Off-take or PPA.
  - GRU and City of Gainesville could determine whether they prefer ownership or sharing of ownership.
- **Risk Mitigation**
  - Not specifically addressed in proposal.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - No calculation made for emission offset credits.
  - Railex reserves right to proprietary oversight in creating tradable credits that may be monetized in the future.
- **Project Financing**
  - Not specifically described in proposal.

## 9. STERLING PLANET

- **Project Description**
  - Build, own, and operate 30 MW biomass plant using bubbling bed/steam turbine technology.
- **Contract Structure**
  - Sell 100% of energy to GRU under a 20-year take and pay PPA with stable energy and capacity charges.
  - Must-run, must-take arrangement.
  - At the end of the 20-year PPA, GRU would have the option to purchase the facility at fair market value or renew the PPA at a renegotiated rate.
- **Risk Mitigation**
  - Guarantees a capacity factor of 88%.
  - If capacity factor falls below 85% for any year, Sterling Planet will pay GRU liquidated damages of \$75,000 per percentage point below 85% up to an annual maximum of \$5 million.
  - If the project qualifies for Production Tax Credits, a portion of the benefits would be returned to GRU to lower the effective energy costs to GRU.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - Renewable energy attributes would be retained and sold by Sterling Planet with a portion of the sale proceeds returned to GRU to lower the effective energy costs to GRU.
- **Project Financing**
  - Sterling Planet will use non-recourse financing at the project level to fund the majority of required capital.

- Equity capital investments may come directly from Sterling Planet or from an environmental or tax investment partner.
- GRU participation in financing strategy not addressed.

## **10. TAYLOR BIOMASS ENERGY, LLC (TBE)**

- **Project Description**
  - Build a solid waste processing system that processes a combination of MSW and wood waste into recyclables, processed biomass gasification fuel, and residual materials.
  - The syngas will be used in a hybrid 1x1 combined cycle plant to generate approximately 35 MW of net electric power based on 500 dry tons per day biomass processed fuel (65% MSW and 35% wood waste).
  - Natural gas will be required for facility start up and back up.
- **Contract Structure**
  - TBE proposes one of two financial and ownership structures:
    - Joint Ownership LLC structure, favored by TBE, where TBE owns 60% and GRU 40%.
    - Take or pay PPA and TBE owns 100%.
- **Risk Mitigation**
  - EPC contractor will provide guaranteed price and schedule.
  - TBE will negotiate an efficacy insurance policy to insure quality and quantity of syngas
  - PPA will be negotiated on an interruptible basis and replacement energy or capacity will be GRU's responsibility.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - PPA pricing does not include RECs that GRU may want to use or sell in secondary markets.
- **Project Financing**
  - TBE plans to finance the facility in the following manner based on a long-term commitment/PPA:
    - Project level or facility level debt – approx. 60% (12 year term)
    - Tax equity financing – approx. 25%
    - Sponsor equity (TBE or TBE and GRU) – approx. 15%

## **11. TIMBERLAND HARVESTERS, LLC**

- **Project Description**
  - Build, own, and operate a 32.4 MW generating facility, which will use 100% woody biomass to fuel a bubbling fluidized bed boiler.
- **Contract Structure**
  - 25-year “take or pay” PPA with both energy and capacity charges that are indexed.

- Timberland is receptive to the opportunity for GRU to have “during and end-of-term” purchase option.
- **Risk Mitigation**
  - Availability guarantee at or above 91%; natural gas as backup to improve availability.
  - Open to negotiation of performance security language.
  - Open to discussion of liquidated damages, replacement power, etc.
- **Title to Excess Energy or Capacity**
  - GRU retains 100%.
- **Ownership of Environmental Attributes**
  - All REC’s transfer to GRU and cost is covered in energy payment.
- **Project Financing**
  - Not specifically addressed.

**ATTACHMENT C  
BIOMASS RFP 2007-135  
EVALUATION METHODOLOGY**

**EVALUATION CRITERIA AND WEIGHTS**

The major objectives of the RFP were to provide: 1) cost effective renewable electrical generation capacity and/or energy benefits, 2) environmental attributes consistent with the preferences of the Gainesville community, and 3) enhanced and reliable energy supply for the GRU system. Fourteen criteria were developed as means to measure each proposal's ability to achieve these objectives. Section 29 of RFP 2007-135 listed the evaluation criteria to be applied. The weights to be applied to each of the criteria were developed by the evaluation team with the intent of weighting the factors so that each major objective would be roughly similar. The weights were developed prior to the due date of the proposals. Table 1 summarizes the criteria applied and the weights assigned to them.

TABLE 1  
EVALUATION CRITERIA AND WEIGHTS  
GROUPED BY MAJOR OBJECTIVES

<b>Category / Criteria</b>	<b>Criteria Weight</b>
<b>(1) Economics: Cost Effective Renewable Capacity and/or Energy Benefits</b>	
(a) Project All-in Production Cost	10.0
(b) Project Variable Production Costs	8.0
(e) Fuel Requirements and Sources	7.0
(f) Anticipated Project In-Service Date and/or Energy Delivery	4.0
(n) Local Economic Impact	2.0
<b>Category Subtotal</b>	<b>31.0</b>
<b>(2) Environmental: Environmental Attributes Consistent with the Gainesville Community</b>	
(d) Environmental Emissions	10.0
(g) Project Commitment to Sustainable Forest Resource Management	10.0
(m) By-product/Waste Production and Disposition	8.0
(h) Project Site Requirements	6.0
<b>Category Subtotal</b>	<b>34.0</b>
<b>(3) Risk &amp; Reliability: Enhanced and Reliable Energy Supply</b>	
(k) Proposed Contractual Terms and Conditions	10.0 <sup>1</sup>
(c) Technology Readiness and Project Reliability	9.0
(j) Experience and Resources of Project Developer/Sponsor	6.0
(i) Project Size and Design	5.0
(l) Respondent's Financial Strength	5.0
<b>Category Subtotal</b>	<b>35.0</b>
<b>Total</b>	<b>100.0</b>

<sup>1</sup> Weights for criteria (k), (c), and (j) in Table 1 were reported in error in the documents originally submitted to GRU's website. The errata were corrected and entered into this document on January 16, 2008.

## **CRITERIA SCORING**

The method for scoring each criterion was also developed before the proposals were received. The methodologies were designed to allow a decision matrix to be developed using normalized scores assigned to each criteria. This approach allows the weight applied to each criterion score to clearly reflect the relative importance of that factor. The convention applied set a value of 1 as representing the worst score a proposal could receive for a given criterion and 5 as the best. A zero (0) would be applied if information sufficient to score a proposal on a given criterion was missing. The development of scores differed for each criterion, some of which included a number of “sub factors” as will be described in this summary. The scores for each criterion were normalized according to the following formula which sets the lowest score for a specific factor received by any given proposal as the value 1, the maximum score as the value 5, and linearly interpolates between the maximum and minimum score for scores in between based on each proposal according to the following formula:

$$\text{Normalized Score} = 1.0 + 4 * (\text{score} - \text{min score}) / (\text{max score} - \text{min score})$$

## **ALL-IN PRODUCTION COST**

The respondents were instructed to provide all-in production costs per megawatt hour (MWh) for a specific set of fuel prices and capacity factors (see Table 2 in the RFP). All-in production costs include capital and financing, operation, maintenance, and fuel costs. The all-in production cost per MWh for each scenario, were normalized across all the proposals, and then summed. The summation for each proposal was then normalized to assign an overall production cost score for the decision matrix. This methodology captured the effects of heat rate curves, profit levels, and different fixed and variable costs across a wide range of operating conditions.

## **VARIABLE PRODUCTION COSTS**

The respondents were instructed to provide variable production costs per megawatt hour for a specific set of fuel prices and capacity factors (see Table 3 in the RFP). Variable production costs include only fuel, chemical and other costs associated with running a unit. These variable production costs, for each scenario, were assigned scaled scores across all proposals, and then summed. The summation for each proposal was then normalized to assign a variable production cost score. Variable production costs are important as they indicate the relative position of the facility in GRU’s economic dispatch stack and are related to the marketability of excess power in the wholesale power markets. The methodology captured the effects of heat rate curves and variable costs across a wide range of operating conditions.

## **TECHNOLOGY READINESS AND PROJECT RELIABILITY**

This criterion is described in Section 26 of the RFP. Scores were based on the number of systems in commercial operation that are producing electricity and have a fuel consumption of at least 25 tons per day. Information provided by each respondent as well as a thorough web search related to each specific technology were used to make this determination.

**ENVIRONMENTAL EMISSIONS**

Each proposal was scored based on ratings assigned to sub factors related to SO2, NOx, Hg, and PM emission standards and carbon neutrality. If a proposal claimed to only meet a standard it was scored a 1 for that sub factor, if it claimed to be able to beat the emission standard for each parameter it was rated as a 3, and if those claims were quantified and substantiated by the systems being proposed it was rated as a 5 for that sub factor. In a similar manner, a proposal with non-renewable fuel requirements (such as natural gas for process stabilization) was rated with a 1 for that sub factor, one that was 100% carbon neutral was rated as a 3, and those that avoided methane production in landfills<sup>2</sup> were rated with a 5. The sub factor scores were then summed, and this value was normalized to score the criterion across proposals.

**FUEL REQUIREMENTS AND SOURCES**

Sections 18 and 21 and Appendix A of the RFP address fuel requirements and sources in detail. Table 2 describes sub factors applied to develop scores for this criterion. Each proposal was rated on a scale of 1 to 5 for each sub factor, the sub factor scores were then summed, and the sum was normalized to score the criterion for each proposal.

TABLE 2  
SUB FACTORS APPLIED TO FUEL  
REQUIREMENTS AND SOURCES

Criterion Sub Factor	Sub Factor Objective	Explanation of evaluation process
Price	* Compare price to UF study	* Estimated price compares to "Economic Availability of Alternative Biomass Sources for Gainesville, Florida * Preference given to those who are competitive - fall within a threshold
Access to biomass supply	* Existing contracts in place for source * Land ownership issues	* Written/existing contracts ensure reliable supply * Land ownership of Forest related biomass supply ensures a reliable stream of fuel
Quality Assurance	* Designated local, regional or corporate quality assurance director * Written fuels program provided meets standards * Performance history provided	* Preference given to companies with quality assurance division, monitors the fuels * Must meet fuel standards (sustainable, non-recyclable, uncontaminated etc.) * Fuel Performance indicators are provided from past contracts (specific things here)

<sup>2</sup> Pursuant to NREL Publication TP-510-32575 Biomass Power and Conventional Fossil Systems with and without CO2 Sequestration -- Comparing the Energy Balance, Greenhouse Gas Emissions and Economics. Spath, P. L.; Mann, M. K. 38 pp. 2004

<b>Reliability of supply</b>	* Size of company * Response time after request for assistance * Sensitivity of feedstock to seasons and weather	* Size determines the labor and equipment resources available to GRU in an emergency situation * Need response time as indicated * Need employees familiar and trained on how to respond safely and quickly
<b>Fuel Delivery mode</b>	* Multimodal delivery options	* looking for multiple ways to deliver fuels to the plant (train, truck, etc.) - multimodal delivery reduces trips to facility
<b>Fuel Diversity</b>	* Proposal shows thought into diversity of fuels	* proposal shows thought into providing a diversity of fuels - fuel diversity reduces risk - risk increases when supply is constrained to one source
<b>Where fuels are processed</b>	* Preference given to off site processing * Preference given to fuels arriving ready to use	* On site processing may generate waste products. GRU does not want waste products on-site. - Off site processing eliminates wastes and the associated removal and disposal of waste
<b>Fuel types</b>	* Proposal uses appropriate/specified materials	* Are proposed fuels those specified in the RFP? Including coal, coke, fuels outside of specifications is not permissible

## ANTICIPATED PROJECT IN-SERVICE DATE AND/OR POWER DELIVERY

Earlier commercial service dates and/or energy delivery dates were scored higher than those with later dates. The projected in-service date was normalized to score this criterion for each proposal.

## COMMITMENT TO SUSTAINABLE FOREST RESOURCE MANAGEMENT

Section 25 of the RFP described GRU's concerns related to this topic. Proposals were scored for this criterion relative to each other after consideration of the following sub factors:

- Biomass coming from forest related operations only.
- Higher scores given for proposals that reference natural resource sustainability.
- Higher scores for those that show sustainability by identifying/defining the total forest biomass resources to be used and the effects of annual fuel procurement on this resource.
- Higher scores for plans that reference or follow state regulations (Example: State of Florida Silvicultural Best Management Practices)
- Added values
  - A detailed procurement plan.
  - Plan shows the effects of the fuel stream removal on the total resource.
  - Procurement by fuel types is addressed

- Obtaining a percentage of the forest related biomass from forests that have been certified by one of the following forest certification systems
  - Sustainable Forestry Initiative
  - American Tree Farm System
  - Forest Stewardship Council
- Company or subcontractors that procure the biomass use continuing education programs that show a commitment to environmental stewardship (Example: Florida’s Master Logger Program)

**PROJECT SITE REQUIREMENTS**

The objective of this criterion was to measure the compatibility of the proposed facilities with the Deerhaven site. Location, number of acres, transportation, transmission, fuel delivery systems, water and wastewater requirements solid waste disposal requirements and other aspects of the project were taken into consideration in scoring the proposals relative to each other.

**PROJECT SIZE AND DESIGN**

Section 19 of the RFP describes GRU’s capacity requirements. Proposals were scored relative to each other based on their ability to meet projected base load requirements and flexibility for expansion on an incremental basis to meet future needs.

**EXPERIENCE AND RESOURCES OF PROJECT DEVELOPER/SPONSOR**

Section 29 of the RFP describes GRU interests with regard to this criterion. Proposals were scored relative to each other based on the information provided by the respondent.

**PROPOSED CONTRACTUAL TERMS AND CONDITIONS**

Sections 23, 24, and 28 of the RFP describes GRU’s interests with regard to contractual terms and conditions. Table 3 contains the sub factors considered, the scores assigned based on certain contractual features, and the weights applied to the sub factor scores. The total weighted score was then normalized to score each proposal on this criterion.

TABLE 3  
SUB FACTORS, SCORES, AND WEIGHTS  
FOR CONTRACTUAL TERMS AND CONDITIONS

Sub Factor Category	Wt.	Proposed Contract Terms & Conditions	Score
<b>Contract Structure</b>	25.0%	- Take and Pay with option to purchase or equity share, energy charge only (4.5 if energy & capacity charge, 4.3 if must take w/energy & capacity charge)	5.0
		- Take and Pay with no option to purchase, no equity share, energy charge only (3.5 if energy & capacity charge, 3.3 if must take w/energy & capacity charge)	4.0
		- Engineer, Procure and Construct (EPC) with GRU ownership & operation	3.0
		- Take or Pay with option to purchase or equity share	2.0
		- Tolling arrangement with GRU taking fuel risk	2.0
		- Take or Pay with no option to purchase, no equity share	1.0

		- Contract structure not specified in proposal	0.0
		- Other: Proposed contract structures not identified above will be given score commensurate with risk most closely related to a contract structure listed above	0.0
		<b>Category Weighted Score</b>	
<b>Risk Mitigation</b>	<b>25.0%</b>	- Firm Energy/Capacity with liquidated damages	5.0
		- Replacement energy or capacity at lower of contract or market price	5.0
		- Backup fuels or systems with energy priced at lowest of cost of production, contract price, or market price	5.0
		- Performance standards or guarantees	4.0
		- Replacement energy or capacity at contract price	4.0
		- Backup fuels or systems with energy priced at cost of production	3.0
		- Mark-to-market default settlement	2.0
		- Replacement energy or capacity at market price	2.0
- No risk mitigation proposed	0.0		
- Other: Proposed risk mitigation not identified above will be given score commensurate with risk most closely related to a risk mitigation measure listed above	0.0		
		<b>Category Weighted Score</b>	
<b>Title to Excess Energy or Capacity</b>	<b>15.0%</b>	- GRU retains title to all Project energy and capacity	5.0
		- Proposed sharing of title to energy and capacity between Respondent and GRU with allocation to GRU greater than or equal to 50%	3.0
		- Proposed sharing of title to energy and capacity between Respondent and GRU with allocation to GRU less than 50%	1.0
		- Respondent retains title to all excess energy and/or capacity or not addressed in proposal	0.0
		<b>Category Weighted Score</b>	
<b>Ownership of Environmental Attributes</b>	<b>15.0%</b>	- GRU retains title to all RECs and environmental credits	5.0
		- Proposed sharing of ownership of RECs and environmental credits between Respondent and GRU with allocation to GRU greater than or equal to 50%	3.0
		- REC ownership to be negotiated.	2.0
		- Proposed sharing of ownership of RECs and environmental credits between Respondent and GRU with allocation to GRU less than 50%	1.0
		- Respondent retains title to all RECs and/or environmental credits or not addressed in proposal	0.0
		<b>Category Weighted Score</b>	
<b>Financing Flexibility</b>	<b>10.0%</b>	- GRU determines project financing arrangement	5.0
		- GRU can modify proposed financing arrangement	3.0
		- Financing flexibility implied but not explicitly detailed.	1.0
		- GRU cannot modify proposed financing arrangement or not addressed in proposal	0.0
		<b>Category Weighted Score</b>	
<b>Force Majeure Provisions</b>	<b>5.0%</b>	- Acceptable, well-defined force majeure provisions	5.0
		- Force majeure provisions to be negotiated between parties	3.0
		- Asymmetric force majeure provisions favoring Respondent or none proposed	1.0
		- Force majeure provisions not addressed in proposal	0.0
		- Other: Proposed force majeure provisions not identified above will be assigned a score from 1-5	0.0
		<b>Category Weighted Score</b>	
<b>Dispute Resolution</b>	<b>5.0%</b>	- Acceptable proposed process at Respondent's expense	5.0
		- Acceptable proposed process with expenses shared equally	3.0

		- Acceptable proposed process and allocation of expenses not addressed	2.0
		- Acceptable proposed process and GRU responsible for more than 50% of expenses	1.0
		- No dispute resolution process identified in proposal	0.0
		- Other: Proposed dispute resolution provisions not identified above will be assigned a score from 1-5	
		<b>Category Weighted Score</b>	
<b>Totals</b>	<b>100.0%</b>		<b>Total Weighted Score</b>

## PROPOSER'S FINANCIAL STRENGTH

Sections 23, 24, 28, and 29 all describe GRU's interests related to the respondent's financial capability, which is strongly associated with financial risk mitigation. The various factors considered in assigning a score are described below.

### Credit Ratings

#### Bond Rating

<u>Moody's</u>	<u>Standard &amp; Poor's</u>	<u>Grade</u>	<u>Risk</u>	<u>Ranking</u>
Aaa	AAA	Investment	Lowest Risk	5
Aa	AA	Investment	Low Risk	4
A	A	Investment	Low Risk	3
Baa	BBB	Investment	Medium Risk	2
Ba, B	BB, B	Speculative	High Risk	1
Caa/Ca/C	CCC/CC/C	Speculative	Highest Risk	
C	D	Junk	<u>In Default</u>	

#### Commercial Paper Credit Ratings

<u>Moody's</u>	<u>Standard &amp; Poor's</u>	<u>Grade</u>	<u>Risk</u>	<u>Ranking</u>
P1	A1+ or A1	Superior	Lowest Risk	5
P2	A2	Satisfactory	Low Risk	4
P3	A3	Adequate	Medium Risk	3
NP	B or C	Speculative	High Risk	2
NP	D	Defaulted	Highest Risk	1

### **Key Financial Ratios – Profitability**

**Net Profit Margin (Return on Sales)** - A measure of net income dollars generated by each dollar of sales.



$$\frac{\text{Net Income}^*}{\text{Net Sales}}$$

**Return on Assets** - Measures the company's ability to utilize its assets to create profits.



$$\frac{\text{Net Income}^*}{(\text{Beginning} + \text{Ending Total Assets}) / 2}$$

**Return on Investments** - Measures the income earned on the invested capital.



$$\frac{\text{Net Income}^*}{\text{Long-term Liabilities} + \text{Equity}}$$

**Return on Equity** - Measures the income earned on the shareholder's investment.



$$\frac{\text{Net Income}^*}{\text{Equity}}$$

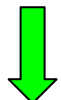
### **Key Financial Ratios – Solvency**

**Debt to Asset** - Provides information about the company's ability to absorb asset reductions arising from losses without jeopardizing the interest of creditors.



$$\frac{\text{Total Liabilities}}{\text{Total Assets}}$$

**Debt to Equity** - Indicates how well creditors are protected in case of the company's insolvency.



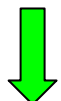
$$\frac{\text{Total Debt}}{\text{Total Equity}}$$

**Interest Coverage Ratio (Times Interest Earned)** - Indicates a company's capacity to meet interest payments. Uses EBIT (Earnings Before Interest and Taxes)



$$\frac{\text{EBIT}}{\text{Interest Expense}}$$

**Long Term Debt to Net Working Capital** - Provides insight into the ability to pay long term debt from current assets after paying current liabilities.



$$\frac{\text{Long-term Debt}}{\text{Current Assets} - \text{Current Liabilities}}$$

### **Key Financial Ratios – Liquidity**

**Working Capital** - Working capital compares current assets to current liabilities, and serves as the liquid reserve available to satisfy contingencies and uncertainties. A high working capital balance is mandated if the entity is unable to borrow on short notice. The

ratio indicates the short-term solvency of a business and in determining if a firm can pay its current liabilities when due.



$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

**Acid Test** - A measurement of the liquidity position of the business. The quick ratio compares the cash plus cash equivalents and accounts receivable to the current liabilities. The primary difference between the current ratio and the quick ratio is the quick ratio does not include inventory and prepaid expenses in the calculation. Consequently, a business's quick ratio will be lower than its current ratio. It is a stringent test of liquidity.



$$\frac{\text{Cash + Marketable Securities + Accounts Receivable}}{\text{Current Liabilities}}$$

**Current Ratio** - Provides an indication of the liquidity of the business by comparing the amount of current assets to current liabilities. A business's current assets generally consist of cash, marketable securities, accounts receivable, and inventories. Current liabilities include accounts payable, current maturities of long-term debt, accrued income taxes, and other accrued expenses that are due within one year. In general, businesses prefer to have at least one dollar of current assets for every dollar of current liabilities. However, the normal current ratio fluctuates from industry to industry. A current ratio significantly higher than the industry average could indicate the existence of redundant assets. Conversely, a current ratio significantly lower than the industry average could indicate a lack of liquidity.



$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

## BY-PRODUCT/WASTE PRODUCTION AND DISPOSITION

Section 29 of the RFP specified the information to be provided related to this criterion. Three sub factors were used to score each proposal: a) the quantity produced (1= relatively large, 5 relatively small); b) the disposal requirements of the material (100% hazardous = 1, 50% hazardous = 3 and non hazardous = 5); and c) the ability to beneficially re-use any by-products (0% = 1, 50% = 3 and 100% = 5). The sub factors were then summed and the total for each proposal was then normalized to score the criterion.

## LOCAL ECONOMIC IMPACT

Section 24 of the RFP addresses issues related to local economic value that are not explicitly part of the all-in production cost of the proposed facility. These sub factors include:

- (i) Number of Local Jobs
- (ii) Average Salary of Local Jobs
- (iii) Tangible Taxes produced in Alachua County
- (iv) Ad Valorem Taxes in Alachua County

Each proposal was scored relative to each other based on these factors.

**Attachment D: Summary Table for GRU Biomass RFP Evaluation**

Respondent	Economics		Environmental		Risk & Reliability		Totals	
	Category Score	Category Ranking	Category Score	Category Ranking	Category Score	Category Ranking	Total Score	Overall Ranking
Covanta Energy Corp	72.52	9	118.00	5	157.90	1	348.42	2
Envortus, Inc	82.36	8	141.36	1	87.40	6	311.12	6
Green Power Systems	110.28	4	138.00	3	76.30	8	324.58	4
Nacogdoches Power, LLC	112.50	3	88.00	7	141.00	2	341.50	3
NRG Energy, Inc	98.44	6	83.36	8	128.00	3	309.80	7
Railex Merchant Energy Group	89.96	7	34.00	9	82.00	7	205.96	9
Sterling Planet	116.42	1	125.36	4	122.00	4	363.78	1
Taylor Biomass Energy, LLC	115.74	2	139.36	2	62.00	9	317.10	5
Timberland Harvesters, LLC	102.72	5	104.00	6	95.50	5	302.22	8

**Summary Table Color Key**

Highest Score in Category or Overall	1
2nd Highest in Category or Overall	2
3rd Highest in Category or Overall	3

**Attachment E: Evaluation Matrix for GRU Biomass RFP Responses**

Category / Criteria	Criteria Weight	Covanta Energy Corp		Envortus, Inc		Green Power Systems	
		Criteria Score	Weighted Score	Criteria Score	Weighted Score	Criteria Score	Weighted Score
<b>(1) Economics: Cost Effective Renewable Capacity and/or Energy Benefits</b>							
(a) Project All-in Production Cost	10.00	1.80	18.00	1.00	10.00	5.00	50.00
(b) Project Variable Production Costs	8.00	1.00	8.00	4.19	33.52	3.91	31.28
(e) Fuel Requirements and Sources	7.00	4.36	30.52	2.12	14.84	1.00	7.00
(f) Anticipated Project In-Service Date and/or Energy Delivery	4.00	2.00	8.00	5.00	20.00	3.00	12.00
(n) Local Economic Impact	2.00	4.00	8.00	2.00	4.00	5.00	10.00
<b>Category Total</b>	<b>31.00</b>		<b>72.52</b>		<b>82.36</b>		<b>110.28</b>
<b>(2) Environmental: Environmental Attributes Consistent with the Gainesville Community</b>							
(d) Environmental Emissions	10.00	4.20	42.00	4.20	42.00	5.00	50.00
(g) Project Commitment to Sustainable Forest Resource Management	10.00	5.00	50.00	4.00	40.00	3.00	30.00
(m) By-product/Waste Production and Disposition	8.00	1.00	8.00	3.67	29.36	5.00	40.00
(h) Project Site Requirements	6.00	3.00	18.00	5.00	30.00	3.00	18.00
<b>Category Total</b>	<b>34.00</b>		<b>118.00</b>		<b>141.36</b>		<b>138.00</b>
<b>(3) Risk &amp; Reliability: Enhanced and Reliable Energy Supply</b>							
(k) Proposed Contractual Terms and Conditions	10.00	4.29	42.90	3.94	39.40	4.53	45.30
(c) Technology Readiness and Project Reliability	9.00	5.00	45.00	3.00	27.00	1.00	9.00
(l) Experience and Resources of Project Developer/Sponsor	6.00	5.00	30.00	1.00	6.00	2.00	12.00
(i) Project Size and Design	5.00	3.00	15.00	1.00	5.00	1.00	5.00
(l) Proposer's Financial Strength	5.00	5.00	25.00	2.00	10.00	1.00	5.00
<b>Category Total</b>	<b>35.00</b>		<b>157.90</b>		<b>87.40</b>		<b>76.30</b>
<b>Grand Total</b>	<b>100.00</b>		<b>348.42</b>		<b>311.12</b>		<b>324.58</b>

**Evaluation Matrix Color Key**

Highest Grand Total	0.00
Highest Category Total	0.00
Highest Criteria Total within Category	0.00

**Attachment E: Evaluation Matrix for GRU Biomass RFP Responses**

Category / Criteria	Criteria Weight	Nacogdoches Power, LLC		NRG Energy, Inc		Raillex Merchant Energy Group	
		Criteria Score	Weighted Score	Criteria Score	Weighted Total	Criteria Score	Weighted Score
<b>(1) Economics: Cost Effective Renewable Capacity and/or Energy Benefits</b>							
(a) Project All-in Production Cost	10.00	2.55	25.50	2.20	22.00	3.56	35.60
(b) Project Variable Production Costs	8.00	5.00	40.00	4.22	33.76	2.55	20.40
(e) Fuel Requirements and Sources	7.00	5.00	35.00	3.24	22.68	2.28	15.96
(f) Anticipated Project In-Service Date and/or Energy Delivery	4.00	1.00	4.00	3.00	12.00	4.00	16.00
(n) Local Economic Impact	2.00	4.00	8.00	4.00	8.00	1.00	2.00
<b>Category Total</b>	<b>31.00</b>		<b>112.50</b>		<b>98.44</b>		<b>89.96</b>
<b>(2) Environmental: Environmental Attributes Consistent with the Gainesville Community</b>							
(d) Environmental Emissions	10.00	3.40	34.00	1.80	18.00	1.00	10.00
(g) Project Commitment to Sustainable Forest Resource Management	10.00	4.00	40.00	3.00	30.00	1.00	10.00
(m) By-product/Waste Production and Disposition	8.00	1.00	8.00	3.67	29.36	1.00	8.00
(h) Project Site Requirements	6.00	1.00	6.00	1.00	6.00	1.00	6.00
<b>Category Total</b>	<b>34.00</b>		<b>88.00</b>		<b>83.36</b>		<b>34.00</b>
<b>(3) Risk &amp; Reliability: Enhanced and Reliable Energy Supply</b>							
(k) Proposed Contractual Terms and Conditions	10.00	4.80	48.00	5.00	50.00	1.00	10.00
(c) Technology Readiness and Project Reliability	9.00	5.00	45.00	1.00	9.00	4.00	36.00
(l) Experience and Resources of Project Developer/Sponsor	6.00	3.00	18.00	4.00	24.00	1.00	6.00
(i) Project Size and Design	5.00	5.00	25.00	5.00	25.00	5.00	25.00
(l) Proposer's Financial Strength	5.00	1.00	5.00	4.00	20.00	1.00	5.00
<b>Category Total</b>	<b>35.00</b>		<b>141.00</b>		<b>128.00</b>		<b>82.00</b>
<b>Grand Total</b>	<b>100.00</b>		<b>341.50</b>		<b>309.80</b>		<b>205.96</b>

**Evaluation Matrix Color Key**

Highest Grand Total	0.00
Highest Category Total	0.00
Highest Criteria Total within Category	0.00

**Attachment E: Evaluation Matrix for GRU Biomass RFP Responses**

Category / Criteria	Criteria Weight	Sterling Planet		Taylor Biomass Energy, LLC		Timberland Harvesters, LLC	
		Criteria Score	Weighted Score	Criteria Score	Weighted Score	Criteria Score	Weighted Score
<b>(1) Economics: Cost Effective Renewable Capacity and/or Energy Benefits</b>							
(a) Project All-in Production Cost	10.00	3.71	37.10	4.89	48.90	2.10	21.00
(b) Project Variable Production Costs	8.00	4.27	34.16	3.81	30.48	4.51	36.08
(e) Fuel Requirements and Sources	7.00	3.88	27.16	1.48	10.36	4.52	31.64
(f) Anticipated Project In-Service Date and/or Energy Delivery	4.00	3.00	12.00	4.00	16.00	2.00	8.00
(n) Local Economic Impact	2.00	3.00	6.00	5.00	10.00	3.00	6.00
<b>Category Total</b>	<b>31.00</b>		<b>116.42</b>		<b>115.74</b>		<b>102.72</b>
<b>(2) Environmental: Environmental Attributes Consistent with the Gainesville Community</b>							
(d) Environmental Emissions	10.00	2.60	26.00	5.00	50.00	3.80	38.00
(g) Project Commitment to Sustainable Forest Resource Management	10.00	4.00	40.00	3.00	30.00	4.00	40.00
(m) By-product/Waste Production and Disposition	8.00	3.67	29.36	3.67	29.36	1.00	8.00
(h) Project Site Requirements	6.00	5.00	30.00	5.00	30.00	3.00	18.00
<b>Category Total</b>	<b>34.00</b>		<b>125.36</b>		<b>139.36</b>		<b>104.00</b>
<b>(3) Risk &amp; Reliability: Enhanced and Reliable Energy Supply</b>							
(k) Proposed Contractual Terms and Conditions	10.00	3.90	39.00	2.80	28.00	3.75	37.50
(c) Technology Readiness and Project Reliability	9.00	5.00	45.00	2.00	18.00	4.00	36.00
(l) Experience and Resources of Project Developer/Sponsor	6.00	3.00	18.00	1.00	6.00	2.00	12.00
(i) Project Size and Design	5.00	1.00	5.00	1.00	5.00	1.00	5.00
(l) Proposer's Financial Strength	5.00	3.00	15.00	1.00	5.00	1.00	5.00
<b>Category Total</b>	<b>35.00</b>		<b>122.00</b>		<b>62.00</b>		<b>95.50</b>
<b>Grand Total</b>	<b>100.00</b>		<b>363.78</b>		<b>317.10</b>		<b>302.22</b>

**Evaluation Matrix Color Key**

Highest Grand Total	0.00
Highest Category Total	0.00
Highest Criteria Total within Category	0.00

