



**A Report to the
City Commission**

Mayor
Lauren Poe

Mayor Pro-Tem
Harvey Budd

Commission Members
David Arreola

Charles Goston

Adrian Hayes-Santos

Harvey Ward Jr

Helen Warren

City of
Gainesville Office
of the City
Auditor

Carlos L. Holt – City Auditor

Proposed Gainesville Renewable
Energy Center Asset Purchase
Agreement Evaluation

May 17, 2017

EXECUTIVE SUMMARY

May 17, 2017



Why We Did This Engagement

The evaluation (not an audit) was added to the Annual Audit Plan by the City Commission on April 6, 2017.

Risks

- Savings will not be applied to rate reduction
- Contract risk
- Plant will require major repairs
- Woody biomass will not be economical or desirable during the life of the contract
- Debt load increase will degrade GRU's borrowing ability and increase future rates
- Bondholders will have superior status to contractors if GRU and the City of Gainesville encounter future financial difficulties
- Municipal bond interest rates diverge upward while treasury rates remain low

For more information on this or any of our reports, please visit: www.cityofgainesville.org/cityauditor.asp

Proposed GREC Asset Purchase Agreement Evaluation

BACKGROUND

On April 29, 2009, the City of Gainesville became party to a 30-year power purchase agreement (PPA) for renewable energy using woody biomass fuel. At the time, building green energy afforded application for Treasury 1603 "specified energy" grants, natural gas prices had experienced volatility, and a carbon tax was being proposed. The woody biomass energy plant became commercially operational on Dec 17, 2013. Since that time, many citizens and elected officials have concluded that the resulting contract was poorly negotiated on the City's side and resulted in very high fixed payments for the availability of energy, even if none were needed. The City has also experienced a tumultuous relationship with the contractor, now known as the Gainesville Renewable Energy Center (GREC). Among the issues: significant legal costs, multiple disagreements, payment withholdings, and two arbitrations filed. Recently, the General Manager (since 2015) of Gainesville Regional Utilities (GRU) signed a Memorandum of Understanding (MOU) with GREC to negotiate a contract to purchase the plant assets for \$750 million, subject to City Commission approval of a negotiated contract (drafting now underway).

OBJECTIVES

The objectives of the engagement were to determine the following:

- Evaluate the proposed purchase arrangement with respect to contractor GREC.
- Evaluate the proposed purchase agreement with respect to GRU and its customers.
- Evaluate the material risks of executing a contract within the scope of the MOU.

WHAT WE FOUND

- Projected savings for the first 26 years would be \$28,437,762 annually.
- Years 27-30 would see increases of \$45,077,584 annually and a 5.9% increase in rates over status quo (GREC contract would end year 26).
- Total actual dollars (not PV) saved for the 30-year period would be \$559,071,488.
- The PV of status quo exceeds the PV of purchase by \$527,574,165 when plant lay-up cost, insurance, and property taxes are factored in.
- GRU electric segment revenue could be reduced by 8.31% for the first year if all savings are applied, and 9.88% if utility taxes and surcharges were held to constant dollars.
- By year 26, the maximum electric savings would have eroded to 6.02% after 1.3% annual inflation of rates.
- At \$750 million, GREC would receive 99.35% of the present value of its income stream minus stand-by costs, without further obligation.

ENGAGEMENT PERSPECTIVE

This engagement by the City Auditor's Office was not an audit under Government Auditing Standards (yellow-book) but is classified as a Non-Audit Service. During this engagement, we measured and forecasted using conservative but realistic estimates for calculations. Risks were evaluated from an inherent perspective then adjusted using known conditions and controls before forming an opinion about those residual risks to GRU's stated objectives of the purchase (reduce expenses, lower electricity rates, and possess more flexibility and control of the GREC plant). No management controls have been tested during this engagement due to time restraints. This engagement should not be used as a substitute for a risk assessment by management or external auditor. The City Auditor's Office is neither in favor of nor against the asset purchase, which is a decision of management and governance. The City Auditor's Office's role was to assist management and governance in its decision making. This engagement should be used as one piece only of that decision-making process.

WHAT GRU IS PURCHASING

With a proposed price of \$750 million dollars, one can quickly assume that there is more to the transaction than purchasing a biomass plant. Rebuilding the biomass plant from scratch would likely require less than 50 percent of that amount. Other wood biomass plants have experienced difficulty in recent years (fires, inefficient equipment, lawsuits, low natural gas price competition, etcⁱ.) A 57 MW Texas biomass plant that opened in 2011 was sold in bankruptcy court for five million dollars in November 2016, while bondholders were still owed fifty-three million dollars.ⁱⁱ "Challenging market conditions" was the chief reason cited for the plant's failure. With this backdrop, why would anyone pay \$750 million for a woody biomass plant? Answer: They wouldn't. But they would consider paying a high amount in order to get out of paying an even higher amount over the next 26 years.

Gainesville Reginal Utilities is party to a Power Purchase Agreement that requires them to pay \$1.9 billion at a minimum (including property taxes) over the next 26 years. Avoiding those payments, by buying and extinguishing the contract, GRU will no longer be bound by the payments required by the contract. As will be shown in this report, GRU will pay \$1.35 billion over the next 30 years for a total dollar saving of \$559,071,488 (if the plant is placed in long-term lay-up). Calculating the actual value of the plant on its own would be difficult since value is usually based on what others would be willing to pay for it, or the value of income streams that could be earned (or costs avoided), or the value of the facility as scrap. An estimate is that it would take between \$307.5 million and \$410 million to rebuild the plantⁱⁱⁱ based on \$3,000 to \$4,000 per MW estimates by the National Institute of Building Sciences. This is consistent with the \$116 million *1603 Specified Energy Grant* obtained by GREC prior to construction since US Treasury Guidance^{iv} states that the grant cannot be more than 30% of the cost of construction for a biomass plant which would project to \$387 million.

PRESENT VALUE CONCEPTS

It is important to understand the concepts of present value. Simplistically, it means that a dollar delivered to you today is worth more than a dollar delivered to you a year from now, ten years from now, or at any point in the future. One important element of the calculation is the *discount rate*, which represents the rate at which today's dollars would be invested.

Figure 1: The Present Value (PV) of 100 Future Dollars using Various Discount Rates

Time to Receive \$100	PV @ 7%	PV @ 5%	PV @ 3%
Today	100.00	100.00	100.00
1 Year from today	93.46	95.24	97.09
10 Years from today	50.83	61.39	74.41
20 Years from today	25.84	37.69	55.37
30 Years from today	13.14	23.14	41.20

Source: Excel Computations using PV Function

As can be seen in Figure 1, as the discount rate that is appropriately chosen (or is the minimum requirement) rises, the present value of the future dollars decreases. Note that \$100 to be received in 30 years is worth \$41.20 at 3% but only \$13.14 at 7%. To put it another way, if one had \$13.14 now, they could invest it at 7% and have \$100 in 30 years.

Now look at Figure 2 to see the impact on *income streams* along with the change in present value of various changes is to how the annual payment is received.

Figure 2: The Present Value (PV) in dollars of an income stream of \$1 million annually for 30 years

Discount Rate >	3%	3.45%	4%	5%	7%
Annually (end)	19,600,441	18,507,805	17,292,033	15,372,451	12,409,041
Semi-ann. (end)	19,690,134	18,597,817	17,380,443	15,454,328	12,472,367
Semi-ann. (beg.)	19,985,486	18,918,629	17,728,052	15,840,686	12,908,900
Monthly (end)	19,765,782	18,673,789	17,455,103	15,523,468	12,525,631
Monthly (beg.)	19,815,196	18,727,476	17,513,287	15,588,149	12,598,697

Source: Excel Computations using PV Function

In each case, the numbers above in Figure 2 are present values for the receipt of \$1 million annually for 30 years or a total received in each case of \$30 million. Note that the very highest present valuation is under \$20 million and the lowest \$12.49 million. Another way to look at this one is if one had \$12,409,041 now that could be invested at a 7% annual rate they could take an end of year annual payment of \$1 million dollars for 30 years, with no residual value left.

BOND DISCUSSION

A brief review of how bonds work is in order. Bonds are financial instruments where the original buyers are lending money to the organization, in exchange for interest payments on their purchase price for a specified period of time. Then, at the end of the period, the bondholders receive all of their original investment (face value of the bond) back. Bonds typically pay interest in semi-annual installments. This is the basic formula for bonds but there are dozens of variations, many of which may reduce expenses.

For example:

Investor: buys a \$10,000, 30-year bond, with a 10% *coupon rate* (stated rate of interest)

Investor obtains: a) \$500 interest payment every 6 months (\$1,000 per year), and; b) \$10,000 is returned to the investor at the end of the 30 years.

This means that the organization offering the bonds will be responsible for paying the semi-annual interest payment and accumulating the principal to reimburse the investor at the end of the period.

Figure 3: Effects of Simple Bond Offering: Organization and Investor of 30-year, \$10,000 Bonds at 10%

Event	Organization	Investor
Bond Offering	Receives \$10,000 from sale	Buys bond, pays \$10,000
1st Semi-annually payment	Pays \$500, ½ of annual interest to all bondholders	Receives \$500, ½ of their annual interest payment
2nd Semi-annual payment	Again pays \$500, ½ of annual interest to all bondholders (this continues every six months for 30 years)	Receives \$500, ½ of their annual interest payment (this continues every six months for 30 years)
End of 30 years	Pays \$10,000 back to investor	Receives \$10,000 investment back in full

Additionally, an organization typically pays one-percent or more of the funding for a group of banks and financiers (commonly referred to as a syndicate) for the handling of the investment and the facilitating of the bond sale and registration of bond holders. If an organization needed \$10 million, it should expect to pay \$100,000 or more in commissions and fees for the initial process.

The description above is the simplest of bond offerings. With an offering of \$750 million, various other financing techniques would be available such as laddering the bonds at 2-years, 5-years, 10-years, 20-years, etc. so that the principal would be paid off early and not generate any more interest. Another technique would be to “call” the bonds early and refinance them at lower rates or, change the bond indenture provisions. Lower effective yield rates may certainly be achieved using various financing techniques. Keeping a portion of the needs in short-term instruments could also be done.

Note: This engagement and report is taking place prior to a financing structure being put in place; therefore, it is unknown precisely what financing steps will be taken or if rates have risen or fallen. For this reason, we have used conservative judgments, and a bond offering of the regular type described above. There are of course various financing mechanisms that can lower effective yields and total payback amounts.

WOODY BIOMASS DISCUSSION

The drop in natural gas and oil prices due to plentiful supply, fracking, increased pipeline availability and other factors have had a negative effect on the economics of woody biomass. This is not necessarily the case for other types of biomass such as bagasse (sugar cane stalks) and black liquor (a byproduct of paper mills), and other waste products. Florida Crystals (sugar) operates a 128.9 MW plant in South Florida that powers 60,000 homes. Paper producers use the black liquor waste to fuel their own plants.

However, other issues affect the economics and carbon saving potential of woody biomass. European countries use woody biomass and obtain beneficial governmental credits called renewable obligation certificates. Europe has increased importation of wood from Canada and the Southern United States. According to an article in *The Economist*^v, European countries desire to get 20% of their power from renewables by the year 2020 would be next to impossible by wind and solar alone. Competition for wood for electricity generation by 2020 could drive prices “through the roof”, increasing “five or six fold.” Most of their additional wood will come from imports, meaning others will also be in pursuit of the same wood being brought to the Gainesville plant. Cut lumber prices have also risen approximately 50% during the past two years^{vi}

A plant similar in size to the Gainesville GREC plant is owned by Southern Company^{vii} and exists in Sacul, Texas (near Nacogdoches) and is occasionally used by Austin Energy. A discussion with the Director of Energy and Marketing Operations on April 5, 2017, indicated that the plant was not being used at that time. Further, he stated that they occasionally run the plant in order to turn the fuel so that it doesn’t combust. He stated that the plant is used much less than originally planned due to costs. The Austin Energy website^{viii} relates that renewables account for 54.3 percent of their total generation but only 0.7 percent of their renewable power is from biomass. Also notable is that some members of the Austin City Council^{ix} have been searching for a way out of the contract, which requires payments of approximately \$4 million per month and has 15 years until expiration. The Austin Energy website includes the statement: “The disproportionate expense of this organically-sourced energy; however, means that Austin Energy does not plan to invest additional dollars into biomass beyond the current contract.”^x

The United States Environmental Protection Agency (EPA) *Clean Power Plan*^{xi} has been put on hold.^{xii} The plan documents^{xiii} included a discussion of woody biomass and how it is not scientifically valid to assume all woody biomass is carbon neutral. The EPA pledged to evaluate in more detail the various factors including characteristics, production practices, and alternative fate of the fuel.

There is a risk that a wood biomass plant for electricity generation may not be economically feasible for a number of years. Other factors would have to work in concert with any strategy to use biomass power from the GREC plant on a regular basis. GRU already has plenty of generation when all assets are online and has an agreement with Jacksonville Electric Authority (JEA) to obtain additional power when prices are economical (2/3 of JEA generation is from natural gas, total 3,747 MW^{xiv}). Management of GRU has long since stated that the minimum output level of the plant was not a good fit (too large) with the other generation assets that they have. Recently, GRU management has discussed possibly using the plant when other aging plants reach original expiration dates. Another consideration is using additional capital spending to modify the minimum efficient output of the GREC plant. These other possible actions are separate decisions that should be made by management on their own additional merits. These other actions are not being negotiated at this time, nor are they subject to scheduled City Commission approval at this time. Other long-term uses of the plant could also become feasible during the next 30 years as well as the eventual feasibility of economically burning wood. Some of these choices are at least speculative to some extent at this time. Therefore, this evaluation can only evaluate the asset purchase based on non-use and long-term lay-up of the plant and the costs associated with this choice.

ASSUMPTIONS FOR FINANCIAL ANALYSIS

1. Purchase price considered at \$750,000,000 and the cost of financing overall is 1.1%, for a total debt issuance of \$758,250,000.
2. Plant is 95% available (hard to disprove use of this unless plant is dispatched regularly).

3. Plant will be placed in lay-up at an annual average cost of \$225,516 (GRUs 5-year average).
4. Purchase price will be funded and deal will close on December 17, 2017, four years after the commercial operation date of December 17, 2013, and with 26 years remaining on the GREC contract.

OBJECTIVES

1. *What is the case for contractor GREC if the MOU leads to execution of a contract and sale of the biomass plant for \$750 million?*

Contractor GREC began receiving payments from the City of Gainesville shortly after the Commercial Operation date of December 17, 2013. Since that time they have encountered multiple disagreements with the City of Gainesville and at least one contractor who sued them. Prior to the MOU being signed, GREC and the City were dealing with a second arbitration on many issues that could result in decisions that will affect their payments for the next 26 years. Approximately \$7 million has already been withheld from invoices by GRU who also brought up other non-availability periods discovered after GRU's failed attempt to do an operational audit of the plant in September 2016. Most likely GREC has had to incur substantial legal expenses in their disagreements with GRU and the previous wood supply contractor, Wood Resource Recovery (who sued and won \$4.6 million^{xv} plus attorney's fees and costs). The CFO of GREC stated in an August 5, 2015, interview with the City Auditor and GRU GM that some of their investors were venture capital investors with a fixed period of time coming due in the next few years. There have likely not been other seriously interested buyers of the plant and PPA during the period of time since operations began. All of the disagreements, news headlines, Navigant investigation, filed arbitrations, and withheld amounts from invoices would deter at least some interested parties. The PPA agreement includes a right of first offer, whereby GRU would have to be notified of any pending offer GREC was considering so that GRU could submit their (blind) offer (PPA Section 27.3). GREC would first have to notify GRU of their intent to sell the facility and provide 60 days for GRU's offer, which to date has not yet been done.

Despite the foregoing circumstances, GREC remains holder to the income stream and determination of the plant. The various efforts and uncertainties would likely make any owner of the plant and PPA desire to move on, particularly if they face no loss in value. GREC's owners, to include the venture capital firms have various opportunities for investments with much greater returns than GRU or the City of Gainesville has. On the other hand, the current GREC investment they hold seems fairly stable, despite the headaches. Even a loss on some of the arbitration issues would likely leave them with most of their income stream. To date, no attorney, court, or arbitrator has informed GRU or the City of Gainesville that the contract can be invalidated. For these reasons we computed the discount rate to determine the present value of GREC expected 26-year cash flows by selecting a mix of 70% high-quality bond yields over the last 20 years and 30% high-yield bond yields over the last 20 years. The results can be seen below.

Figure 4: GREC Weighted Average Cost of Capital

Financial Instrument	Percentage	Weight	
30 Year HQ Corp US Bond - 20 yr. avg. yield	6.004938272	0.7	4.203457
B of A Merrill Lynch High Yield US - 20 yr. avg. yield	9.120062241	0.3	2.736019
Weighted Avg. Cost of Capital (WACC)			6.94%

Source: Federal Reserve Economic Data (FRED) (See Appendix B)

The first choice of any present value computations is to choose the discount rate to be use. Having arrived at 6.94% as our choice for GREC computations, we determine how much and how often GREC will receive payments. If the plant is not run, GRU will owe \$194,709 per day. Multiplying that by 365 days, then dividing by 12 (months), and multiplying that by 95% (availability) arrives at \$5,626,279 monthly, as per GREC invoices. Calculating 312 monthly payments at 6.94%/12 or 0.58% for each period resulted in a present value of \$811,905,305. Next, subtracting the present value of annual stand-by costs of \$4,483,062^{xvi} for 26 years (total PV of \$57,010,400), results in a present value of \$754,894,906. The purchase price is 99.35% of the present value of GREC’s income stream. If GREC can reinvest their \$750 million at 6.94%, they can receive nearly the same monthly payments every month for the next 26 years. Since GREC would be receiving full value for their income stream, with the exception of agreeing for GRU to retain the approximately \$8 million being withheld, there is no discounting factored into the price for the possibility of a loss in arbitration.

Figure 5: GREC’s Present Value of Income Stream

PV Using Excel PV Function	\$	811,905,305
Annual Stand-by Costs		(4,483,062)
PV of Stand-by Costs for 26 years		57,010,400
Total PV of GREC at 6.94% discount rate		754,894,906
Price to be paid for GREC	\$	750,000,000
Purchase Price as a Percent of PV		99.35%

Source: Internal calculations by the City Auditor’s Office

2. What is the case for GRU if the MOU leads to execution of a contract and sale of the biomass plant for \$750 million?

Using conservative but attainable financing projections, GRU could save over \$28.4 million dollars per year for the first 26 years. This is approximately 9.88% of GRU’s electric segment sales for the most recently completed fiscal year. Governance and management of GRU would be responsible for determining how to apply that savings to rates. When factoring in a 10% utility tax for all spending related to the purchase (including insurance and lay-up costs) an additional \$4.507 million would be added to the electric portion of the bill reducing the possible reduction to \$8.31% the first year. As rates rise over time, (forecasted at 1.3% per year in this report) the savings will become a smaller percentage of the bill, as shown below in Figure 7.

Figure 6: Potential Impact to Electric Bill Portion

Percent of Revenue Reduction Possible Year 1	(with 10% utility tax)	8.31%
Percent of Revenue Reduction Possible Year 5	(with 10% utility tax)	7.90%
Percent of Revenue Reduction Possible Year 10	(with 10% utility tax)	7.40%
Percent of Revenue Reduction Possible Year 20	(with 10% utility tax)	6.51%
Percent of Revenue Reduction Possible Year 26	(with 10% utility tax)	6.02%
Percent of Revenue Reduction Possible Year 27	(with 10% utility tax)	-5.94%
Percent of Revenue Reduction Possible Year 30	(with 10% utility tax)	-5.72%

Source: Internal calculations by the City Auditor’s Office

If financed over 30 years, as projected in this report (see Appendix B), years 27-30 would see additional annual costs of \$45.08 million over status quo since the GREC contract would have ended. Rates would be 5.94 percent higher than they would have been under the status quo in year 27. Management and sitting City Commissioners in 2044 through 2047 will be budgeting \$45,077,538 per year for the December 2017 buy-out. Contrastingly, with the current status quo these would have been the first years that they would be free and clear of the GREC contract.

Figure 7: GRU’s Electricity Segment

	GRU Annual Financials - Fiscal Year 2016	Pro Forma 2018*
Electric Segment Sales	287,809,939	259,372,177
Other Revenues	20,261,224	20,261,224
Total Expenses	225,290,559	196,852,797
Net Revenues	82,780,604	82,780,604

Source: Internal calculations by the City Auditor’s Office

Clearly, GRU management and governance can use a \$28 million a year cut in expenses to reduce rates. However, due to annual budget cycles, there is no guarantee that future decision makers will desire to use the savings for this purpose. Public discussions by the City Commission during the past months, with guidance from the City Attorney, indicate that although some Commissioners have stated a desire to earmark any savings specifically toward rate reduction, no mechanism can legally be used to tie the hands of future decision makers with regard to how future dollars will be budgeted.

Figure 8: GRU’s Potential Benefits

\$	14,218,881	Semi Annual Payment Savings (for first 26 years)
\$	28,437,762	Annual Savings (for first 26 years)
\$	739,381,822	Savings Year 1 through 26
\$	(180,310,334)	Total Additional Payments year 27-30
\$	559,071,488	Net Savings Total Payments

Source: Internal calculations by the City Auditor’s Office

3. *What are the risks of executing a contract to purchase the GREC plant assets under the terms of the MOU?*

Note: An initial draft contract for purchasing the GREC plant assets is being circulated for review, suggestions, and edits by management and governance of GRU. Since draft contracts are by definition subject to change, an evaluation of the contract will not be performed in this engagement because it is unknown what the final contract may contain.

HOW RISKS ARE EVALUATED

Risks can only be evaluated based on an objective. What are the risks that the objective will not be achieved? Example: The objective of a recreation department may be to provide enjoyable and safe activities for families to enjoy. Some risks that could prevent achieving that objective are: unsafe equipment, hiring employees that abuse children, or dangerous weather conditions. The City Auditor's Office evaluated risks during this engagement by considering GRU's stated objectives of:

- Cutting expenses,
- Reducing electricity rates,
- Greater flexibility of the GREC plant assets.

Risks are frequently evaluated by using a three-by-three matrix to visualize the likelihood of occurrence and impact/consequence of that risk. Risks with a high likelihood and high impact would require significant attention where risks with a low impact would not, unless they occur with such frequency as to be a problem. The cost principle is also a consideration in that no control should cost more than the impact of occurrence. For example, an organization would not normally spend \$50,000 on an interest rate hedge if the impact without it would only be \$49,000.

Figure 9: A Typical 3x3 Risk Matrix

3 x 3 Risk Matrix

L I K E L I H O O D	High	Medium Risk	High Risk	Extreme Risk
	Med	Low Risk	Medium Risk	High Risk
	Low	Insignificant Risk	Low Risk	Medium Risk
		Low	Med	High
	CONSEQUENCES			

Source: <https://www.risk-assessments.org/risk-assessment-matrix-3x3.html>

Risks are first evaluated inherently, that is, if no controls existed. Then residual risks are those risks that remain after management controls, organizational design, and other mitigation factors are implemented. Risks must be reevaluated over time and the controls tested to determine if they are still working as intended to mitigate risks. In Figure 9, risks rated Medium, High, and Extreme should be mitigated by management; or, they may choose to accept the risk.

POSSIBLE RISKS

Note: All risks are being contrast against the stated objectives of GRU: cutting expenses, electricity rate reduction, and more flexibility and control of the GREC plant.

- **Savings will not be applied to rate reduction:**

No City Commission can bind other City Commissions to annual decisions on how funds will be spent. This has been discussed by the City Commission with the City Attorney at recent public meetings. This means that there can be nothing more than a non-binding pledge by current or future members *at the most*. Although current City Commissioners have expressed vocally that they desire to pass on savings to the GRU customers, it will still require an approved budget each year to apply those dollars there. Yet to be elected commissioners may have other desires. There are no internal controls that can be enacted to require this.

Likelihood:

MED

Impact:

HIGH

- **Contract risk:**

A contract for a purchase of an asset is much less complicated than a lengthy power purchase agreement. Less complication most always results in less risk since both sides have greater ability to understand all of the metrics and the impacts they have. Given that the other party is the same organization than authored most of the previous PPA contract does present some concern. Widely viewed as one-side and one of the worst contracts many have seen (also called a “raw deal” by the Gainesville, Sun) there was not a win-win on its execution. This time, the City will be creating the first draft and have inside and outside counsel working on the document. There are a number of controls that can be used to protect GRU from disappointment:

- Use of approved boilerplate clauses
- Resistance of any hard to understand or hard to define language
- Third party expert review prior to signing
- Compare contract to other best-practice agreements that have held up over time
- Predetermined period of review after all changes have been made

Likelihood:

LOW

Impact:

HIGH

- **Plant will require major repairs**

On September 22, 2016, GRU management and engineers attempted to do an operational audit of the GREC plant. The team left after several hours dissatisfied with results since GREC operators were unwilling to do anything other than have verbal discussions in a conference room. Although the PPA section 22.2 describes a semi-annual “Operation Audit” that shall consist of “on-site inspections of the facility *and* access to interview operations managers.” On-site management of GREC maintained that only the interviews were required. They have before and since refused to provide particular engineering reports, event logs, or contracts with subcontractors, etc. Despite the corral put around the visit, GRU was able to determine GREC’s procedures were inconsistent with those required for the available energy charge. This issue was then added to the arbitration issues. So far GREC has not been viewed as forthcoming with information. Although lenders will require inspection and testing of the plant, and GREC has agreed to the inspections, lenders know that the plant as collateral is not worth the sums being provided for purchase. Due to economics, GRU may not choose to run the biomass plant once purchased. However, to protect any investment the biomass plant must work for the purchase to be worthwhile. If the plant does not work as advertised for the next 26 years, GRU has paid all or part of \$750 million unnecessarily since required PPA payments would not need to be made if the plant energy was not available. Further, during the 30-year period after purchase, other uses of the plant or potential buyers may become known. If one thinks back to 1987, much has changed. With a working plant in lay-up, it is available for future needs or desires or to be sold to others (such as a large industrial customer moving to the area who wants their own power generation). The possibility of using the plant if other generators break down would also be gone. If the plant requires major repair, all other choices rather than lay-up, will not be available in future years.

Some controls that may be used to mitigate the risk:

- Require that all engineering reports, event logs, and other vendor agreements be made available for inspection and duplication during the due diligence process (at this point there is no legitimate reason to withhold anything).
- Hire outside inspectors, not currently associated with GREC or planned for later use by GRU, to inspect the plant, documentation, etc. and provide a written report.
- Ensure warranties are sound and that warranties and representations made by GREC survive closing for at least one year or more.
- Require that a percentage of the purchase price (5%) be held in escrow for at least one year.

Likelihood:

MED

Impact:

HIGH

- **Woody biomass will not be economical or desirable during the life of the contract**

This was previously discussed in an earlier section. If this is the case, the entire purchase price was only for the relief of payments under the current PPA. This is precisely why the plant should only be purchased if it makes sense to purchase the plant without any planned future use. Regardless, GRU is obtaining the least benefit possible of ownership of the plant if this is the case. There are no controls readily available to mitigate this risk.

Likelihood:

MED

Impact:

HIGH

- **Debt load increase will degrade GRU's borrowing ability and increase future rates**

This is a certainty to some extent. However, GRU currently maintains an AA- rating from Standard and Poor's and has an excellent history of performing as rating agencies desire with consistency and stability as key factors. The only blemish on GRU's record is the long-term requirements under the GREC contract. Rating agencies have already regarded the GREC payments as debt and they are capitalized on their balance sheet. A March 24, 2017, release by Moody's raises concern that debt service coverage ratios may deteriorate, particularly noting "higher-plant operating risk for GRU to manage." GRU's ability to make additional large debt funding will be impacted. If rating agencies do confirm the AA- rating for the bond offering, they have satisfied themselves for now that the GRU rating is stable. If the offering results in a downgrade, prior to issuance, GRU will pay higher interest rates and should then reconsider following through.

Likelihood:

MED

Impact:

MED

- **Accounting entries required for the purchase will negatively affect GRU’s balance sheet in a material manner**

This item would not be included here if these claims had not already been made by the public. This is not the case. Accounting entries (debits and credits) will basically back out the capital lease assets and liability associated with the current PPA required payments; and, enter the new asset on the balance sheet at purchase price (could include additional items to get the plant ready for use) and also include the new liability on the balance sheet. External auditors of the financial statements will closely scrutinize new entries for year ending statements and determine if they accurately present the financial statements in all material respects.

Likelihood and Impact: **None**

- **Bondholders will have superior status to contractors if GRU and the City of Gainesville encounter future financial difficulties**

This is a true statement and will only come into play should severe financial difficulties exist in the future. Additionally, in Chapter 9 bankruptcy, revenue bondholders have superior claims to general obligation bondholders, whose debt is treated as “unsecured” unless secured by a statutory lien. Obviously, GRU and the City would have to be in dire straits for this situation to become a reality, but that doesn’t mean it can’t happen, other cities have filed bankruptcy Chapter 9.

Likelihood:

LOW

Impact:

HIGH

- **Municipal bond interest rates diverge upward while treasury rates remain low**

The only interest rate protection in the MOU protects GRU in the event that 30-year US Treasuries rise above 3.43 percent (at 3.03 as of May 11, 2017^{xvii}). There are no protections if muni rates rise (at 3.25 for AA as of May 11, 2017) in divergence of US Treasuries. This has happened before, particularly during the 2009 recession when muni commercial paper was near 7%. A catastrophic event, such as a very large municipal bankruptcy or a break-out of war could cause this. Should this happen after closing, but before the bond sales, GRU would be bound to proceed even though rates would make the entire purchase not worthwhile. This situation is unlikely but the risk could be mitigated with various financial devices such as interest rate hedges, swap agreements, etc.

Likelihood:

LOW

Impact:

HIGH

- **Time, expense, and legal efforts spent on arbitration issues have been wasted**

If the MOU leads to contract, GRU and the City will likely never know how the arbitration would have been decided. Some of the issues were recurring meaning that the decisions would have impacted the amounts GRU owed to GREC for another 26 years. While the MOU provides that GRU can keep the \$8 million already withheld from invoices, this amount is far from what might have been the case should GRU have succeeded on all of its arguments. GREC recently lost a suit from one of their wood suppliers. During the attempted operational audit previously discussed, GRU discovered from plant operator admissions that many more additional available energy payment amounts were in GRU's opinion, unwarranted. However, even if GRU won arguments on these periods, plant operators could simply change their procedures so that this didn't happen in the future. Should the MOU not result in a sale of the plant, GRU could resume the arbitration process. Since GREC will be receiving 99.35 percent of their present value if the plant is purchased at \$750 million, GRU is receiving no discount for the possibility that they will succeed in arbitration.

Likelihood:

MED

Impact:

MED

- **Plant property will be costly to clean-up after the plant's useful life**

There is a possibility that there is or will be contamination that will be required to be remediated at the end of the plant's useful life. There is also the possibility that disassembling and removing the plant to restore the property to its previous condition will cost more than any scrap dealer, or marketer of biomass plant parts will pay for the plant parts.

Likelihood:

LOW

Impact:

HIGH

- **GRU customers are will be disgruntled for “rewarding” GREC with a buyout**

There are certainly customers that will feel this way. GRU should act in the best interest of its customers as a whole from a long-term perspective. Current management is not responsible for the poorly negotiated contract they already hold. GRU and governance should weigh options going forward and act in the best way to benefit customers. It is unknown what percentage of customers might feel this way or how it would impact GRU going forward.

Likelihood and Impact: There is no impact on the primary objectives of: cutting expenses, electric rate reduction, and having greater flexibility of the use of the GREC asset.

AUDIT TEAM

Carlos L. Holt, CPA, CFF, CIA, CGAP, CFE, City Auditor

Eileen M. Marzak, CPA, CFE, Assistant City Auditor

Residual Risk Ratings and GRU Comments

RISKS	RATINGS	GRU COMMENTS
a. Savings will not be applied to rate reduction:	Likelihood: H Impact: M	Rating Agencies will not look favorably upon future commissions who elect to deviate from the plan to offer substantial rate reductions. They will provide a control mechanism over future commissions desires to divert rate reductions.
b. Contract risk:	Likelihood: L Impact: H	All five of the controls noted by the City auditor have been employed in the development of GRU’s first draft.
c. Plant will require major repairs	Likelihood: M Impact: H	It has been fortuitous that GREC was required to provide GRU power from March 15 th until now, operating between 70 megawatts and 102.5 daily. GRU took GREC “thru the paces” as the system required them for reliability (Deerhaven 2 down and ties lines restricted). A plant doesn’t operate in this manner for over two months while hiding fatal flaws in its design and major systems. As part of GRU’s due diligence the plant operating data will be inspected for this period. In spite of this, GRU is still employing all four controls outlined by the City Auditor (with variation on the fourth item to include LOC’s, or credit worthy entity to backstop the representations and warranties).
d. Woody biomass will not be economical or desirable during the life of the contract	Likelihood: M Impact: H	Even if biomass-fueled generation is uneconomical GRU will have mitigated the fixed costs under the PPA through terminating the PPA.

APPENDIX A – GRU COMMENTS ON RISK ELEMENTS INCLUDED IN REPORT

RISKS	RATINGS	GRU COMMENTS
<p>e. Debt load increase will degrade GRU’s borrowing ability and increase future rates</p>	<p>Likelihood: M Impact: M</p>	<p>GRU’s conversations with the Rating Agencies have been positive (including a follow-up conversation with Moody’s after their March 24th release). The Rating Agencies use both a standard debt service coverage ratio and a modified debt service coverage ratio. If this transaction closes, GRU’s standard debt service coverage ratio will be lowered, but its modified debt service coverage ratio will increase. The rating agencies place significant weight on the modified ratio because it includes the impact of the GREC debt under the PPA. GRU management is comfortable that this transaction would result in stable or improved debt ratings.</p>
<p>f. Accounting entries required for the purchase will negatively affect GRU’s balance sheet in a material manner</p>	<p>Likelihood: NONE Impact: NONE</p>	<p>GRU management agrees with City Auditor’s comments.</p>
<p>g. Bondholders will have superior status to contractors if GRU and the City of Gainesville encounter future financial difficulties</p>	<p>Likelihood: L Impact: H</p>	<p>GRU management agrees with City Auditor’s comments.</p>
<p>h. Municipal bond interest rates diverge upward while treasury rates remain low</p>	<p>Likelihood: L Impact: H</p>	<p>GRU plans to “lock-in” interest rates as soon as possible after contract execution in order to avoid the specter of higher interest rates. That said, I agree with the City auditor that there is a difference between 30 US Treasury Bond Rates and the Municipal Bond Index in the events when there may be a large municipal crisis. However, you can’t compare the 2009 recession when muni commercial paper was near 7%, because the 30 year muni bond rate was much lower and not as adversely impacted. Over time, the 30 US Treasury Bond Rate and Municipal Bond Index track very closely and GRU management and its financial</p>

APPENDIX A – GRU COMMENTS ON RISK ELEMENTS INCLUDED IN REPORT

RISKS	RATINGS	GRU COMMENTS
		advisors agreed on its use.
<p>i. Time, expense, and legal efforts spent on arbitration issues have been wasted</p>	<p>Likelihood: M Impact: M</p>	<p>Prior to GRU withholding payments under the PPA, to which GREC responded by taking its dispute to arbitration there had been no constructive discussions concerning a viable purchase of the GREC facility by GRU. If not for the development of such strong legal arguments, it is unclear whether GREC would have considered mediation, or the resultant discussions and negotiations that have brought the parties to this point. It is clear to GRU management that the legal monies spent to date have made GRU’s ability to retain the \$ 7.4 million of withholdings a part of the MOU and the contract.</p> <p>The City Auditor’s assertion that GRU is receiving no discount for the possibility that they will succeed in arbitration overlooks the assumptions made in using the 95% available energy factors. The 5% reduction is the result of almost 20 days of GREC being unavailable due to longer outages and loss of payments during ramp up and shut downs. The issue of annual outages and being paid lower available energy charges during ramp ups are the core to the arbitration and the withholding of funds.</p> <p>GRU management does recognize that the \$ 750 million is close to the net present value of what GREC would expect to recover during the course of operating under the PPA. That is why both GRU and GREC are highly incented to close the transaction.</p>

APPENDIX A – GRU COMMENTS ON RISK ELEMENTS INCLUDED IN REPORT

RISKS	RATINGS	GRU COMMENTS
<p>j. Plant property will be costly to clean-up after the plant’s useful life</p>	<p>Likelihood: L Impact: H</p>	<p>GRU management believes that the final cleanup costs for the GREC facility are not material expenses and will be mitigated by the value of scrap and materials, however outside independent engineers will be performing due diligence on this and other issues prior to the execution of the contract.</p>
<p>k. GRU customers are will be disgruntled for “rewarding” GREC with a buyout</p>	<p>No impact on objectives</p>	<p>GRU management agrees with City Auditor’s comments.</p>

End Notes

ⁱ <https://thebiomassmonitor.org/2016/02/22/biomass-energy-growing-pains/>

ⁱⁱ <https://www.dallasnews.com/business/energy/2016/11/02/aspens-power-biomass-plant-east-texas-sold-nearly-5m>

ⁱⁱⁱ <https://www.wbdg.org/resources/biomass-electricity-generation>

^{iv} <https://www.treasury.gov/initiatives/recovery/Documents/GUIDANCE.pdf>

^v <http://www.economist.com/news/business/21575771-environmental-lunacy-europe-fuel-future>

^{vi} <http://www.nasdaq.com/markets/lumber.aspx?timeframe=2y>

^{vii} PPA by prior owners of GREC who subsequently failed to obtain funding for construction before selling the PPA to Southern Company

^{viii} <https://austinenergy.com>

^{ix} <http://www.twcnews.com/tx/austin/news/2015/06/23/biomass-plant-in-nacogdoches-costs--4m-a-month.html>

^x Austin Energy’s PPA cost about \$4 million monthly for available energy and has 15 years remaining on the contract.

^{xi} <https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/html/2015-22842.htm>

^{xii} <https://www.epa.gov/Energy-Independence>

^{xiii} <https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/html/2015-22842.htm>

^{xiv} https://www.jea.com/About/Electric_Generation/

^{xv} <http://www.gainesville.com/news/20160623/biomass-plant-ordered-to-pay-46-million-in-damages>

^{xvi} GRU’s estimate of what they would spend to keep the plant in stand-by under Scenario 3 on “Estimated Biomass Operations Costs” Draft 4/03/2017.

END NOTES

^{xvii} https://ycharts.com/indicators/30_year_treasury_rate