City of PALMETTO Florida

City Commission Workshop Meeting

Monday, July 22, 2019 at 4:30 pm

PLEDGE OF PUBLIC CONDUCT

We may disagree, but we will be respectful to one another.

We will direct all comments to issues.

We will avoid personal attacks.

516 8th Avenue West Palmetto, FL 34221

941.723.4570 www.palmettofl.org

COMMISSION MEMBERS

- Shirley Groover Bryant, Mayor
- Tamara Cornwell, Vice Mayor, Commissioner-At-Large 2
- Jonathan Davis, Commissioner-At-Large 1
- Harold Smith, Commissioner, Ward 1
- Tambra Varnadore, Commissioner, Ward 2
- Brian Williams, Commissioner, Ward 3

1. **Florida Power and Light (FPL) Energy Savings Guarantee Agreement (A. Tusing)**

   Attachments:

   - **FPL Energy Savings Guarantee** (FPL.pdf)

2. **FY 2020 Version 1 Budget (J. Freeman)**

   To find a copy of the FY 2020 Version 1 Budget, please copy the following link into your web browser:

http://www.palmettofl.org/170/Financial-Reports

If any person desires to appeal any decision of the City Commission, CRA Board, or of any other Board of the City, that person will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based (FS §286.0105). The City of Palmetto does not discriminate on the basis of race, color, national origin, sex, religion, age, marital status or handicapped status in employment or in the provision of services. Handicapped individuals may receive special accommodation in services on forty-eight hours' notice (FS §286.26). Anyone requiring reasonable accommodation for this meeting as provided for in the American with Disabilities Act should contact the City Clerk by telephone at 941-723-4570, fax 941-723-4576 or e-mail jfreeman@palmettofl.org or alarowe@palmettofl.org.

POSTED: July 17, 2019

Contact: Amber LaRowe (alarowe@palmettofl.org 941.723.4570) | Published on 07/17/2019 at 2:18 PM

ENERGY SAVINGS GUARANTEE

FPL SERVICES, LLC, herein after referred to as "The COMPANY", guarantees that, during each Guarantee Report period during the Savings Guarantee Term, the Equipment shall be capable of producing Annual Energy Cost Savings (defined below) in an amount equal to or greater than Annual Guaranteed Savings (defined below) for such annual period, subject to the OWNER's, herein after referred to as "OWNER", operation of the Equipment per the Operating Plan, adjustments which the COMPANY is entitled to make per the terms of this Savings Guarantee, and all other terms of this Savings Guarantee.

This Savings Guarantee only applies to the designated Equipment specified in this Savings Guarantee. Attachments and Exhibits to this Savings Guarantee are incorporated by reference.

SECTION 1. BASIC REQUIREMENTS OF THIS SAVINGS GUARANTEE

(A) DEFINITIONS.

Initially capitalized terms in this Savings Guarantee have the meaning described in Section 2, and in the absence of such definition, as the context reasonably requires.

(B) OWNER CONTROLLED VARIABLES AND OPERATING PLAN

(1) For purposes of this Savings Guarantee, the OWNER represents, warrants, and agrees to operate the Equipment as required in the Operating Plan, to properly maintain (and replace, when necessary) the Equipment, to protect against and replace in the event of any casualty, and not to undertake any Changes which would adversely affect or reduce the Annual Energy Cost Savings.

(2) In the event of any failure of the OWNER to operate per the Operating Plan or in the event of any Changes, the OWNER agrees to notify the COMPANY in writing within five (5) business days of any actual, anticipated, or intended variation from the Operating Plan or other Changes, whether before Substantial Completion or during the Savings Guarantee Term, which could impact any facility or Equipment to which this Savings Guarantee applies. Upon receipt of such a notice, or in any event if the COMPANY independently learns of any such Changes, COMPANY shall be entitled to adjust the Annual Energy Cost Savings to reflect Annual Energy Cost Savings to exclude any adverse impact of any such Changes.

(3) Subject to the COMPANY preparing and submitting the annual Guarantee Report to the OWNER (with adjustments as described in this Savings Guarantee), this Savings Guarantee is based upon M&V Option A as detailed in this Guarantee.

(C) UNDERSTANDING UTILITY BILLS

(1) This Savings Guarantee and the Annual Energy Cost Savings in any Guarantee Report is not a representation, guarantee, or warranty that the actual dollar amount of utility bills of the OWNER will be reduced or lower than before, as so many other factors affect utility bills. This is only a guarantee that the Annual Energy Cost Savings will meet or exceed the Annual Guaranteed Savings during each respective annual measurement period during the Savings Guarantee Term if the Equipment is operated as required by the Operating Plan. As the OWNER has sole custody and control over the Equipment and any Changes, the COMPANY is permitted to adjust the Annual Energy Cost Savings so that the impact of any Changes are not attributed against COMPANY and so that the Annual Energy Cost Savings calculation is not adversely affected by Changes.

(2) Cost savings, and actual utility bills, are two completely different concepts. Actual utility bills can be affected by many different reasons in the sole control of the OWNER, such as the OWNER changes in building occupancy, hours or times of day of use, the way that Equipment (or equipment not installed by the COMPANY) is operated (hours, load level, environmental conditions, etc.), and maintenance. Actual utility bills can also be affected by increases in utility rates and government imposed taxes.

(3) This Savings Guarantee and any achievement of the Annual Guaranteed Savings does not directly represent nor depend upon the OWNER actual utility bills, and is not a guarantee of a lower utility bill in terms of absolute dollars.

(D) SAVINGS DETERMINATION METHODOLOGY

(1) The 2015 Federal Energy Management Program (FEMP) M&V Guidelines Version 4.0 and 2012 International Performance Measurement and Verification Protocol ("IPMVP") are voluntary consensus documents written by and for technical, procurement and financial personnel in government, commerce, and industry. The FEMP M&V Guideline and IPMVP provide an overview of current measurement & verification (M&V) techniques and set the framework for verifying third-party-financed energy projects for public (including Federal) and private-sector projects. They dictate that energy (or water) savings are determined by comparing the energy (or water) use associated with a facility or certain systems within a facility before and after the installation of an energy conservation measure (ECM) or other measure. The "before" case is called the baseline. The "after" case is called the post-installation, or performance, period. Baseline and post-installation energy use measurements or estimates can be constructed using the methods associated with M&V Options as described in these guidelines. The challenge of M&V is to balance M&V costs, accuracy, and repeatability with the value of the ECM(s) or systems being evaluated, and to increase the potential for greater savings by careful monitoring and reporting. Therefore, the Protocol recommends Option A (Retrofit Isolation: Key Parameter Measurement) for the measured savings portion or non-stipulated/non-calculated portion. Attachment 7 contains a detailed summary of verification methods.

(2) THE ANNUAL GUARANTEE REPORT. Commencing upon the anniversary of the Final Acceptance Date, and upon each anniversary thereafter occurring during the Savings Guarantee Term (subject to a reasonable amount of preparation time for the COMPANY), the COMPANY shall deliver an annual Guarantee Report to the OWNER. Such annual Guarantee Report shall provide the results and supporting information of the COMPANY'S calculation of the Annual Energy Cost Savings and compare the Annual Energy Costs Savings to the Annual Guaranteed Savings.

(3) This savings guarantee has been structured to comply with provisions of F.S 489.145 which provides that the amount of annually guaranteed savings must "... meet or exceed total annual contract payments made by the customer...". Total annual contract payments, as determined by a separate third party finance agreement, are inclusive of all costs associated with this program to include all development and implementation, financing and interest, bonding, and feasibility study costs.

SECTION 2. DEFINITIONS: References in this Savings Guarantee to exhibits or other attachments serves to incorporate by reference such exhibits and other attachments into this Savings Guarantee. The following initial capitalized terms in this Savings Guarantee have the meaning set forth below.

"Agreement" means the Energy Services Agreement entered into between CITY OF PALMETTO, FLORIDA and FPL SERVICES, LLC.

"Annual Energy Cost Savings" means, for each respective annual Guarantee Report period, the total of (1) the Measured Load Reduction times the Contract Utility Rates calculated for such period, plus (2) the Measured Load Shift times the difference between the applicable On Peak Rate Categories and Off Peak Rate Categories, calculated for such period, plus (3) any Calculated Savings for such period.

"Annual Guaranteed Savings" means such level of Annual Energy Cost Savings to be exactly equal to the amount of the regularly scheduled payments to be made by the OWNER for the Equipment under the Agreement for the respective annual Guarantee Report time period, as calculated by the COMPANY.

"Changes" means any deviation, modification, alteration, or change from (1) OWNER operation of the Equipment as required in accordance with the Operating Plan and/or (2) OWNER use or operation of its facilities as observed by the COMPANY at the time of its inspections. Without limitation, changes include any

conditions which may, do, or are reasonably expected to alter the use of any Equipment or to impact the Annual Energy Cost Savings, and include (without limitation) changes in the primary use of any facility covered by this Savings Guarantee, changes to operating hours, levels of use, occupancy, changes to utility suppliers, method of utility billing or utility purchasing, any casualty, loss, destruction of Equipment, any changes to the Equipment or any facility, any failure to adequately or properly maintain Equipment. For purposes of clarity, conditions that are deemed to be Changes need not be specifically identified as an underlying assumption or baseline by COMPANY.

"Contract Utility Rates" means the rates set forth in Attachment 2 (applicable for the entire Savings Guarantee Term). The rates shall be the prevailing utility rates plus all surcharges and taxes in effect and applicable to the OWNER as in effect on the date of this Guarantee.

"COMPANY" has the meaning in the Agreement, FPL SERVICES, LLC.

"Equipment" means the Load Reduction Equipment and the Load Shift Equipment.

"Final Acceptance Date" means the date that the COMPANY and the OWNER designate all work associated with the Equipment/Project is complete.

"Guarantee Report" means the respective annual report issued by the COMPANY to the OWNER, during each calendar year anniversary occurring during the Savings Guarantee Term which provides the results and supporting information of the COMPANY'S calculation of the Annual Guaranteed Savings, conducted per the Post Installation Measurement(s), and as adjusted by the COMPANY in accordance with this Savings Guarantee.

"Load Reduction Equipment" means those items of Equipment, which are to achieve load reduction as designated by the COMPANY in the Guarantee Report.

"Load Shift Equipment" means those items of Equipment, which are to achieve load shift as designated by the COMPANY in the Guarantee Report.

"Measured Load Reduction" means the difference between the OWNER electric energy load from (A) the pre-existing equipment which was retrofitted and/or replaced by the COMPANY with the Load Reduction Equipment, and (B) the greater of (1) OWNER actual use of the Load Reduction Equipment or (2) the agreed upon level of use of the Load Reduction Equipment in accordance with the Operating Plan.

"Measured Load Shift" means the amount of the OWNER electric energy load shifted from (A) the use of non-Load Shift Equipment (identified at the time of the Pre-Installation Measurement) during the On Peak Rate Categories to (B) the greater of (1) OWNER actual use of the Load Shift Equipment or (2) the agreed upon level of use of the Load Shift Equipment in accordance with the Operating Plan.

"Measured Savings" means (1) the Measured Load Reduction times the Contract Utility Rates calculated for such period, plus (2) the Measured Load Shift times the difference between the applicable On Peak Rate Categories and Off Peak Rate Categories, calculated for such period.

"Off Peak Rate Categories" means the lower of (1) any applicable off peak rate categories or non-prime rate categories of the utility providing service to the OWNER as in effect on the date of the Agreement, or (2) any applicable off peak rate categories or non-prime rate categories of the utility providing service to the OWNER as in effect on the date of the COMPANY'S delivery of the respective annual Guarantee Report to the OWNER. The COMPANY'S calculation of the Off Peak Rate Categories shall include and be based upon a calculated and imputed escalation rate set forth in the Exhibits to this Savings Guarantee, which the COMPANY and the OWNER agree to be a reasonable rate of historic increase for purposes of calculating this Savings Guarantee (and for no other purpose).

"On Peak Rate Categories" means the greater of (1) any applicable on peak rate categories or prime rate categories of the utility providing service to the OWNER as in effect on the date of the Agreement, plus all surcharges and taxes applicable thereto, or (2) any applicable peak rate categories or prime rate categories of the utility providing service to the OWNER as in effect on the date of the COMPANY'S delivery of the respective annual Guarantee Report to the OWNER, plus all surcharges and taxes applicable thereto. The COMPANY'S calculation of the On Peak Rate Categories shall include and be based upon a calculated and imputed escalation rate set forth in the Exhibits to this Savings Guarantee, which the COMPANY and the OWNER agree to be a reasonable rate of historic increase for purposes of calculating this Savings Guarantee (and for no other purpose).

"Operating Plan" shall mean the OWNER operation of the Equipment in accordance with the operating plan in Attachment 1 which is incorporated by reference, including but not limited to the committed level and hours of use by the OWNER of the Load Reduction Equipment and the Load Shift Equipment as listed in the Operating Plan.

"Owner" has the meaning in the agreement, City of Palmetto, Florida.

"Savings Guarantee" means this Savings Guarantee and all of its terms and conditions.

"Savings Guarantee Term" means the time period during which the OWNER is making regularly scheduled payments under the Agreement for the Equipment specified in this Savings Guarantee (and not any other equipment which may be covered by the Agreement), provided however, that notwithstanding such longer payment period under the terms of the Agreement, the Savings Guarantee Term shall not exceed twelve (12) years from the date of final acceptance by the County.

"Stipulated or Calculated Savings" means those additional savings associated with the Equipment which the OWNER and COMPANY have mutually agreed upon as being realized by the OWNER as set forth in the Operating Plan or other exhibits/attachments to this Savings Guarantee, including but not limited to Attachment 3. Stipulated (or calculated) Savings do not need to be measured or monitored, and are not subject to verification in the Post Installation Measurement. By example, Calculated Savings may consist of maintenance cost savings or other savings, which are difficult to measure or monitor on an ongoing basis.

"Substantial Completion" means the date that the COMPANY designates the Equipment as substantially installed and available for operation and use by the OWNER, excluding minor punch list items which do not affect the use or operation of the Equipment as a whole.

SECTION 3. SAVINGS GUARANTEE

Subject to all terms of this Savings Guarantee, during the Savings Guarantee Term the COMPANY guarantees that, for each annual Guarantee Report period, the Equipment shall, if operated in accordance with the Operating Plan, produce Annual Energy Cost Savings in an amount equal to or greater than Annual Guaranteed Savings for such annual period.

All of the COMPANY'S obligations under this Savings Guarantee, as to each time period covered by each annual Guarantee Report, shall be deemed fully satisfied and performed (A) upon presentation to the OWNER of the annual Guarantee Report which indicates that the Annual Energy Cost Savings meets or exceeds the Annual Guaranteed Savings for such respective annual period, or (B) when payment is made, if required, pursuant to the sole and exclusive remedy described in Section 5(B) of this Savings Guarantee. Thereafter, during any annual measurement period, the COMPANY shall not be further obligated to monitor, measure, extrapolate, or prove any Annual Energy Cost Savings for that or any prior time period.

SECTION 4. THE ANNUAL GUARANTEE REPORT PROCEDURE

(A) The Annual Energy Cost Savings shall be determined by the COMPANY in an annual Guarantee Report and based upon the COMPANY'S baseline calculations as described in Attachment 6 and

subject to adjustments by the COMPANY for any Changes. Within ninety (90) days following the first anniversary of the final acceptance and each anniversary thereafter during the Savings Guarantee Term, the COMPANY shall apply current data to update any necessary baseline calculations for the Changes and provide the OWNER with a copy of the respective annual Guarantee Report for that annual time period. The COMPANY'S updated calculations shall be in accordance with this Savings Guarantee, and to the extent of calculating and adjusting for any Changes, shall be in accordance with trade industry standards and practices, and the COMPANY'S updated calculations (including but not limited to adjustments for Changes) shall be final and conclusive. The OWNER shall retain the right to review and approve, which approval shall not be unreasonably withheld, the data collection process, and the data to be used in updating the baseline calculations. Such review may be conducted by a qualified, independent contractor selected by the OWNER, and approved by the COMPANY.

(B) In connection with each annual Guarantee Report, the COMPANY may also conduct a brief energy audit inspection of the OWNER facilities. This shall enable the COMPANY to determine what types of Changes the OWNER has made to its facility, business, or operations (including, but not limited to, Changes).

(C) If a Guarantee Report indicates that the respective Annual Energy Cost Savings for the then current annual Guarantee Report period is at least equal to the Annual Guaranteed Savings amount for such annual period, then the COMPANY shall be deemed to have achieved and performed the Savings Guarantee for such annual period and shall not have any further obligation under this Savings Guarantee for such annual period or any prior annual period, and shall not be obligated to take any further action until the next scheduled annual Guarantee Report period.

(D) In the event of the OWNER removal, destruction, substitution, modification, or other alteration of the Equipment, any Changes, or the OWNER failure to operate the Equipment for the hours or at the levels set forth in the Agreement or this Savings Guarantee (including, but not limited to, Changes), the COMPANY may adjust the Annual Energy Cost Savings to reflect savings as if the OWNER had not made any such Changes and as if the OWNER had continued to operate the Equipment in accordance with the Operating Plan, and this adjustment shall apply for all purposes of the Guarantee Report and calculation of the Annual Energy Cost Savings and satisfaction of this Savings Guarantee.

SECTION 5. EXCLUSIVE REMEDIES OF OWNER

(A) Prior to delivery of any annual Guarantee Report, in the event that such Guarantee Report would indicate that the Equipment will otherwise fail to produce Annual Energy Cost Savings in an amount at least equal to the Annual Guaranteed Savings for such annual period (and such situation is not caused by the OWNER failure to operate the Equipment per this Savings Guarantee), the COMPANY may, on one or more occasions, take action to cause the Annual Energy Cost Savings to equal or exceed the Annual Guaranteed Savings, including but not limited to fine tuning of Equipment, the addition of implementation methods, operation methods, or energy conservation measures which increase the Annual Energy Cost Savings. In any such remedy case, the COMPANY shall provide the OWNER with notice of any such activity including an annual Guarantee Report, which will provide the appropriate details. Any such action shall not adversely impact facility operations nor impede on normal facility functionality.

(B) The COMPANY may take all other actions to help the Annual Energy Cost Savings equal or exceed the Annual Guaranteed Savings, including but not limited to the addition of implementation methods, operation methods, or energy conservation measures which increase the Annual Energy Cost Savings. The OWNER shall have the right to review and approve, which approval shall not be unreasonably withheld, any such action to ensure that they do not adversely impact facility operations nor impede on normal facility functionality.

(C) If, after taking the actions described above (which the COMPANY shall describe to the OWNER in the Guarantee Report) and performing any follow up which the COMPANY deems necessary, such Guarantee Report still indicates that the Annual Energy Cost Savings in such Guarantee Report is not at least

equal to the Annual Guaranteed Savings amount for such annual period, then the COMPANY shall pay to the OWNER an amount equal to the difference for such respective annual period between the Annual Guaranteed Savings amount and the Annual Energy Cost Savings in such annual Guarantee Report. This shall only be for the then current annual Guarantee Report and shall not affect any prior or any future annual Guarantee Report. The OWNER agrees not to offset, deduct, set-off, withhold, or delay any payment due under the Agreement. This is the OWNER sole and exclusive remedy under this Savings Guarantee, and no other rights or remedies are granted.

SECTION 6. EXCLUSIONS AND LIMITATIONS

(A) THE SOLE AND EXCLUSIVE REMEDY OF THE CITY OF PALMETTO UNDER THIS SAVINGS GUARANTEE IS SPECIFICALLY STATED ABOVE. EXCEPT AS SET FORTH ABOVE IN THIS SAVINGS GUARANTEE, THE COMPANY HAS NOT MADE AND DOES NOT HEREBY MAKE ANY WARRANTY, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING WITHOUT LIMITATION, THE CONDITION, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY EQUIPMENT OR THE REDUCTION IN THE OWNER ENERGY USAGE AS A RESULT OF THE INSTALLATION AND OPERATION OF ANY EQUIPMENT.

(B) THE COMPANY SHALL NOT BE RESPONSIBLE FOR INCIDENTAL, INDIRECT, PUNITIVE, OR CONSEQUENTIAL DAMAGES, INCLUDING BUT WITHOUT LIMITATION, PROPERTY DAMAGE RESULTING FROM, OR RELATED TO THE AGREEMENT OR THE EQUIPMENT (INCLUDING BUT NOT LIMITED TO THE MALFUNCTION OR MISOPERATION THEREOF), BODILY INJURY, MENTAL ANGUISH, MENTAL INJURY OR DISEASE, LOSS OF PROFITS, AND GOODWILL, REGARDLESS OF THE CAUSE OR BASIS OF SUCH ACTION, WHETHER IN STRICT LIABILITY, CONTRACT, TORT, OR OTHERWISE.

IN WITNESS WHEREOF, and intending to be legally bound, the parties hereto subscribe their names to this Contract by their duly authorized officers on the date first above written.

FPL SERVICES, LLC

By: _____

Name: Troy W. Rice

Title: Vice President and General Manager

Authorized By the Customer:

ATTEST:

BY:_____

Title:

CITY OF PALMETTO

By: _____

Name:

Title:

APPROVED AS TO FORM:

City of Palmetto Attorney

By: _____

Name:

Title:

ATTACHMENT 1

Multiple copies of this document shall be provided for each facility/area for which different occupancy information applies.

ANNUAL LIGHTING HOURS

Facility	Average Hours of Operation
City Hall	3,277
Public Works	3,565
Public Works - Central Stores & Shed	3,087
Waste Water Treatment Plant	3,994

HVAC OPERATING PARAMETERS

Facility	HVAC On/ Off Time		HVAC Occupied Set Point	HVAC Unoccupied Set Point
	On	Off	°F Set Point (Cooling/Heating)	°F Set Point (Cooling/Heating)
City Hall	24 Hours	0 Hours	72/69	76/65

ATTACHMENT 2

Contract Utility Rates

The Contract Utility Rates for first year during the Savings Guarantee Term are set forth below and shall be used for all calculations made under this Agreement.

Electric Rates

Facility	Address	$/kWh (blended on-peak/off-peak)	$/kWh (on-peak)	$/kWh (off-peak)	$/kWh (blended overall)	$/kWd
Public Works	601 17th St West	**$0.0552**	N/A	N/A	**$0.0978**	**$12.21**
Public Works (Storage Bldg)	601 17th St West	**$0.1110**	N/A	N/A	**$0.1150**	**$0.00**
City Hall	516 8th Ave West	**$0.0554**	N/A	N/A	**$0.1009**	**$12.24**
Waste Water Treatment Plant	1310 28th Ave West	**$0.0524**	$0.0852	$0.0416	**$0.0744**	**$11.92**

Water/Sewer Rates

Building Name	Water Rate ($/kGal)	Sewer Rate ($/kGal)	Total Water/Sewer Rate ($/kGal)	Provider
City Hall	$7.03	$3.98	$11.01	City of Palmetto
Public Works	$7.03	$3.98	$11.01	City of Palmetto
Wastewater Treatment Plant	$7.03	$3.98	$11.01	City of Palmetto

ATTACHMENT 2-A

% Utility Rates Escalation Rates (these are historical averages used for developing savings estimates only and are not binding as it pertains to this Guarantee)

Year	Electricity/ Gas	Water	Materials/Capital Avoidance
1	0%	0%	0%
2	3%	3%	0%
3	3%	3%	0%
4	3%	3%	0%
5	3%	3%	0%
6	3%	3%	0%
7	3%	3%	0%
8	3%	3%	0%
9	3%	3%	0%
10	3%	3%	0%
11	3%	3%	0%
12	3%	3%	0%

The rates set forth above shall be based upon a compounding of the immediately preceding year's escalated rate (i.e. compounded escalation annually).

ATTACHMENT 3

DESCRIPTION OF CALCULATED SAVINGS

Lighting Material Savings (ECM-1)

Lighting material calculated savings and the associated assumptions are provided for each facility in the report titled, "City of Palmetto IGA". This report is incorporated into this Guarantee Document.

HVAC Savings due to Lighting Reduction (ECM-1)

HVAC calculated savings due to lighting and the associated assumptions are provided for each facility in the report titled, "City of Palmetto IGA". This report is incorporated into this Guarantee Document.

Window Replacement (ECM-5)

Window replacement calculated savings and the associated assumptions are provided for each facility in the report titled, "City of Palmetto IGA". This report is incorporated into this Guarantee Document.

LT-1 Rate Change (ECM-6)

LT-1 rate change calculated savings and the associated assumptions are provided for each facility in the report titled, "City of Palmetto IGA". This report is incorporated into this Guarantee Document.

Capital Avoidance

Capital avoidance calculated savings and the associated assumptions are provided for each facility in the report titled, "City of Palmetto IGA". This report is incorporated into this Guarantee Document.

SUMMARY OF CALCULATED SAVINGS

The savings identified below shall be Calculated Savings which are mutually agreed by OWNER and the COMPANY, but will not be specifically measured. The Calculated Savings shall be deemed to increase during each year of the Savings Guarantee Term by the annual escalation percentages set forth below, with such escalation being annually compounded upon the immediately preceding year escalated rate.

Source of Savings	First Year Savings (non – escalated)	Annual Escalation
LIGHTING MATERIAL SAVINGS (ECM-1)	$2,535	0% (Yrs 1-5)
HVAC SAVINGS DUE TO LIGHTING REDUCTION (ECM-1)	$401	0% (1st yr), 3% (Yrs 2 -12)
WINDOW REPLACEMENT SAVINGS	$348	0% (1st yr), 3% (Yrs 2 -12)
LT-1 RATE CHANGE SAVINGS	$5,155	0% (1st yr), 3% (Yrs 2 -12)
CAPITAL AVOIDANCE	$6,726	0% (Yrs 1 - 5)
TOTAL CALCULATED SAVINGS	$15,165	N/A

ATTACHMENT 4

Measure Specific Lighting Savings (ECM-1)

Per Option A, Pre/Post construction spot measurements with post spot measurements in years 3, 6, 9, and 12 will be taken of a representative sample of fixtures to establish energy consumption for the lighting. These measurements will be accomplished through the use of hand held meters and/or mounting of temporary meters (by FPL SERVICES, LLC). Run hours are hereby stipulated. The results will be used to prorate the calculated savings, thus determining the adjustment (+/-), to be used in the comparison with the Guaranteed Savings.

Equations for Calculating Lighting Energy and Demand Savings

To determine estimates of energy savings for lighting efficiency projects use the following equation:

$$kWh\ Savings_t = \sum_u [(kW/Fixture_{baseline} \times Quantity_{baseline} - kW/Fixture_{post} \times Quantity_{post}) \times Hours\ of\ Operation]_{t,u}$$

where:

KWh Savings =	kilowatt-hour savings realized during the post-installation time period *t*
$KW/fixture_{baseline}$ =	lighting baseline demand per fixture for usage group *u*
$kW/fixture_{post}$ =	lighting demand per fixture during post-installation period for usage group *u*
$Quantity_{baseline}$ =	quantity of affected fixtures before the lighting retrofit for usage group *u,* adjusted for inoperative and nonoperative lighting fixtures
$Quantity_{post}$ =	quantity of affected fixtures after the lighting retrofit for usage group *u*
Hours of Operation =	number of operating hours during the time period *t* for the usage group *u*, assuming operating hours are the same before and after measure installation

Demand

Demand savings can be calculated as either an average reduction in demand or as a maximum reduction in demand.

Average reduction in demand is generally easier to calculate. It is defined as kWh savings during the time period in question (e.g. utility summer peak period) divided by the hours in the time period.

Maximum demand reduction with respect to cost savings, is typically the reduction in utility meter maximum demand under the terms and conditions specified by the servicing utility. For peak load reduction, for example, the maximum demand reduction may be defined as the maximum kW reduction averaged over 30-minute intervals during the utility's summer peak period. The maximum demand reduction is usually calculated to determine savings in utility peak demand charges.

Annual Reconciliation

The annual reconciliation is based on the difference between guaranteed savings and measured savings extrapolated from representative measured sampling. Excess savings will be left to OWNER. A shortfall in any given year would be funded by FPL SERVICES, LLC to the OWNER. Option A will be used for Measurement and Verification.

Sample Lighting Savings Calculation
Monthly Kilowatt Demand X Monthly Kilowatt Demand Rate X 12 Months =
Annual Kilowatt Demand Savings

Annual Kilowatt-hours X Kilowatt-hour rate = Annual Kilowatt-hour Savings

Annual Kilowatt Demand Savings + Annual Kilowatt-hour Savings = Total Annual Savings

Example Calculation (City Hall):

4.91 kW x $12.24/kW x 12 months = $721.18

13,527.89 kWh x $0.0554/kWh = $749.45

$721.18 + $749.45 = $1,470.63

Total Savings $1,470.63 (City Hall)

Total Lighting Savings for all locations: $11,528

Measured Adjusted Savings Calculation:
Percentage of Measured Values vs. Calculated Values x Total guaranteed Savings = Excess Savings or Shortfall in Savings

Measure Specific Water Conservation Savings (ECM-3)

Per Option A, Pre/Post construction spot measurements with post spot measurements in years 3, 6, 9, and 12 will be taken to establish water consumption for a representative sample of water closets, showerheads, and faucets. These measurements will be accomplished through the use of a calibrated bucket and/or bag. The results will be used to prorate the calculated savings, thus determining the adjustment (+/-), to be used in the comparison with the Guaranteed Savings.

Equations for Calculating Water Savings

To determine estimates of water savings use the following equation:

$$Gallons\ Savings_t = \sum_u [(Gal/Flush_{baseline} \times Quantity_{baseline} - Gal/Flush_{post} \times Quantity_{post}) \times Number\ of\ Occupants]_{t,u}$$

where:

Gallons Savings = gallon savings realized during the post-installation time period *t*

$Gal/Flush_{baseline}$ = Gallons baseline per flush for usage group *u*

$Gal/Flush_{post}$ = Gallons per flush during post-installation period for usage group *u*

$Quantity_{baseline}$ =	quantity of affected fixtures before the water conservation retrofit for usage group *u* and the number of flushes
$Quantity_{post}$ =	quantity of affected fixtures post water conservation retrofit for usage group *u* and the number of flushes
Number of Occupants =	number of people during the time period *t* for the usage group *u*, assuming number of people are the same before and after measure installation

The Measured First Year Water Conservation Savings for all Facilities = $439. Savings will be measured/verified as stated above and converted to savings by applying the flow measurements, water and sewer consumption rates, the usage rates and individual facility occupancy as stated in the Reports. The usage rates and occupancy are hereby stipulated.

Option A – Measure Specific for HVAC DX Replacement (ECM-4)

Per Option A, the general approach to determine energy savings involves comparing the energy usage associated with a facility or certain systems within a facility, before installation of the ECM (baseline) and after installation of the ECM (post-installation). For the HVAC DX unit, temperature and humidity spot measurements will be taken pre/post construction with post spot measurements in years 3, 6, 9, and 12 to calculate the cooling output of the RTU. Airflow will be stipulated based on manufacturer's data or TAB results. Input power will be measured to calculate the efficiency of the unit. Ton-hours are hereby stipulated.

Therefore:

Energy savings = (baseline energy use) – (post-installation energy use)

Electric Demand Savings Demand or capacity saved (kW_{saved}) is computed by subtracting the demand required post-implementation by each item of ECM (kW_{post}) (and further subject to the Operating Plan requirements), from the demand required pre-implementation (kW_{pre}) by the original equipment. The general formula is shown below.

$$kW_{saved} = (kW_{pre}) - (kW_{post})$$

Electric Energy Savings Electric energy saved (kWh_{saved}) is computed by taking the difference between the demand requirement measured for both pre- and post-implementation conditions. The formula is shown below.

$$kWh_{saved} = (kWh_{pre}) - (kWh_{post})$$

Electric Dollar Savings Dollar savings are computed by applying the applicable Contract Utility Rates (see definition of this term).

HVAC DX Replacement Savings:

FACILITY/ECM	Energy/ Demand Rate	Measured Savings ($)
City of Palmetto City Hall	Per Attach 2	$754

Note: Savings represent the non-escalated savings amount.

ATTACHMENT 5

Annual Guaranteed Savings Allocation

Savings Guarantee Term Year	Measured Savings	Calculated Savings	Annual Guaranteed Energy Cost Savings
1	$12,721	$15,165	$27,886
2	$13,103	$15,342	$28,445
3	$13,496	$15,525	$29,021
4	$13,901	$15,712	$29,613
5	$14,318	$15,906	$30,224
6	$14,747	$6,845	$21,592
7	$15,190	$7,049	$22,239
8	$15,645	$7,261	$22,906
9	$16,115	$7,479	$23,594
10	$16,598	$7,704	$24,302
11	$17,096	$7,935	$25,031
12	$17,609	$8,172	$25,781
TOTAL	$180,538	$130,095	$310,634

ATTACHMENT 6

Guarantee Report

Within ninety (90) days following the final acceptance and each anniversary thereafter during the Savings Guarantee Term, the COMPANY shall provide the Guarantee Report to OWNER. In the Guarantee Report, the COMPANY shall calculate the Annual Energy Cost Savings and shall report to OWNER such amount (and shall detail any excess savings where the Annual Energy Cost Savings exceed the Annual Guaranteed Savings) during the preceding year.

Annual Guaranteed and Excess Savings Allocation

Savings Guarantee Term Year	Measured Savings	Calculated Savings	Actual Savings	Annual Guaranteed Energy Cost Savings	Excess Savings
1		$15,165		$27,886	%
2		$15,342		$28,445	%
3		$15,525		$29,021	%
4		$15,712		$29,613	%
5		$15,906		$30,224	%
6		$6,845		$21,592	%
7		$7,049		$22,239	%
8		$7,261		$22,906	%
9		$7,479		$23,594	%
10		$7,704		$24,302	%
11		$7,935		$25,031	%
12		$8,172		$25,781	%
Totals		$130,095		$310,634	

ATTACHMENT 7

Summary of Measurement and Verification Options

All the methods in the FEMP/IPMVP Guideline for determining savings are based on the same concept; namely, those energy savings are derived by comparing energy usage after a retrofit to the baseline. It is relatively easy to measure post-retrofit consumption; however, it is impossible to "measure" what the energy usage would be without the retrofit. Therefore, it is impossible to "measure" energy savings.

Energy savings can only be determined based on assumptions about the baseline. Four options are provided to determine energy savings. A particular option is chosen based on the on project-specific features of each performance contract.

The options differ in their approach to the level and duration of the retrofit verification measurements. For instance, Options A and B both apply at the system or ECM level, while Option C uses measurements taken at the whole-building, or whole-facility, level. Option A involves short-term measurements, while Options B and C use short term and/or continuous or regular interval measurements during the term of the contract. Option D involves computer simulation techniques.

Each option has advantages and disadvantages based on site-specific factors.
The four options are described in the table below.

Overview of M&V Options (from the FEMP/IPMVP)

M&V option	How savings are calculated	Typical Applications
A. Retrofit Isolation: Key Parameter Measurement Savings are determined by field measurement of the key performance parameter(s) which define the energy use of the system(s) and/or success of the project. Measurement frequency ranges from short-term to continuous, depending on the expected variations in the measurement parameter and the length of the reporting period. Parameters not selected for field measurement are estimated. Estimates can be based on historical data, manufacturer's specifications, or engineering judgment. Documentation of the source or justification of the estimated parameter is required. The plausible savings error arising from estimation rather than measurement is evaluated.	Engineering calculation of baseline and reporting period energy from: • Short term or continuous measurements of key parameter(s); and • Estimated values.	Lighting retrofit where power draw is the key performance parameter that is measured periodically. Estimate operating hours of the lights based on building schedules and occupant behavior.

M&V option	How savings are calculated	Typical Applications
B. Retrofit Isolation: All Parameter Measurement Savings are determined by field measurement of the energy use of the ECM-affected system. Measurement frequency ranges from short term to continuous, depending on the expected variations in the savings and the length of the reporting period.	Short-term or continuous measurements of the baseline and reporting period energy, and/or engineering computations using measurements of proxies of energy use. Routine and non-routine adjustments as required.	Application of a variable-speed drive and controls to a motor to adjust pump flow. Measure electric power with a KW meter installed on the electrical supply to the motor, which reads the power every minute. In the baseline period this meter is in place for a week to verify constant loading. The meter is in place throughout the reporting period to track variations in power use.
C. Whole Facility Savings are determined by measuring energy use at the whole facility or sub-facility level. Continuous measurements of the entire facility's energy use are taken throughout the reporting period.	Analysis of whole facility baseline and reporting period (utility) meter data. Routine adjustments as required, using techniques such as simple comparison or regression analysis. Non-routine adjustments as required.	Multifaceted energy management program affecting many systems in a facility. Energy use is measured by the gas and electric utility meters for a twelve month baseline period and throughout the reporting period.
D. Calibrated Simulation Savings are determined through simulation of the energy use of the whole facility, or of a sub-facility. Simulation routines are demonstrated to adequately model actual energy performance measured in the facility. This option usually requires considerable skill in calibrated simulation.	Energy use simulation, calibrated with hourly or monthly utility billing data. (Energy end use metering may be used to help refine input data.)	Multifaceted energy management program affecting many systems in a facility where no meter existed in the baseline period. Energy use measurements, after installation of gas and electric meters, are used to calibrate a simulation. Baseline energy use, determined using the calibrated simulation, is compared to a simulation of reporting period energy use.

Option A – Retrofit Isolation with Key Parameter Measurement

M & V Option A involves a retrofit or system level M & V assessment. The approach is intended for retrofits where key performance factors (e.g., end-use capacity, demand, power) or operational factors (e.g., lighting operational hours, cooling ton-hours) can be spot or short term-measured during the baseline and post installation periods. Any factor not measured is estimated based on assumptions, analysis of historical data, or manufacturer's data.

All end use technologies can be verified using Option A. However, the accuracy of this option is generally inversely proportional to the complexity of the measure. Thus, the savings from a simple lighting retrofit will typically be more accurately estimated with Option A than the savings from a more complicated retrofit. Properly applied, an Option A approach:

- Ensures that baseline conditions have been properly defined
- Confirms that the proper equipment/systems were installed and that they have the potential to generate savings
- Verifies that the installed equipment/systems continue to have the capacity to yield the predicted savings during the term of the contract

Option A is an approach designed for projects in which the potential to generate savings must be verified, but the actual savings can be determined from short term measurements, estimates, and engineering calculations. Performance period energy use is not measured throughout the term of the contract. Performance period energy use and baseline energy use are predicted using an engineering or statistical analysis of information that does not involve long term measurements.

With Option A, savings are determined by measuring the key parameters such as capacity, efficiency, or operation of a system before and after retrofit. Using estimates is the easiest and least expensive method of determining savings, but improperly applied, can be the most inaccurate. Option A is best suited where a single factor represents a significant portion of the savings uncertainty.

The potential to generate savings may be verified through spot/short term metering and inspections conducted immediately before and immediately after installation. Annual (or some other regular interval) inspections must be conducted to verify that the equipment/systems are performing to specification. If conditions have changed, additional performance period measurements or non-routine adjustments may be appropriate.

Option B – Retrofit Isolation with All Parameter Measurement

M & V Option B is a retrofit isolation or system-level approach. The approach is intended for retrofits with performance factors (e.g., end-use capacity, demand, power) and operational factors (lighting operational hours, cooling ton-hours) that can be measured at the component or system level and where long term performance needs to be verified. It is similar to Option A, but uses periodic or continuous metering of all energy quantities, or all parameters needed to calculate energy, during the performance period. This approach provides greatest accuracy in the calculation of savings, but increases the performance period M & V cost.

The Option B approach ensures the same items as Option A, but also:

- Determines energy savings using periodic or continuous measurement of energy use or all parameters needed to calculate energy use during the term of the contract

Option B verification procedures involve the same items as Option A, but require more end-use metering. Option B relies on physical assessment of equipment change-outs to ensure that the installation is to specification. The potential to generate savings is verified through observations, inspections, and spot/short term/continuous metering of energy or proven proxies of energy use, such as variable frequency drive speed for motor power. Baseline models are typically developed by correlating metered energy use with key independent variables. Depending on the ECM, spot or short term metering may be sufficient to characterize the baseline condition, and the continuous metering of one or more variables may occur after retrofit installation.

Option C – Whole Building Data Analysis

M & V Option C involves whole-facility utility or sub-meter data analysis procedures to verify the performance of retrofit projects in which whole-facility baseline and performance period data are available. Option C usually involves collecting historical whole facility baseline energy use and related data and continuously measuring whole facility energy use after ECM installation. Baseline and periodic inspections of the equipment are also needed. Energy savings under Option C are estimated by developing statistically representative models of whole facility or sub-metered energy consumption (i.e., therms and/or KWh). This method confirms total energy savings, but does not measure the savings from individual components.

In general, Option C should be used with complex equipment replacement and controls projects for which predicted savings are relatively large, i.e., greater than 10% to 20% of the site's energy use on a monthly basis. Option C methods should be employed for projects that meet the following requirements:

- Savings are predicted to be greater than about 10% to 20% of the overall consumption measured by the utility or sub-meter.
- At least 12 and preferably 24 months or more of pre-installation data are used to calculate a baseline model
- At least 9 and preferably 12 months of performance period data are used to calculate annual savings
- Adequate data on independent variables are available to generate an accurate baseline model, and procedures are in place to track the variables required for performance period models
- Significant operational or other changes are not planned for the facility during the performance period, and procedures are in place to document changes that do occur at the site

With Option C, energy savings are determined using whole-building utility meter or facility-level meter data. Savings are determined through analysis of utility data (therms, fuel oil, KW, KWh, etc.) and the independent variables (e.g., weather, occupancy, production rate) that affect energy consumption.

The key elements of an option C approach includes developing an appropriate baseline model which relates the baseline energy use to key independent variables, and continuously measuring the performance period energy use and key independent variables. Savings are often calculated by comparing the energy use predicted by the baseline model using measured conditions with the actual energy use of the performance period. Alternatively, performance period models may be developed if the baseline and performance period models are to be adjusted to typical conditions prior to comparison. Performance period models may also be needed if there is not a full year's worth of data available for the performance period.

One of the challenges in applying Option C is accounting for factors beyond the ECM that affect overall site energy use, such as changes in the square footage or loads. Tracking site changes means accounting for changes in energy use not associated with ECM installation. Adequately tracking the information needed to make these non-routine baseline adjustments can be challenging for long term contracts and sites that have significant operational changes.

Option D – Calibrated Simulation

Option D involves whole facility or system analysis procedures to verify the performance of retrofit projects using calibrated computer simulation models. Computer simulation is a powerful tool that allows an experienced user to model the building and mechanical systems in order to predict building energy use both before and after the installation of ECMs, The accuracy of the model is ensured by using metered site data to describe baseline and/or performance period conditions. Carefully constructed models can provide savings estimates for the individual ECMs on a project. More elaborate models generally improve the accuracy of savings calculations, but increase costs. A calibrated simulation of a building, however, can be utilized to easily evaluate savings from other potential improvements.

Building simulation requires experienced, qualified analysts, and Option D methods should be used only for projects that meet any or all of the following requirements:

- For complex equipment replacement and controls projects with too many ECMs to cost-effectively use retrofit isolation methods A or B
- When interactive effects between ECMs are too complex for retrofit isolation approaches, but need to be quantified
- When the Option C utility data analysis approach is not viable due to the overall level of savings being less than 20% of metered use
- When complex baseline adjustments are expected during the performance period
- When energy savings values per individual measure are desired
- When new construction projects are involved
- When savings levels are sufficient to warrant the cost of simulation
- When either baseline or performance period energy data, but not both, are unavailable or unreliable

Option D is especially useful where a baseline does not exist (e.g., new construction or major building modification) or the factors responsible for savings are not easily measured (e.g., reduced solar gain and heat loss through new windows).

Even for the simplest projects simulation modeling and calibration are time-intensive activities and should be performed by an accomplished building simulation specialist. Calibrated simulation analysis is an expensive M & V procedure, and should be undertaken only on projects that generate enough savings to justify its use.