# **Energy Savings Guarantee and M&V Plan**

# **DEFINITIONS**

When used in this Agreement, the following capitalized words shall have the meanings ascribed to them below:

- "Acceptance of Installation" means an authorized representative of the CLIENT has inspected and accepted that ESG installed Energy Conservation Measures are operational and comply with contract performance requirements and specifications. The CLIENT's acceptance shall not relieve ESG from responsibility for continued compliance with contract requirements during the contract term. The Acceptance of Installation shall occur after Substantial Completion.
- "Approval" means the CLIENT has completed review of submittals, deliverables or administrative documents (e.g., insurance certificates, installation schedules, planned utility interruptions, etc.) and has determined that the documents conform to contract requirements. The CLIENT's approval shall not relieve ESG from responsibility for complying with contract requirements.
- "Baseline Period" is defined as the twelve month period beginning February 1. 2007 and ending January 31, 2008.
- "Energy Baseline" shall be the energy consumption and costs prior to the installation of the energy conservation measures at the facilities. The baseline will consist of all base year energy bills applicable to the meters in the project. It may also consist of any estimated usage for unmetered energy consumption.
- "Energy Conservation Measure (ECM)" is defined as the installation of new equipment/facilities, modification and/or alteration of existing equipment/facilities or rate structures or revised operations and maintenance procedures intended to reduce energy consumption of facilities/energy systems, improve equipment efficiency or provide equipment that complies with existing standards.
- "Energy and Operational Savings" is the sum of the Energy Savings and Operational Savings as defined herein.
- "Energy Costs" shall mean charges for fuel adjustments, base services, transmission, tariffs, and distributions. The Energy Costs will normally be derived or imputed from the facility's utility bills. This method allows for updating savings calculations with changing rate schedules. In the event of a utility rate decrease, the utility rate(s) used to assign dollar cost will not drop below that of the base year.



- "Facilities" shall mean those buildings and equipment from which the energy and operational cost savings will be realized.
- "Final Acceptance Date" shall mean the date all of the ECMs or Measures comprising the Project (as defined in the Agreement) have been delivered, installed, and accepted by the CLIENT.
- "First Guarantee Year" is defined as the period beginning on the first (1st) day of the month following the Final Acceptance Date and ending on the day prior to the first (1st) anniversary thereof.
- **"Guarantee Period"** is defined as the period beginning on the first (1st) day of the First Guarantee Year and ending on the last day of the Term.
- "Guarantee Year" is defined as each of the successive twelve (12) month periods commencing on the anniversary of the commencement of the First Guarantee Year throughout the Term of this Agreement.
- "Guaranteed Savings" is defined as the amount of Energy and Operational Cost Savings.
- "Installation Period" is from the date of award to Substantial Completion.
- "Operational Costs" shall include the costs associated with operating and maintaining the Facilities. Examples include the cost of inside and outside labor to repair and maintain systems and equipment, the cost of replacement parts, the cost of deferred maintenance, the cost of lamp and ballast disposal, and the cost of new capital equipment.
- "Retrofit Isolation Method" (if applicable to this Project) refers to energy audit methodologies that require pre-retrofit and post-retrofit measurements to isolate energy consumption and costs of specific facility equipment and systems impacted exclusively by this Agreement.
- "Term" shall be 13.5 years.
- "Total Guarantee Year Savings" is defined as the amount of Energy and Operational Savings realized by Facilities in each Guarantee Year as a result of the Work.

#### **TERM AND TERMINATION**

The Term of this Guarantee shall commence on the first (1st) day of the first month following the date of Substantial Completion of the Work installed pursuant to this Agreement, unless terminated earlier as provided for herein.

<u>Guarantee</u>: ESG guarantees to the CLIENT that the Facilities will realize in each Guarantee Year savings in Energy and Operational Costs (the "Energy and Operational Savings") collectively equal to the amounts shown on Table A below. At the end of each year ESG will present the CLIENT with an Energy Savings Audit Report within ninety (90) days. If there is a shortfall of the Energy Savings in any year, ESG shall provide settlement within sixty (60) days of the acceptance of the report by the CLIENT.



Savings Report: Within ninety (90) days following the end of each of the Guarantee Years, ESG will provide the CLIENT with an annual report ("Energy Services Guarantee Report"). The CLIENT will assist ESG in generating the Energy Services Guarantee Report by authorizing ESG to contact utility companies directly for true copies of all bills pertaining to Energy Costs and Consumption together with access to the CLIENT's relevant accounting records, and facilities to monitor any installed equipment relating to such Energy Costs, Consumptions, and Savings pertaining to the Energy Guarantee. Data and calculations utilized by ESG in the preparation of its Cost Savings Energy Services Guarantee Report will be made available to the CLIENT, along with such explanations and clarifications as the CLIENT may reasonably request. In the event that ESG is not provided immediate access to utility bills from the Utility, ESG will contact a Representative from the CLIENT to obtain this information. If there is a delay in receiving the information the ninety (90) day period will be reasonably extended to gain said access.

<u>Operational Savings:</u> Operational savings have been reviewed and accepted by the CLIENT and are described in Table A - Savings Guarantee. Operational savings will begin to accrue on the date of completion and acceptance of each ECM.

<u>Additional Savings:</u> ESG may identify other Energy and Operational Savings opportunities during the construction period or during any Guarantee Year. Additional Energy and Operational Savings that can be demonstrated as a result of ESG efforts that result in no additional costs to the CLIENT beyond the costs identified in this Agreement will be included in the annual Energy Services Guarantee Report for the applicable Guarantee Year(s).

<u>Savings Prior to Final Acceptance Date:</u> All Energy and Operational Savings realized by the CLIENT that result from activities undertaken by ESG prior to Final Acceptance Date, including any utility rebates or other incentives earned as a direct result of the installed energy conservation measures provided by ESG, will be applied toward all savings shortfalls before payment is made. Energy savings that are achieved by the upgrades and modifications in the Agreement prior to completion of the entire retrofit project (or construction savings) will be added to the first year actual energy savings amount.

ESG and the CLIENT also agree that if the actual annual energy savings amount exceeds the energy guarantee amount, such excess energy savings amounts will be either:

- Added to the savings for any future year before calculating the savings amount; or
- Billed back to the CLIENT up to any amounts paid by ESG for savings shortfalls in a previous year.

Accumulation of Savings: The Guaranteed Savings in each Guarantee Year are considered satisfied if the Total Guarantee Year Savings for such Guarantee Year equals or exceeds the amount identified and determined as set forth in Section 4.0 – Table A. Energy savings that are achieved by the upgrades and modifications in the Agreement prior to completion of the entire retrofit project (or construction savings) will be added to the first year actual energy savings amount. ESG and the CLIENT also agree that if the actual annual energy savings amount exceeds the energy guarantee amount, such excess energy savings amounts will be either:



- Added to the savings for any future year before calculating the savings amount; or
- Billed back to the CLIENT up to any amounts paid by ESG for savings shortfalls in a previous year

<u>Hours and Practices:</u> To achieve these energy savings, ESG and the CLIENT agree upon the building operating hours listed below:

Facility	Week Days	SAT/SUN	Holidays	
Detention Center	24 hours per day	24 hours per day	24 hours per day	
East Columbia	09:00 to 21:00 <sup>a</sup>	Sat: 09:00 to 18:00	None	
Library		Sun: 13:00 to 17:00		
Central Library	09:00 to 21:00 <sup>a</sup>	Sat: 09:00 to 18:00	None	
Central Library		Sun: 13:00 to 17:00		
Recreation & Parks	07:00 to 17:00	None	None	
HQ				
Scaggsville PSC	24 hours per day	24 hours per day	24 hours per day	
Gateway Building	07:00 to 17:00	None <sup>b</sup>	None	
Dorsey Building <sup>c</sup>	07:00 to 17:00	None	None	

<sup>&</sup>lt;sup>a</sup> Friday is 09:00 to 18:00

Activities and Events Adversely Impacting Savings: The CLIENT shall promptly notify ESG of any activities known to the CLIENT, which adversely impact ESG's ability to realize the Guaranteed Savings. If this type of situation occurs over the Guarantee Period ESG shall be entitled to reduce its Guaranteed Savings, or make necessary adjustments to the energy baseline in order to quantify the changes in the facility. This will allow ESG and the CLIENT to recognize and document any such adverse impact to the extent that such adverse impact is beyond ESG's reasonable control.

#### **SAVINGS GUARANTEE**

ESG guarantees that the Work will result in the following sum of Total Guaranteed Year Savings over the Term as outlined in Table A on the following page:



<sup>&</sup>lt;sup>b</sup> Howard Community College Section is open until 22:00 hours on weekdays and is open 07:00 to 17:00 on Saturdays

<sup>&</sup>lt;sup>c</sup> The sheriff's department and the County Business and Technology Office Center sections are open 24 hours a day

# Table A - Guaranteed Savings

Table A – Total Guaranteed Savings for the Contract Term

		Agreed		Annual	Pł	ase I Annual Phase II Annual			Total																																	
		Upon	(	Option A		Option C Option C		Option C Option C		Option C	Operational		Option C Operational		Annual																											
Year	(	Savings		Savings		Savings	Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings		Savings			Savings		Savings
Construction	\$	48,000	\$	-	\$	-			\$	-	\$	48,000																														
1	\$	-	\$	-	\$	371,910	\$	110,703	\$	5,600	\$	488,213																														
2	\$	-	\$	-	\$	383,067	\$	114,024	\$	5,768	\$	502,860																														
3	\$	-	\$	-	\$	394,559	\$	117,445	\$	5,941	\$	517,945																														
4	\$	-	\$	-	\$	406,396	\$	120,968	\$	6,119	\$	533,484																														
5	\$	-	\$	-	\$	418,588	\$	124,598	\$	6,303	\$	549,488																														
6	\$	-	\$	-	\$	431,146	\$	128,335	\$	6,492	\$	565,973																														
7	\$	-	\$	-	\$	444,080	\$	132,185	\$	6,687	\$	582,952																														
8	\$	-	\$	-	\$	457,402	\$	136,151	\$	6,887	\$	600,441																														
9	\$	-	\$	-	\$	471,124	\$	140,236	\$	7,094	\$	618,454																														
10	\$	-	\$	-	\$	485,258	\$	144,443	\$	7,307	\$	637,008																														
11	\$	-	\$	-	\$	499,816	\$	148,776	\$	7,526	\$	656,118																														
12	\$	-	\$	-	\$	514,810	\$	153,239	\$	7,752	\$	675,801																														
13	\$	-	\$	-	\$	530,255	\$	157,836	\$	7,984	\$	696,075																														
14 <sup>a</sup>	\$	-	\$	-	\$	546,162	\$	81,286	\$	4,112	\$	631,560																														
Totals	\$	48,000	\$	-	\$	6,354,574	\$	1,810,226	\$	91,572	\$	8,304,372																														

<sup>&</sup>lt;sup>a</sup> Only half year values shown



#### **Escalation Rates**

The annual escalation rates listed in the following table are stipulated as part of guaranteed energy and operational savings listed in Table A and for M&V and O&M costs listed in the financial section of the project. ESG and the CLIENT agree to the escalation rates listed below:

Table A-1 – Escalation Rates

Energy Cost Esc./yr	3%
Labor Cost Esc./yr	3%
Maintenance Cost Esc	3%

The actual escalation of calculated savings that will be applied in the M&V Report will be the *highest* of:

- (1) 3% (see Table A-1 above)
- (2) CPI (Consumer Price Index) for the geographical region, or
- (3) Other rate changes that may apply.

The escalation rates include the general inflation rates.

The following is the baseline utility information for the seven buildings.

**Table B-1 – Baseline Energy Use Information** 

**Baseline Utility Summary** 

	Electric	Gas	Oil	Water / S	Sewer <sup>a</sup>
Building	Baseline Energy Use, kWh/yr	Baseline Gas Use therms	Baseline Oil Use gallons	Baseline Water Use, kgal	Baseline Sewer Use, kgal
Detention Center	2,391,300	170,870	-	13,961	13,961
East Columbia Library	1,232,400	18,571	-	1,113	1,113
Central Library	1,440,600	-	-	533	533
Recreation & Parks HQ	818,800	18,189	-	358	358
Scaggsville PSC	1,081,800	-	17,637	340	340
Gateway Building	3,563,700	-	-	2,365	2,365
Dorsey Building	5,447,700	25,404	-	877	877
TOTAL	15,976,300	233,034	17,637	19,547	19,547

a Estimated from partial utility data for all of the buildings except the Gateway building



Table B-2 – Baseline Unit Utility Costs

IGA Baseline Utility Costs											
	Electric Rates			(	Gas		Oil	Water		Sewer	
Facility	\$/kWh \$/kW		\$/therm		\$/gal		\$/kgal		\$/kgal		
Detention Center	\$ 0.1070	\$	2.67	\$	1.40	\$	-	\$	1.62	\$	2.35
Scaggsville PSC	\$ 0.1150	\$	2.67	\$	-	\$	2.00	\$	1.62	\$	2.35
East Columbia Library	\$ 0.1090	\$	2.67	\$	1.40	\$	-	\$	1.62	\$	2.35
Central Library	\$ 0.1080	\$	2.67	\$	-	\$	-	\$	1.62	\$	2.35
Recs & Parks HQ	\$ 0.1080	\$	2.67	\$	1.35	\$	-	\$	1.62	\$	2.35
Dorsey Building	\$ 0.1080	\$	2.67	\$	1.25	\$	-	\$	1.62	\$	2.35
Gateway Building	\$ 0.1070	\$	2.67	\$	-	\$	2.03	\$	1.62	\$	2.35

Adjustments To The Guarantee: The Guaranteed Savings will be adjusted to account for material changes, where material is defined as any change or changes that may increase or decrease the energy consumption of the Facilities by more than 1% annually, including, but not limited to the following

- a. Changes in the hours of operation of any buildings constituting any part of the Facilities.
- b. Changes in the occupancy of the buildings constituting any part of the Facilities.
- c. Changes in the structure of buildings constituting any part of the Facilities, such as architectural features or building components.
- d. Modifications or renovations to the buildings constituting any part of the Facilities, which may or may not change the conditioned space.
- e. Changes to the ECMs.
- f. Changes in utility prices and/or rate structure.
- g. Change in utility suppliers
- h. Change in the method of utility billing or purchasing with respect to the Facilities.
- i. Addition or deletion of energy consuming equipment at the site.
- j. Weather variance from base year to current year.
- k. CLIENT's failure to adhere to operating and maintenance responsibilities as defined by the equipment manufacturer.
- I. Adjustments necessary to account for lighting burnouts as documented before retrofit.
- m. New outside air ventilation needed to bring any buildings constituting any part of the Facilities up to applicable building code.
- n. Required increases in light levels to bring any buildings constituting any part of the Facilities up to the applicable code or requirement.
- o. Any condition, which affects the energy demand or consumption of Facilities, caused by CLIENT or its agents.

CLIENT will be responsible for providing ESG notice of actual or proposed material changes to the site and its anticipated effect on energy usage and consumption. CLIENT must notify ESG no less than thirty (30) days before a planned material change occurs, or within seventy-two (72) hours of an emergency or unplanned material change.



# CLIENT agrees to:

- a. Not make any changes to the initial building control's system program without prior notice to ESG.
- b. Not place the building control system in a permanent 'on' status, nor will CLIENT manually operate or override any part of the building control system except upon equipment failure or emergency conditions.
- c. Provide access for the **COMPANY** to adjust the ECMs to ensure optimal operation and maximum energy savings.
- d. Maintain the space temperature settings between 68°F and 72°F during occupied hours, with a heating setback temperature of 60°F during non-occupied hours.

**BASELINE UNIT ENERGY COSTS** – Are outlined in Section 4.0 – Table B-2 and were used for all calculations made under this Exhibit.

#### **HOURS OF USE**

The hours of building equipment operation for the Guarantee are set forth below and were used for all calculations made in this Attachment. These hours were agreed upon between the CLIENT and ESG.

Table C – Hours of Use and Baseline Area

Facility	Gross Area	Annual Operating Hours				
racility	ft <sup>2</sup>	Baseline	Post Retrofit			
Detention Center	95,000	8,760	8,760			
East Columbia Library	46,000	5,840	5,840			
Central Library	46,000	5,840	5,840			
Recreation & Parks HQ	57,000	8,760	4,480			
Scaggsville PSC	42,000	8,760	8,760			
Gateway Building	93,000	5,840	5,840			
Dorsey Building	197,518	8,760	4,480			

# **M&V APPROACH**

IPMVP (April 2007) Option C is the approach used in the M&V process for verifying savings related to this project. Options C is being used with consideration of the characteristics of the specific ECMs, acceptable accuracy, and reasonable cost.

#### Option C

The purpose of Option C, "Whole Facility Measurement" or in this project, "Whole Program Measurement" is to provide systematic savings analysis for utility consumption, comparing a base year to a current year that has similar operational and environmental parameters. The required information is taken directly from each of building's utility bills and regional weather data. The software system utilized in this tracking will be EnergyCAP™, which is the industry preferred audit software.



#### STEP 1: ESTABLISH A BASELINE PERIOD

## A) PRORATE BILLING PERIODS

The number of days in the billing month being audited is compared to the base month billing period. Base year energy bills are prorated to obtain calendar month consumption. This is done to smooth out varying billing periods and to match bills to weather data.

## B) DETERMINE WEATHER SENSITIVE CONSUMPTION

How warm or cool it is determines the load requirements of HVAC related equipment. It is, therefore, essential that weather be tracked so variances can be determined. Any variances from the base to current year will be adjusted so a true "apples to apples" comparison is provided.

A certain portion of each month's energy consumption is due to base load not related to weather such as lighting, computers, and office equipment. This non-weather sensitive consumption will be present no matter what the weather conditions are; therefore, they will be separated from the weather-sensitive consumption. Using standard logic and the assumption that the energy consumption-to-weather relationship is linear, ESG along with the EnergyCAP<sup>TM</sup> software, is able to statistically determine the weather and non-weather sensitive consumption.

#### STEP 2: APPLY CURRENT YEAR CONDITIONS

The base year is adjusted to reflect current year environmental and operational conditions. Energy consumption savings are then calculated by comparing current year consumption to adjusted base year consumption. These are as follows:

- Billing Period Length
- Weather
- Changes In Facility Occupancy Or Use
- o Additions Or Deletions Of Energy Using Equipment
- Additions Or Deletions Of Building Square Footage
- o Changes In Energy Prices and or Rate Structures

# STEP 3: GUARANTEED SAVINGS

Utility bill cost avoidance is how energy conservation measures are measured after project completion. By subtracting the Current Year Energy Cost from the Adjusted Base Year Energy Cost, the overall cost avoidance associated with that energy type is calculated. Cost avoidance is directly associated to the Energy Savings Guarantee.

Energy Audits will be based upon the environmental and operating conditions for the facility during the time periods specified in the Baseline.

Each billing period during the term will be compared to a Base Period. The actual energy use and savings will be analyzed and compared to the guaranteed energy savings amount using the IPMVP, along with the acceptable energy monitoring equipment and an industry standard



energy accounting software program. The results of this analysis will be presented to the CLIENT on an annual basis.

#### METHODOLOGY FOR ASSIGNING DOLLAR VALUES TO SAVINGS

An average cost per unit will be used. Charges for fuel adjustments, annual escalation rates in Table A-1, base services, transmission, tariffs, and distributions will be included. In the event of a utility rate decrease, the utility rate(s) used to assign dollar cost will not drop below that of the base year.

#### **APPLY CURRENT YEAR CONDITIONS**

The measurement of energy consumption and the cost savings associated with installed energy management equipment is a comparison between the energy consumed during the current calendar period and the respective baseline calendar period.

The first step in cost avoidance calculations is the creation of a baseline. The baseline reflects the facility's energy use and energy costs <u>before</u> the installation of the energy conservation measures. The baseline calendar period will typically be a consecutive twelve month period for which reliable data exists before contract execution. The baseline will consist of all energy bills applicable to the meters in the Project. Once the program is in place, actual energy use is recorded from current utility bills. The costs the facility incurs after implementation of the measures are compared to the baseline in order to determine if savings projections--and guarantees--have been met.

#### **BASELINE PERIOD ADJUSTMENTS**

Proper analysis and comparison can only be achieved if the environmental and facility parameters are equal to those of the base year. Examples of factors that affect the environment and facility parameters are weather, energy rates, facility schedules, and changes in equipment. The baseline may need to be adjusted to equalize the parameters of the current year so that an accurate analysis can be performed and valid savings can be measured. In essence, the adjustment process shows what the costs and usage would have been in the base year, under the current conditions, for an 'apples to apples' comparison. These adjustments typically cover:

- Standardize for the Number of Days in a Billing Period
- Normalize the Differences in Outdoor Temperature Through Degree Days
- · Changes In Facility Occupancy and Use
- · Additions or Deletions of Energy Using Equipment
- · Additions or Deletions of Square Footage
- Changes in Energy Prices and / or Rate Structures

Savings calculations may also be adjusted for new outside air ventilation requirements; changes in operational modes (i.e. – addition of air conditioning); and changes to comfort levels. The CLIENT will notify ESG within fifteen (15) business days of any significant changes in facility operations, occupancy levels, hours of operation, structure, equipment or any other changes that are reasonably expected to affect energy use by more than 1%. The impact of such



changes on the guaranteed energy savings amount will be monitored through the energy monitoring systems and savings calculated through engineering analysis by ESG.

The consumption energy unit cost for each specific energy type is the total consumption related cost found on the respective utility bill, including charges for consumption, service, power factor, fuel adjustment, etc., divided by total consumption OR the stipulated energy cost given in Table B-2 – Unit Energy Costs. Late payment charges will not be included in this calculation.

#### **GLOBAL ASSUMPTIONS**

# **Energy Prices**

The greater of base period utility unit cost or the current period utility unit cost, escalated at the annual escalation rates provided in Table A-1, will be used in determining the adjusted base period utility cost. In no case, however, shall the rate used to calculate the Guaranteed Energy Savings be lower than base year utility rate.

# Performance Period Utility Rate Adjustment Factors, if applicable.

ESG is not responsible for any utility rate changes other than those defined in the post-installation energy policy. A rate adjustment factor will be applied to calculate actual savings regarding the changes of the utility rates. The actual energy cost savings will be the product of the calculated energy savings from defined rates and the utility adjustment factor when applicable. In no case, however, shall the rate used to calculate the Guaranteed Energy Savings be lower than base year utility rate.

# Schedule of Verification Reporting Activities:

Item	Time for Submission	Owner's Review & Acceptance Period
Annual Report	90 days after annual performance period	30 days <sup>(*)</sup>

<sup>(\*)</sup> Owner's Acceptance becomes automatic if not provided by the end of the Owner's Review & Acceptance Period.

# **Content and Format of Reports**

ESG is responsible for the periodic Energy Services Guarantee Report.

# **OPERATIONAL SAVINGS**

The operational cost savings for this project are negotiated and agreed upon by ESG and accepted by the CLIENT. There is no need to verify the agreed upon operational savings.



#### **DOCUMENTATION FOR SECTION 179D TAX DEDUCTION**

As a result of the implementation of this Project, certain tax deductions under Section 179D of the Internal Revenue Code may be available because of the energy efficient improvements to the Owner's buildings. The Owner agrees to allocate these Section 179D tax deductions to ESG to the extent such deduction arises from the technical specifications developed by ESG and the implementation of this Project.

Upon job completion, the Owner agrees to execute the required written allocation including the declaration related to this tax code provision. ESG will be responsible for preparing the declaration and all accompanying documentation for Owner's signature. ESG will be designated the Section 179D beneficiary.

#### **ASSIGNMENT OF ENVIRONMENTAL ATTRIBUTES**

As a result of the implementation of this Project, certain Environmental Attributes may be available, either now or in the future. This section specifies the process whereby the Owner will assign such Environmental Attributes to ESG.

"Environmental Attributes" means any and all credits, deductions, benefits, emission reductions, incentives, offsets, and allowances, howsoever entitled, attributable to and arising from the implementation of this Project, whether such Environmental Attributes now exist or are developed in the future. Environmental Attributes include but are not limited to: (1) Any avoided emissions of pollutants to the air, soil, or water; (2) Any avoided emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and other greenhouse gases (GHGs); (3) Section 45 credits; (4) green tags; (5) renewable energy credits; and (6) The reporting rights to these avoided emissions such as White Tag Reporting Rights. Environmental Attributes also include any energy, capacity, reliability, or other energy reduction attributes that result from the implementation of this Project.

All Environmental Attributes arising from the implementation of this Project shall be owned by ESG. Owner agrees to execute all required documentation to assign all Environmental Attributes to ESG. If any filings are required with the Internal Revenue Service or some other governmental entity to obtain the benefits of the Environmental Attributes, Owner hereby instructs ESG to prepare and file such documents.



#### **PROJECT INFORMATION:**

**CLIENT NAME: Howard County** 

**ESCO Name: Energy Systems Group (ESG)** 

ESG Contact Person for M&V: Donna Wicks

Street Address: 4655 Rosebud Lane, Newburgh, IN 47630

Phone: (812) 492-3714 Fax: (812) 475-2544 E-mail: dwicks@EnergySystemsGroup.com

Client Contact for M&V: Richard Lee

Address of Client: Bureau of Facilities, Department of Public Works, Howard County

Maryland, 9250 Bendix Road, Columbia, MD 21045

**Phone:** (410) 313-7548 **Fax:** (410) 313-5777 **E-mail:** rylee@howardcountymd.gov

#### **DISPUTE RESOLUTION**

The M&V plan has been reviewed and accepted by **CLIENT**. It is the primary document for the M&V process. If a dispute arises under this M&V agreement, the parties shall promptly attempt in good faith to resolve the dispute by negotiation. If not settled by negotiation, this M&V plan will be referred to as the means to solve related disputes.

#### POST-INSTALLATION DATA COLLECTED

Owner will provide access to site locations at reasonable times to perform on-site tests to verify performance, changes in use, and to verify modification of facilities as necessary. **ESG** will not unreasonably interfere with **CLIENT's** operation on the site.

**ESG** will collect the appropriate monthly utility billing data from **CLIENT** or appropriate Utility Providers for all ECMs being measured in accordance with IPMVP Option C.

ESG will collect before and after construction measurements for applicable Option A ECMs. In the case of lighting, pre and post measurements will be taken on sample fixtures determined in line with FEMP's Statistical Sampling plan. This data will be used verify the calculated energy savings, based on agreed upon hours of operation and baseline utility rates.

All devices employed to meter electric power use shall be capable of metering continuous RMS power at accuracy of +/-1.0% actual value, over the entire load range; Metering of polyphase loads shall include independent measurement of each phase.



# **COST OF M&V ACTIVITIES**

For CLIENT's project, the M&V plan is intended to continue throughout the term of financing. CLIENT, at their discretion may choose to discontinue the M&V plan. The cancellation of the M&V plan will negate the energy guarantee. Proper notification procedures must be followed if such action is considered. Refer to Support Services exhibit for details on cancellation option.

The amount to be paid annually by **CLIENT** for the M&V services provided by **ESG** is outlined in the Support Services exhibit with details on invoicing and payment procedures.

