ENERGY SERVICES PROPOSAL

City of Camas

Streetlights

Energy Efficiency Upgrades

Presented by:

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ABACUS
RESOURCE
MANAGEMENT
COMPANY

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EXECUTIVE SUMMARY

Abacus Resource Management Company (Abacus) is pleased to present this proposal for the implementation of energy efficiency upgrades of the City of Camas' Streetlights.

This Proposal follows the outline contained in the Conditions of the Master Energy Services Agreement No. 2013-133 A (1). As such, it presents the contractual terms under which Abacus, the City of Camas, and the State of Washington will work together over the term of the project. This agreement describes the services rendered, payment methods, guarantees, and other aspects of the project.

An estimated $257,300 in Clark Public Utility District incentives are expected for this project. In addition, Abacus has assisted the City of Camas in applying for the Washington State Department of Commerce Energy Efficiency Grant Program for the 2013-2015 biennium. The City of Camas has received a grant amount of $500,000 for this street lighting upgrade project. In order to receive this grant the City must incur at least this amount of costs no later than June 30, 2015.

Description of the Project

The project scope of work consists of upgrades to approximately 3,000 streetlights throughout the City of Camas. In general, 2,000 fixtures will be replaced with new LED fixtures, and 1,000 fixtures will be retrofitted with new LED light components.

Scope of Services

The scope of services under this Proposal includes the design, construction, and commissioning of the proposed measures and the verification of savings.

Financial Benefits

The project will produce an estimated $97,638 annually in utility savings as described in the Investment Grade Audit (IGA) dated Sep 18, 2014, and an additional $8,000 per year in maintenance cost savings per the owner. The estimated project financials shown to the owner during development of this ESP used a more conservative utility savings amount of $91,548. Final utility cost savings will be dependent on the utility rate structure applied by Clark PUD, which have not been finalized to date.

Guarantees

Abacus is providing three guarantees under this Proposal. First, we are guaranteeing the Maximum Project Cost as defined in paragraph IV will not exceed $2,268,836. Second, Abacus is guaranteeing that the City of Camas realizes actual energy/utility savings of not less than 1,161,797 kWh (as calculated in the IGA). Third, we are guaranteeing the energy equipment will perform at or above the levels of service defined in Paragraph VI.

In addition to these guarantees, we will provide the City of Camas an "open book" process regarding the actual construction costs. If the actual construction costs are less than we forecast, the City of Camas will realize the financial savings. City representatives will be invited to review

the quotes and/or bids from subcontractors and interview the subcontractors to be used on this project.

Project Summary

Total Estimated Project Cost (including all fees and taxes)	$2,299,836
Maximum Guaranteed Project Cost (total less DES fees and taxes)	$2,268,836
Estimated Energy Savings (final utility rates are to be determined)	$ 97,638
Annual total kWh guaranteed	1,161,797
Estimated Clark PUD incentive	$ 257,300

I. FACILITY DESCRIPTION

The City of Camas owns and maintains approximately 3,000 streetlights throughout the city limits. All of the streetlights use HPS (high pressure sodium) lamps that range in size from 70 to 400 watts. There are about eighteen different light fixtures in use, but the majority of light fixtures are the cobra head style and the acorn style.

The existing HPS lights produce a very yellow color, and have characteristics of low color rendering index, low Kelvin temperature, and have an average lifespan of about 24,000 hours.

New LED technology is now available that is more efficient at generating light, produces a higher color temperature light, has improved color rendering abilities, and is projected to have an average life of over 100,000 hours.

Abacus was contracted by the City of Camas to provide a project assessment of the energy efficiency opportunities associated with upgrading the street lights to the new LED technology. The utility provider provided ARCNet data that shows the gps locations of each of the street lights that the City owns and maintains. Additional input was taken from the City, who has already overseen the successful installation of some LED retrofit kits on the acorn light fixtures on 4th street in downtown Camas, to complete the analysis.

Abacus has identified an appropriate LED upgrade for each of the (18) different type of streetlights owned and operated by the City. The table on the following page identifies the types and quantities of existing fixtures, and the proposed upgrades which form the basis for this proposal. For more details about the existing and proposed lights see the Detailed Energy Audit presented in Appendix B.

Abacus is also providing unit costing in this proposal for each of the (18) different fixture types, so that if quantities change the unit pricing can be used to accommodate these changes. It is anticipated that the database of 3,000 light fixtures provided by the utility company may have a small percentage of errors associated with them, and these unit prices can be used to adjust the contract as needed. In addition, if the owner decides

that they desire more light than is required by RP-8 (which is the basis for selecting the upgrades included in this proposal) then the contract can be changed as needed.

Fixture ID	Existing Fixture Type Description	Qty	Proposed Fixture Type Description	Mfr	Warranty (Years)
A	100W HPS Acorn	1,084	25W LED Acorn Retrofit Kit	Xtralight	10
B	70W HPS Cobrahead	36	42W LED Cobrahead	Cree	10
C	100W HPS Cobrahead	849	53W LED Cobrahead	Cree	10
D	150W HPS Cobrahead	295	70W LED Cobrahead	AEL	5
E	200W HPS Cobrahead	331	101W LED Cobrahead	Cree	10
G	100W HPS Dual Head Acorn	24	(2) 25W LED Acorn Retrofit Kit	Xtralight	10
H	200W HPS Dual Head Acorn	1	(2) 25W LED Acorn Retrofit Kit	Xtralight	10
I	150W HPS Dual Head Cobrahead	3	(2) 70W LED Cobrahead	AEL	5
J	200W HPS Dual Head Cobrahead	46	(2) 101W LED Cobrahead	Cree	10
K	70W HPS Floodlight	3	50W LED Flood	GigaTera	5
L	200W HPS Floodlight	1	100W LED Flood	GigaTera	5
M	400W HPS Floodlight	1	100W LED Flood	GigaTera	5
O	100W HPS Highlight	3	53W LED Cobrahead	Cree	10
P	150W HPS Highlight	1	70W LED Cobrahead	AEL	5
Q	100W HPS Post Top	283	30W LED Area Light	Relume	7
R	150W HPS Cobrahead - Lake Rd.	36	70W LED Cobrahead	AEL	5
S	200W HPS Cobrahead - Lake Rd.	81	101W LED Cobrahead	Cree	10
T	100W HPS Shoebox - Camas Meadows Dr.	44	53W LED Cobrahead	Cree	10
TOTAL		3,122			

II. ESCO EQUIPMENT

The overall scope of the work is the following:

EEM 1: Install New High Efficiency LED Streetlights

This measure proposes to upgrade the existing HID streetlights with new high efficiency LED lights. In many cases the light fixtures will be removed and replaced with new fixtures, and in some cases a retrofit kit will be installed inside the existing fixtures to convert them to LED. The new LEDs will save energy and also provide the following benefits:

- Improved color rendering index – the existing high pressure sodium lights have a CRI of around 25 (out of 100) making it hard to distinguish colors underneath them. The new LEDs have CRI over 70, making it much easier to distinguish colors under the LED light.
- Increased color temperature – the existing high pressure sodium lights have a color temperature of around 2,200, causing objects underneath to appear very yellow. The new LEDs have color temperatures over 4,000, causing objects underneath to appear much whiter and/or bluer. In humans, especially as we age, it is easier for our eyes to see in bluer light.

- Reduced maintenance costs – the existing high pressure sodium lights have a lamp life averaging 24,000 hours. The new LEDs have a lamp life averaging 100,000 hours, and come with a warranty ranging from 5 to 10 years. This will drastically reduce the amount of time needed to replace failed lamps.

Specific tasks will include:

1. Provide all required permits and inspections.
2. Perform detailed lighting designs to confirm that the proposed upgrades will satisfy RP-8-00 guidelines.
3. Install sample retrofit kits in the downtown area Acorn fixtures for the owner acceptance. (The owner has already installed one sample kit downtown, and we anticipate installing additional kits for owner approval prior to finalizing the final fixture selection. If the owner wishes to proceed with the sample kits already installed then no new sample kits will be needed.)
4. Install new LED fixtures and retrofit kits throughout the City.
5. Commission system to ensure proper system operation.
6. Provide operator training on all systems.

Costs:

1. All costs are estimated utilizing the quantities and fixture counts as described in the IGA. As exact fixture counts may vary, the actual guaranteed construction costs will change if fixture counts change. Additional fixtures will require additional construction funds, reduced fixture costs will reduce the construction budget.
2. All proposed retrofit or replacement lamp costs have been estimated per the IGA and are in compliance with minimum lighting standards. Deviations from the proposed retrofit wattage and/or type based on owner request may require adjustment of the construction budget.

III. ESCO SERVICES

ESCO will provide the following services:

A. CONSTRUCTION SERVICES

1. Construction: Provide, or cause to be provided, all material, labor, and equipment, including paying for permits, fees, bonds, and insurance, required for the complete and working installation of the ESCO equipment, except as noted. The ESCO intends to solicit construction costs from selected subcontractors and equipment

suppliers who will competitively acquire all material, labor and subcontractors, except the following tasks will be completed by ESCO's own staff:

a) Field Superintendent: onsite supervision of the work.

When ESCO has completed the installation of the Equipment, including start-up and operation verification and training in accordance with the Proposal, ESCO shall provide to Owner a "Notice of Commencement of Energy Savings" and Owner shall have 14 days within which to accept or challenge the Notice.

2. Performance Verification: Complete the M&V protocols outlined in the Energy Audit and work with Clark PUD and the Owner to document the savings upon which the utility incentives will be based.

3. Performance Maintenance: The ESCO will monitor system performance and will review expected performance and actual performance with the Owner on an annual basis during the first year following the commencement of energy savings.

4. Equipment Maintenance: The ESCO will provide no equipment maintenance other than warranty services. Following the completion of the installation and Owner acceptance of the Equipment, Owner shall provide all necessary service, repairs, and adjustments to the Equipment so that the Equipment will perform in the manner and to the extent set forth in the Proposal. ESCO shall have no obligation to service or maintain the Equipment after Completion and Acceptance unless ESCO and Owner have entered into a separate maintenance agreement. ESCO shall coordinate manufacturer's standard warranty on equipment and materials.

5. Hazardous Waste: ESCO intends to notify the Owner of all locations where the work may encounter hazardous materials and request the Owner abate the hazard prior to the work. However, upon the request of Owner, ESCO may, without assuming the ownership thereof and acting in the name and on behalf of the Owner, have the hazardous material or substances removed and disposed of or contained and the cost of such work is not included in the project. Owner agrees and acknowledges that it has not relied on or employed ESCO to analyze or identify the presence of any hazardous substance on the Owner's premises.

6. Operation and Maintenance Measures: None.

7. Warranty: ESCO will respond to and correct all warranty claims initiated by the Owner for a period of one year following the "Notice of Commencement of Energy Savings."

B. PROFESSIONAL SERVICES

1. Project Management: Overall development and management of the project throughout the term of the agreement. Specific tasks include project development, management of Owner/Designer issues, Management of Owner/Constructor issues, and management of warranty issues. ESCO will keep Owner informed on project status via regular emails and project meetings. ESCO will issue formal meeting minutes of all meetings.

2. Energy Audit: Detailed engineering analysis to establish scope and feasibility of conservation measures.

3. Design Services: Provide sketches, material lists, drawings, specifications, and/or other documentation which may be required for Owner's review and to obtain permits and negotiate or receive competitive prices for construction of the ESCO equipment. Design services include all mechanical and electrical design required for the project. Specific tasks will include:
   a. Collect record drawings and conduct site surveys.
   b. Meet with Owner to determine design standards.
   c. Preliminary design submittal and review.
   d. Final design submittal and review.
   e. Negotiating & Bidding (including document reproduction and distribution).
   f. Contractor interviews and selection.
   g. Submittal/shop drawing review.
   h. As-built drawing preparation as applicable.
   i. One year warranty inspections.

4. Construction Management: Provide construction management services to coordinate and supervise the work. Specific tasks will include:
   a. Execute all subcontracts.
   b. Secure all required bonds, permits, and insurance coverage.
   c. Coordinate and control the construction schedule.
   d. Maintain complete and accurate project accounting records including invoicing.
   e. Coordinate and control all construction activities.
   f. Execute project closeout.
   g. Resolve all warranty claims.

   The owner is expected to coordinate day-to-day communications with system operators and any scheduling of affluent relocations in and around the work.

5. Start-Up, Testing and Operation Training: The ESCO will provide:
   a. Complete start-up, testing, and commissioning of ESCO equipment.
   b. Training of City staff on the new fixtures and retrofit kits.

6. Ongoing Services: For a period one year following the "Notice of Commencement of Energy Savings" the ESCO will provide:
   a. Inspections, reporting, and meetings as needed to address concerns related to actual performance of the ESCO equipment.
   b. Coordination with subcontractors and suppliers as required to resolve warranty claims made by Owner.

IV. PROJECT COSTS

A. ESCO guarantees that the Maximum Project Cost for scope items listed in paragraph II will not exceed $2,268,836 (all costs are **not** including sales tax). In addition to these costs which are included in the agreement, there are costs budgeted outside the agreement for sales tax and DES project management fee ($31,000 total) bringing the total project budget to $2,299,836.

B. Maximum Project Cost includes:
   1. Construction Services .....$ 1,706,981
   2. Professional Services (ESCO Fees) .....$ 453,815
   3. Other Costs (Contingency)…….....$ 108,040

C. Construction Services: Will be charged at actual costs not to exceed the guaranteed maximum price of $1,706,981. These costs are estimated as follows:

A. CONSTRUCTION COSTS			Proposed Cost	
	Labor and Material:			
EEM-1a	Upgrade 100w Cobrahead Lights to LED		$	406,956
EEM-1b	Upgrade 150w Cobrahead Lights to LED		$	192,593
EEM-1c	Upgrade Other Cobrahead Lights to LED		$	332,433
EEM-1d	Upgrade Misc Lights to LED		$	276,040
EEM-1e	Upgrade Acorn Lights to LED		$	351,021
	Taxes on Material Only		$	98,220
Subtotal Labor and Materials Cost			$	1,657,263
	Permits (included above)		$	-
	Construction Bond	3.0%	$	49,718
TOTAL CONSTRUCTION COST			$	1,706,981

Invoicing for the construction services will be on a monthly basis based on percentage of work completed. Invoicing backup data will be provided including schedule of values and corresponding subcontractor invoices or other source of costs.

The ESCO shall provide a Schedule of Values at the end of construction bidding. At a minimum, the schedule shall identify the costs of subcontractors, Abacus direct purchased material, bonds, permits, and direct project expenses.

D. Professional Services: Will be lump sum fees and will be billed as a percentage of completion. The total fee for all professional services is $453,815 which breaks down as follows:

B. PROFESSIONAL SERVICES FEES			
Audit Fee (Amount Paid by City)		$	10,000
Design M,E,C,S	5.0%	$	85,349
Construction Management	5.0%	$	85,349
ESCO M and V Cost	1.0%	$	17,070
Ongoing M&V (Years 2 and 3)			
Overhead and Profit	15.0%	$	256,047
TOTAL ESCO FEES		$	453,815

E. Energy Performance Monitoring and Verification Fee: Is included in Professional Services Fees above and will be billed at the end of the first year of energy savings (one year after commencement of energy savings). Per DES, M&V will not be required for years 2 and 3.

F. Contingency: Within the Guaranteed Maximum Price, a contingency of $108,040 is available to the ESCO to cover unanticipated costs associated with the work. These additional costs can be added to the agreement via a Change Order request from ESCO. Any unspent contingency will revert to the Owner at project closeout.

G. Other Costs: The following costs are not guaranteed by the ESCO and are listed here for budgetary or funding authorization purposes only:

1. Estimated DES Project Management Fee: $31,000 total.

2. Sales Tax: sales tax will be charged at the prevailing rate (currently 8.4%) on materials only and has been included in the construction cost due to the special tax treatment of illumination in the public right-of-way. There are no additional taxes estimated.

Sales Tax - Construction Portion	$0
Sales Tax - Professional Services Portion	$0
Sales Tax - Contingency Portion	$0
Total Sales Tax	$0

V. PROJECT ACCOUNTING

A. Accounting Records

The ESCO shall check all material, equipment and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under this Agreement. The accounting system shall be satisfactory to the Owner. The Owner shall be afforded access to all the ESCO's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda and similar data relating to this Contract, and the ESCO shall preserve all such records for a period of three years, or for such longer period as may be required by law, after the final payment.

B. Construction Services

Project accounting records will be used for the sole purpose of documenting actual cost of the Construction Services.

C. Reconciliation of Actual Project Costs

1. The guaranteed maximum project cost is based on an estimate of construction services costs. In recognition that actual costs may vary from the estimate, the following procedures are established to reconcile this difference:
   a. When actual costs exceed the estimate and contingency, for the scope of work as detailed in the IGA and this proposal, the additional expense will be borne by the ESCO.
   b. When actual costs are less than the estimate, the remaining funds will be returned to the Owner by executing a deductive change order at project completion.

VI. STANDARDS OF COMFORT SERVICE

A. Heating: Not Applicable
B. Cooling: Not Applicable
C. Ventilation: Not Applicable
D. Light Levels: IESNA RP-8-00 (2005)

Illuminance Method - Recommended Values					
Roadway & Pedestrian Conflict Area		Pavement Classification (Minimum Maintained Average Values)			Uniformity Ratio E_{avg}/E_{min}
Road	Pedestrian Conflict Area	R1 lux/fc	R2 & R3 lux/fc	R4 lux/fc	
Freeway Class A		6.0 / 0.6	9.0 / 0.9	8.0 / 0.8	3
Freeway Class B		4.0 / 0.4	6.0 / 0.6	5.0 / 0.5	3
Expressway	High	10.0 / 1.0	14.0 / 1.4	13.0 / 1.3	3
	Medium	8.0 / 0.8	12.0 / 1.2	10.0 / 1.0	3
	Low	6.0 / 0.6	9.0 / 0.9	8.0 / 0.8	3
Major	High	12.0 / 1.2	17.0 / 1.7	15.0 / 1.5	3
	Medium	9.0 / 0.9	13.0 / 1.3	11.0 / 1.1	3
	Low	6.0 / 0.6	9.0 / 0.9	8.0 / 0.8	3
Collector	High	8.0 / 0.8	12.0 / 1.2	10.0 / 1.0	4
	Medium	6.0 / 0.6	9.0 / 0.9	8.0 / 0.8	4
	Low	4.0 / 0.4	6.0 / 0.6	5.0 / 0.5	4
Local	High	6.0 / 0.6	9.0 / 0.9	8.0 / 0.8	6
	Medium	5.0 / 0.5	7.0 / 0.7	6.0 / 0.6	6
	Low	3.0 / 0.3	4.0 / 0.4	4.0 / 0.4	6

Source: IES RP-8-00 (reaffirmed 2005)

VII. ESTIMATED ANNUAL SAVINGS AMOUNT

A. The ESCO estimates that annual utility savings will be 1,161,797 kWh.

B. The ESCO estimates that annual utility cost savings will be $97,638.

VIII. METHOD OF CALCULATING ENERGY AND ENERGY COST SAVINGS (M&V PLAN)

We will measure and verify the electric energy savings resulting from this project using the IPMVP (International Performance Measurement and Verification Protocol). The electric energy savings for EEM 1 will be based upon IPMVP Option A approach (Retrofit Isolation).

Annual utility cost ($) savings will be guaranteed at the utility rates currently in effect at the time of this proposal and as documented in the IGA listed in Appendix B. Final actual utility cost savings will be dependent on the utility rate structure applied by Clark PUD, which have not been finalized to date.

M&V will be provided for each installed EEM. The equipment installed for each EEM will be verified and documented.

For EEM 1, the energy savings are relatively large, but there is no central utility meter. In fact, 85% of the light fixtures are not even metered by the utility company; they are billed based upon the utility companies' calculated energy use and pre-determined monthly costs for energy. The energy attributed by the utility company for these unmetered lights does not accurately reflect the actual energy used (rounding errors). Therefore using actual bills are not an option for measuring the energy savings.

We therefore propose to use the IPMVP Option A (Retrofit Isolation) to measure the savings for this EEM. We will use the local utility's approved average fixture wattage for the high pressure sodium lights, and the manufacturer's average wattage for the new LED lights, and the actual quantity of lights installed to determine the kW savings. This kW savings will be multiplied by the stipulated annual hours of use (4,100 hours per year) to determine the annual energy savings.

To verify EEM performance, the following data will be obtained:

1. The actual quantity of fixtures that are upgraded will be updated throughout construction as discrepancies are noted.
2. The utility approved average fixture wattage will be used for the baseline energy used by the existing light fixtures. The current utility approved average fixture wattage includes ballast losses, and is listed here for reference:

Fixture ID	Fixture Type Description	Utility Approved Average Watts / Fixture
A	100W HPS Acorn	115
B	70W HPS Cobrahead	80
C	100W HPS Cobrahead	115
D	150W HPS Cobrahead	172
E	200W HPS Cobrahead	230
F	400W HPS Cobrahead	460
G	100W HPS Dual Head Acorn	230
H	200W HPS Dual Head Acorn	460
I	150W HPS Dual Head Cobrahead	344
J	200W HPS Dual Head Cobrahead	460
K	70W HPS Floodlight	80
L	200W HPS Floodlight	230
M	400W HPS Floodlight	460
N	70W HPS Highlight	80
O	100W HPS Highlight	115
P	150W HPS Highlight	172
Q	100W HPS Post Top	115
R	150W HPS Cobrahead - Lake Rd.	172
S	200W HPS Cobrahead - Lake Rd.	230
T	100W HPS Shoebox - Camas Meadows Dr.	115

3. The total fixture quantity affected by the upgrade will be collected during construction.
4. The manufacturer's provided average wattages will be used for the new LED fixture wattages.
5. The actual fixture quantities installed will be used to calculate the measured energy savings.
6. The lights are assumed to operate 4,100 hours per year. This is the annual usage that the local utility company has used in their approved rate tariff, and is a reasonable assumption for lights that operate dusk to dawn, which all of these lights do.

IX. ENERGY SAVINGS GUARANTY

The ESCO guarantees that the actual energy/utility savings will not be less than 1,161,797 kWh, which at the baseline utility rates (as defined in the Energy Audit), represents an annual cost savings of $97,638. Final utility cost savings will be dependent on the utility rate structures applied by Clark PUD, which have not been finalized to date.

Energy savings will be determined utilizing the method proposed in Section VIII. Utility reported savings may vary as the utility currently “rounds” kWh to average values and does not apply ballast factors uniformly between existing and proposed conditions.

In the event that actual energy savings, pursuant to Section VIII Method of Calculating Energy and Energy Cost Savings, are less than this guaranteed minimum, the ESCO shall pay the Owner the difference between the actual kWh savings and the guaranteed amount, based on current kWh rates. This savings guarantee will be in effect only for the first year after the commencement of savings unless the Owner executes a separate performance maintenance agreement for additional year(s) of Performance Monitoring and Verification Services.

X. FINANCING

Project financing will be provided by the Owner. The ESCO agrees to waive any finance fees related to the financing of project costs (as described in Section IV) provided the Owner agrees to make monthly progress payments to the ESCO based on the percentage of completion of each task. Progress payments will be less 5% for retention. Retention amounts will be due after project completion per the ESCO Agreement.

XI. INSURANCE AND BONDING

A. The ESCO shall provide a payment and performance bond in the amount of 100% of the Construction Services cost plus applicable sales tax on that cost. The Bond shall be in the form of AIA Document A312. The "Sum Amount of Bond" shall specifically exclude coverage for those portions of the Energy Services Agreement and/or Energy Services Agreement Addendum pertaining to design services, energy cost savings guarantee, maintenance guarantee, utility incentives, efficiency guarantees, and any other clauses which do not relate specifically to construction management and supervision of work for purchasing and installing of ESCO Equipment, or for work to be accomplished by the Owner. The Bond must be with a Surety or Bonding Company that is registered with the State of Washington Insurance Commissioner's Office.

B. For the purposes of this Agreement, the "Sum Amount of Bond" shall be $1,706,981 ($1,706,981 construction services plus $0 sales tax).

C. Certificates of General Liability insurance will be provided prior to contract signing. The State of Washington shall be named as an additional insured on all insurance certificates.

XII. MODIFICATIONS TO BASELINE BY OWNER

A. The Owner shall maintain all existing facilities and installed ESCO equipment during the term of this contract at or above current maintenance levels. Owner agrees to maintain the energy efficiency of the systems installed.

B. The energy savings are based on operating the energy systems in a similar manner that was represented during our analysis period. In the event the Owner elects to operate the energy systems differently, thereby increasing the energy usage of the system or load in the spaces served, the ESCO will prepare a calculation of the additional energy used for such additional usage and be allowed to adjust the baseline use and savings accordingly.

XIII. PROJECT SCHEDULE

ESCO proposes the following schedule for completion of design and construction activities:

City of Camas acceptance of ESP	March 2, 2015
ESCO Notice to Proceed	March 16, 2015
Subcontractor Bids Awarded	May 1, 2015
Submittal approval & order non-Acorn materials	May 29, 2015
Test Kits Installed in Acorn Fixtures	May 15, 2015
Test Kits approved & order Acorn materials	June 15, 2015
Construction Begins	July 1, 2015
Construction Substantially Complete	November 14, 2015
Commencement of Energy Savings	December 1, 2015

These dates are preliminary. A more definitive schedule will be produced upon execution of contract documents and equipment selection for lead time.

APPENDICES

The following documents are attached to this proposal and included as part intended to be a part of the proposal:

The Project Financial Tables are included as Appendix A.

The Investment Grade Energy Audit for the Camas Streetlights is included in this proposal as Appendix B.

APPENDIX A – FINANCIAL TABLES

Budget Summary

Project:	Camas LED street lighting & WWTP energy upgrades Camas, Washington		Measure: Date: Phase:	All LED 2/19/2015 ESPC Proposal
A. CONSTRUCTION COSTS				Proposed Cost
	Labor and Material:			
EEM-1a	Upgrade 100w Cobrahead Lights to LED		$	406,956
EEM-1b	Upgrade 150w Cobrahead Lights to LED		$	192,593
EEM-1c	Upgrade Other Cobrahead Lights to LED		$	332,433
EEM-1d	Upgrade Misc Lights to LED		$	276,040
EEM-1e	Upgrade Acorn Lights to LED		$	351,021
	Taxes on Material Only		$	98,220
Subtotal Labor and Materials Cost			$	1,657,263
	Permits (included above)		$	-
	Construction Bond	3.0%	$	49,718
TOTAL CONSTRUCTION COST			$	1,706,981
B. PROFESSIONAL SERVICES FEES				
	Audit Fee (Amount Paid by City)		$	10,000
	Design M,E,C,S	5.0%	$	85,349
	Construction Management	5.0%	$	85,349
	ESCO M and V Cost	1.0%	$	17,070
	Ongoing M&V (Years 2 and 3)			
	Overhead and Profit	15.0%	$	256,047
TOTAL ESCO FEES			$	453,815
C. OTHER COSTS				
	Project Contingency	5.0%	$	108,040
TOTAL OTHER COSTS			$	108,040
D. TOTAL GUARANTEED CONSTRUCTION & ESCO SERVICES			$	2,268,836
E. NON-GUARANTEED COSTS				
	Sales Tax - Construction Portion	0.0%	$	-
	Sales Tax - Professional Services Portion	0.0%	$	-
	Sales Tax - Contingency Portion	0.0%	$	-
	DES Admin. Fee		$	31,000
	DES M and V Fee (Years 2 & 3)			
TOTAL NON GUARANTEED COSTS			$	31,000
F. TOTAL PROJECT COST			$	2,299,836
	Utility Incentives (Estimate)		$	257,300
	Commerce Grant (Estimate)		$	500,000
	Net Project Cost		$	1,542,536
	Estimated Annual Utility Cost Savings		$	97,638
	Maintenance Savings		$	8,000
	Total Annual Cost Savings		$	105,638
	Simple Payback (years)			14.6

Camas Streetlights – EEM Cost Breakdown

The table below illustrates the individual fixture type unit costs that have been used to generate the subcontractor costs for this project. These unit costs will be used to adjust the contract price due to changes in fixture quantities, and these costs may be adjusted if the owner decides that they want more light than is required by RP-8-00 in some areas, or otherwise requests a change to the proposed upgrades for non-energy and non-lighting issues.

Fixture ID	Fixture Type Description	Fixture Type Description	Manufacturer	Model	Qty	**Subcontractor Unit Cost per Item ($)**	Total Subcontractor Cost ($)
A	100W HPS Acorn	25W LED Acorn Retrofit Kit	Xtralight	BRK LED 1 01 025 N 4 X UIN	1,084	**$283.92**	$307,769.28
B	70W HPS Cobrahead	42W LED Cobrahead	Cree	BXSPR A 0 3 F C U S N	36	**$437.25**	$15,741.00
C	100W HPS Cobrahead	53W LED Cobrahead	Cree	BXSP A 0 3 G A U S N	849	**$519.38**	$440,953.62
D	150W HPS Cobrahead	70W LED Cobrahead	AEL	ATB0 30BLEDE70 MVOLT R3	295	**$603.10**	$177,914.50
E	200W HPS Cobrahead	101W LED Cobrahead	Cree	BXSP A 0 3 H A U S N	331	**$664.28**	$219,876.68
G	100W HPS Dual Head Acorn	(2) 25W LED Acorn Retrofit Kit	Xtralight	BRK LED 1 01 025 N 4 X UIN	24	**$507.44**	$12,178.56
H	200W HPS Dual Head Acorn	(2) 25W LED Acorn Retrofit Kit	Xtralight	BRK LED 1 01 025 N 4 X UIN	1	**$507.44**	$507.44
I	150W HPS Dual Head Cobrahead	(2) 70W LED Cobrahead	AEL	ATB0 30BLEDE70 MVOLT R3	3	**$1,206.20**	$3,618.60
J	200W HPS Dual Head Cobrahead	(2) 101W LED Cobrahead	Cree	BXSP A 0 3 H A U S N	46	**$1,268.15**	$58,334.90
K	70W HPS Floodlight	50W LED Flood	GigaTera	WP 050 A 40 PH D G1 S	3	**$475.01**	$1,425.03
L	200W HPS Floodlight	100W LED Flood	GigaTera	WP 100 A 40 PH D G1 S	1	**$606.21**	$606.21
O	100W HPS Highlight	53W LED Cobrahead	Cree	BXSP A 0 3 G A U S N	3	**$438.29**	$1,314.87
P	150W HPS Highlight	70W LED Cobrahead	AEL	ATB0 30BLEDE70 MVOLT R3	1	**$522.00**	$522.00
Q	100W HPS Post Top	30W LED Area Light	Relume	UAG2 H24 D5 35 NW UL X	283	**$805.79**	$228,038.57
R	150W HPS Cobrahead - Lake Rd.	70W LED Cobrahead	AEL	ATB0 30BLEDE70 MVOLT R3	36	**$558.87**	$20,119.32
S	200W HPS Cobrahead - Lake Rd.	101W LED Cobrahead	Cree	BXSP A 0 3 H A U S N	81	**$620.05**	$50,224.05
T	100W HPS Shoebox - Camas Meadows Dr.	53W LED Cobrahead	Cree	BXSP A 0 3 G A U S N	44	**$438.29**	$19,284.76
TOTAL		**TOTALS**			3,122		$1,559,035.60

APPENDIX B – INVESTMENT GRADE AUDIT