THE CITY OF EDINBURG

INVITATION TO BID

BID #2010-84 INSTALLATION OF SOLAR STREETS LIGHTS

The City of Edinburg, Texas is soliciting sealed separate bids for the above referenced as requested by the Parks and Recreation Department. The bid shall be received no later than **3:00 p.m., Monday, August 02, 2010.** Any bid received after the time set for opening will be returned to bidder unopened. Bidder(s) must provide an original and shall be addressed to:

CITY OF EDINBURG
C/O CITY SECRETARY
415 W. UNIVERSITY DRIVE
P.O. BOX 1079
EDINBURG, TEXAS 78540-1079

Bids must be submitted in an envelope sealed with tape and prominently marked on the lower left hand corner of the bid envelope with corresponding bid number and title. All bids will be opened and publicly read aloud at the above designated time at the City of Edinburg (New City Hall) Conference Room, 1st Floor, located at 415 W. University Drive, Edinburg, Texas. Bids sent via facsimile shall not be accepted.

The City of Edinburg reserves the right to accept or reject bids submitted, waive formalities in bidding, accept the bid deemed most advantageous to the City of Edinburg, and to hold the bids for a period of sixty (60) days without taking action thereon. If you have any questions or require additional information regarding this bid, please contact Mr. Luis Rodriguez, Director of Parks and Recreation, at (956) 381-5631.

If you choose not to submit a bid and would like to remain on the City of Edinburg bidder's list for future bids, you must respond in writing.

Sincerely,

Lorena Fuentes

Lorena Fuentes, Purchasing Agent

INVITATION TO BID

ASSIGNED BID NO.: **2010-84**

BID TITLE: **Installation of Solar Street Lights**

CLOSED DATE & TIME: **August 2, 2010 @ 3:00 PM**

SPECIFICATIONS ATTACHED XX

DELIVER SEALED BID TO: **CITY OF EDINBURG**
C/O CITY SECRETARY
415 W. UNIVERSITY DRIVE
P.O. BOX 1079
EDINBURG, TEXAS 78540

ADDENDUM ONLY _____

Quotations are requested for furnishing materials or services described below in accordance with terms set forth herein.

ITEM	QUANTITY	DESCRIPTION OF GOODS OR SERVICES	UNIT PRICE	AMOUNT
	ESTIMATE			
1	10-15	Solar lighting systems with LED Cobrahead Sag lens on a 6' arm running from dusk to dawn with a Q3 light engine mounted on the side of 45' Type 1 Grey Square Tapered Pre-stressed Concrete Pole and shall not be accessible from the ground without mechanical means.	$_____	$_____
2	10-15	Installation of Solar Lighting Systems and Poles	$_____	$_____
3	1	Design Services and Technical Support	$_____	$_____
		GRAND TOTAL		$_____
		NOTE: BID WILL BE AWARDED ON A UNIT PRICE. ABOVE QUANTITIES ARE ESTIMATES ONLY AND MAY CHANGE DEPENDING ON FUNDING AVAILABILITY. PRICE MUST INCLUDE DELIVERY.		
		Note: The City reserves the right to accept or reject bids submitted, waive formalities in bidding, consider each item submitted as a separate bid, award all or individually, whichever may be more advantageous to the City, and to hold the bids for a period of sixty (60) days without taking action thereon.		

GENERAL CONDITIONS & INSTRUCTIONS – READ CAREFULLY

1. The bids must be submitted on this form only.
2. The City reserves the right to accept or reject any or all bids, waive formalities, and accept the bid deemed most advantageous to the City.
3. The City reserves the right to award the bid to the lowest responsible bidder.
4. Prices must be itemized.
5. All quotations must be F.O.B. Edinburg and include all costs for delivery and packaging.

   Delivery time shall be specified by the bidder. Failure to state a firm delivery date will make an incomplete bid. Delivery time will be one of the determining factors in selecting the best bid. However, if the delivery time is not met when stated, upon notification of the same, the City may allow a ten-day grace period for delivery. If delivery is not met after the ten-day grace period allowed, the City of Edinburg reserves the right to completely cancel order and to revoke and render void the purchase order previously issued for same.

6. In cases of discrepancy between the unit price and the extension, the unit price will be taken.
7. All bids must be signed by an authorized representative.
8. Envelope containing this bid **must** be marked with **Bid No. and Bid Title** from Page 1 and sealed with tape.
9. Bid guarantee (if applicable) must be submitted with bid.
10. Any bid received after the time set for opening will be returned to bidder unopened.
11. This bid tabulation shall constitute a binding contract subject to acceptance by the City.
12. Special reference is made to bid specifications (if attached) for other conditions and instructions.
13. Failure to adhere or comply with the above general conditions and instructions will cause the bid to be rejected.
14. Bidders are advised that in addition to local bids received, the City participates in Texas Cooperatives that comply with the bidding requirements of the State of Texas; therefore, the City will include State Cooperative pricing to determine the selection of bid award that is most advantageous to the City.
15. No citizen or business shall be qualified to submit competitive bids for city purchases or improvements if it has a substantial delinquency to the City, including taxes, utility bills, or rental obligations, or has pending litigation against the City.

In compliance with the invitation for bid, and subject to all conditions thereof, the undersigned offers, and agrees, if this bid be accepted within 60 days from **time of closing**, to furnish any or all of the items or render such services upon which prices are quoted in accordance with the bid specifications applying, and at the price set opposite each item.

For bid inquiries, please call the Purchasing Agent at (956) 388-1895, Ext. 8972.

DATE:_____

BID PRICE:_____

DELIVERY DATE:_____

BIDDER NAME:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

MAILING ADDRESS:_____

TELEPHONE NO.:_____

E-MAIL ADDRESS:_____

FEDERAL ID #:_____

BOND AND INSURANCE REQUIREMENTS

(A) If the contract amount is over $25,000 for construction or facility improvements, the successful bidder shall provide a bid guarantee, give a good and sufficient bond in the amount of the contract price for the faithful performance of such contract, executed by a surety company authorized to do business in the state, in accordance with state statutes, as amended. A payment bond in the full amount of the contract price to assure payment is required by law of all persons supplying labor and material in execution of work provided for in the contract.

(1) A bid guarantee equivalent to 5% of the bid price is required from each bidder. The bid guarantee shall consist of a firm commitment such as a bid bond, certified check or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his or her bid, execute such contractual documents as may be required within the specified time.

(2) A performance bond on the part of the contractor for 100% of the contract price is required. A "performance bond" is one executed in connection with the contract to secure fulfillment of all the contractor's obligations under such contract. It is solely for the protection of the City awarding the contract; in the amount of the contract; and is conditioned on the faithful performance of the work, in accordance with the plans, specifications, and contract documents, including warranties. The performance bond shall remain in effect during the warranty period of the contract or for one year, whichever is longer.

(3) A payment bond on the part of the contract for 100% of the contract price is required. A "payment bond" is one executed in connection with a contract to assure payment, as required by law, of all persons supplying labor and material in execution of the work provided for in the contract. The payment bond is solely for the protection and use of payment bond beneficiaries who have a direct contractual relationship with the prime contractor or a sub-contractor to supply labor or material and is in the amount of the contract.

(4) Failure of a contractor to comply with this section authorizes the City Manager to terminate the contract and retain any applicable security.

(B) A bid guarantee, performance and payment bond will not be required for contracts zero to $25,000. The City will specify in the contract that no money will be paid to the contractor until the project has been completed and final acceptance has been made by the City.

(C) Staff may waive insurance requirements for contracts $0 - $4,999.99, including but not limited to contracts for food, materials, supplies, and construction. Workers' Compensation in amounts which satisfy statutory coverage shall be required for construction projects.

(D) The following insurance requirements will be included in all City contracts of $5,000.00 - $14,999.99. In contracts not involving building and construction projects, as that activity is defined in TEX. LABOR CODE §406.096, contractors may obtain alternative form of worker accident insurance with minimum limits of liability of $100,000 per claim.

Minimum Insurance Requirements	
Type of Coverage	**Limits of Liability**
Worker's Compensation	Statutory Coverage
Comprehensive General Liability (City named as additional insured) Bodily Injury	$250,000 each person/$500,000 each occurrence
Property Damage	$100,000 each occurrence/$100,000 aggregate or $500,000 combined single limits

(E) The following insurance requirements will be included in all City contracts of $15,000 or more.

(1) The successful bidder will be required to carry the following insurance coverage and limits of coverage, as well as list the City as an additional insured to liability coverage as requested by the City. In addition, the successful bidder shall provide the City with evidence of coverage and furnish acceptable proof of payment of insurance premiums.

(2) The successful bidder will be required to secure and/or have insurance coverage in force with an admitted property and casualty insurance company licensed by the State of Texas to conduct business in the State of Texas.

(3) In contracts not involving building and construction projects, as that activity is defined in TEX. LABOR CODE §406.096, contractors may obtain alternative form of worker accident insurance with minimum limits of liability of $100,000 per claim.

Minimum Insurance Requirements	
Type of Coverage	**Limits of Liability**
Worker's Compensation	Statutory Coverage
Employer's Liability	Bodily Injury by Accident: $100,000 each accident Bodily Injury by Disease: $100,000 each employee/$500,000 policy limit
Comprehensive General Liability Bodily Injury Property Damage	 $250,000 each person/$500,000 each occurrence $100,000 each occurrence/$100,000 aggregate or $500,000 combined single limits
Comprehensive Auto Liability Bodily Injury Property Damage	 $100,000 each person/$500,000 each occurrence $100,000 each occurrence/$100,000 aggregate or $500,000 combined single limits
City's Protective Liability Bodily Injury Property Damage	 $250,000 each person/$500,000 each occurrence $100,000 each occurrence/$100,000 aggregate or $500,000 combined single limits

SPECIFICATIONS/GENERAL CONDITIONS

The City of Edinburg Parks & Recreation Department is seeking bid/quotes from qualified local or area Companies/Firms for the purchase and installation of 10 – 15 solar street lights to Freddy Gonzalez Park located on the corner of Freddy Gonzalez Dr. and Veterans Dr. See attach for more specifications.

GENERAL

1. **Design:**
   Sol Model PMV-320-313100-SQ-CH, All components of solar lighting systems shall be mounted on the side of 45' Type 1 Grey Square Tapered Pre-stressed Concrete Pole and shall not be accessible from the ground without mechanical means. **The Brand manufacturing names are used to establish quality and characteristics of the lighting system required and not are not to exclude any other products and services of equal or greater quality and characteristics.**

2. **Operation:**
   Lights are stand-alone solar powered systems – not connected to grid power. Overall, the system operates automatically – without the use of a separate photocell. The solar panel itself acts as a photocell. It senses a low light level at dusk, and turns the light on – to run a full dusk to dawn, and adjust automatically as the days get longer. The controller regulates these functions. There is no day-to-day maintenance or adjustment required. All of the controller settings are done at the factory.

3. **Quality Assurance:**
   A. Manufacturer: Minimum 15 years experience in manufacture of solar powered lighting systems.
   B. Manufacturer's Quality System: Registered to ISO 9001:2001 Quality Standards, including in-house engineering for product design activities.
   C. PhotoVoltaic panels shall be [IEC61215] [IEEE1262] listed [and/or] [UL1703 listed]
   D. Battery shall be rated "non-spillable" by ICAO/IATA/DOT
   E. Manufacturer MUST provide 24/7 Technical Support PHONE number.
   F. Manufacturer provides independent professional engineering approved drawings for wind force resistance to at least 130 mph.
   G. Manufacturer must have knowledge of Davis Bacon Act Requirements.

4. **Required Use of American Iron, Steel, and manufactured Goods – Section 1605 of the American Recovery and Reinvestment Act of 2009 (May 2009).**

   THIS AWARD TERM IS APPLICABLE TO ANY RECOVERY ACT FUNDS FOR CONSTRUCTION, ALTERATION, MAINTENANCE, OR REPAIR OF ANY PUBLIC BUILDING OR PUBLIC WORK AND THE TOTAL PROJECT VALUE IS ESTIMATED LESS THE $7,443,000. THIS AWARD TERM ALSO APPLIES TO ALL SUBGRANTS AND CONTRACTS.

   A. Definitions. As used in this award term and condition—
      I. Manufactured good means, a good brought to the construction site for incorporation into the building or work that has been – (1) Processed into a specific form and shape; or (2) Combined with other raw material to create a material that has different properties than the properties of the individual raw materials.
      II. Public building and public work means public building of, and a public work of a governmental entity (the United States; the District of Columbia; commonwealths, territories, and minor outlying islands of the

United States; State and local governments; and multi-State, regional, or interstate entities which have governmental functions). These buildings and works may include, without limitations, bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals, and the construction alterations, maintenance, or repair of such buildings and works.

III. Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements.

B. Domestic preference.

I. This award term and condition implements Section 1605 of the American Recovery and Reinvestment Act of 2009 (Recovery Act) (Pub. L. 111—5), by requiring that all iron, steel, and manufactured goods used in the project are produced in the United States except as provided in paragraph (b)(3) and (b)(4) of this section and condition.

II. This requirement does not apply to the material listed by the Federal Government as follows: None [Award official to list applicable excepted material or indicated "none"]

III. The award official may add other iron, steel and/or manufactured goods to the list in paragraph (b)(2) of this section and condition if the Federal Government determines that—(1) The cost of the domestic iron, steel, and/or manufactured goods would be unreasonable. The cost of domestic iron, steel, and/or manufactured goods would be unreasonable when the cumulative cost of such material will increase the cost of the overall project by more than 25 percent; (2) The iron, steel, and/or manufactured good is not produced, or manufactured in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or (3) The application of the restriction of section 1605 of the Recovery Act would be inconsistent with the public interest.

C. Request for determination of inapplicability of Section 1605 of the Recovery Act.

I. Any recipient request to use foreign iron, steel, and/or manufactured goods in accordance with paragraph (b)(3) of this section shall include adequate information for Federal Government valuation of the request, including –

a. A description of the foreign and domestic iron, steel, and/or manufactured goods;
b. Unit of measure;
c. Quantity;
d. Cost;
e. Time of delivery of availability;
f. Location of the project;
g. Name and address of the proposed supplier; and
h. A detailed justification of the reason for use of foreign iron, steel, and/or manufactured goods cited in accordance with paragraph (b)(3) of this section.

II. A request based on unreasonable cost shall include a reasonable survey of the market and a completed cost comparison table in the format in paragraph (d) of this section.

III. The cost of iron, steel, and/or manufactured goods material shall include all delivery costs to the construction site and any applicable duty.

IV. Any recipient request for a determination submitted after Recovery Act funds have been obligated for a project for construction, alteration, maintenance, or repair shall explain why the recipient could not reasonably foresee the need for such determination and could not have requested the determination before the funds were obligated. If the recipient does not submit a satisfactory explanation, the award official need not make a determination.

V. If the Federal Government determines after funds have been obligated for a project for construction, alteration, maintenance, or repair that an exception to section 1605 of the Recovery Act applies, the award official will amend the award to allow use of the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is non-availability or public interest, the amended award shall reflect adjustment of the award amount, redistribution of budgeted funds, and/or relevant manufactured goods. When the basis for the exception is the unreasonable cost of the domestic iron, steel or manufactured goods, the award official shall adjust the award amount or redistribute budgeted funds by the least the differential established in 2 CFR 176.110(a).

VI. Unless the Federal government determines that an exception to the section 1605 of the Recovery Act applies, use of foreign iron, steel, and/or manufactured goods in noncompliant with section 1605 of the American Recovery and Reinvestment Act.

D. Data. To permit evaluation of request under paragraph (d) of this section based on unreasonable cost, the Recipient shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Items Cost Comparison

Description	Unit of Measure	Quantity	Cost (dollars)*
Item 1:			
Foreign steel, iron, or manufactured good			
Domestic steel, iron, or manufactured good			
Item 2:			
Foreign steel, iron, or manufactured good			
Domestic steel, iron, or manufactured good			

List name, address, telephone number, email address, and contact for suppliers surveyed. Attach copy of the response; if oral, attach summary. Include other applicable supporting information.

*** Include all delivery cost to the constructions site.**

5. **Required use of American iron, steel manufactured goods (covered under international agreements) – Section 1605 of the American Recovery and Reinvestment Act of 2009 (May 2009)**

THIS AWARD TERM IS APPLICABLE TO ANY RECOVERY ACT FUNDS FOR CONSTRUCTION, ALTERATION, MAINTENANCE, OR REPAIR OF ANY PUBLIC BUILDING OR PUBLIC WORK AND THE TOTAL PROJECT VALUE IS ESTIMATED LESS THE $7,443,000. THIS AWARD TERM ALSO APPLIES TO ALL SUBGRANTS AND CONTRACTS.

A. Definitions. As used in this award terms and condition –

Designated country –

a. A World Trade Organization Government Procurement Agreement country (Aruba, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom;
b. A Free Trade Agreement (FTA) country (Australia, Bahrain, Canada, Chile, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Mexico, Morocco, Nicaragua, Oman, Peru, or Singapore); or
c. A United States-European Communities Exchange of Letters (May 15, 1995) country: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and United Kingdom.

Designated Country iron, steel, and/or manufactured goods –

a. Is wholly the growth, product, or manufacture of a designated country; or
b. In the case of a manufactured good that consist in whole or in part of materials from another country, has been substantially transformed in a designated country into a new and different manufactured good distinct from the materials from which it was transformed.

Designated iron, steel, and/or manufactured good –

a. Is wholly the growth, product, or manufacture of the United States; or
b. In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in the United States into a new and different manufactured good distinct from the materials from which it was transformed. There is no requirement with regard to the origin of components or subcomponents in manufactured goods or products, as long as the manufacture of the goods occurs in the United States.

Foreign iron, steel, and/or manufactured good means iron, steel and/or manufactured good that is not domestic or designated country iron, steel, and/or manufactured good.

Manufactured good means a good brought to the construction site for incorporation into the building or work that has been—

a. Processed into a specific form and shape; or
b. Combined with other raw material to create a material that has different properties than the properties of the individual raw materials.

Public building and public work means a public building of, and a public work of, a governmental entity (the United States; the District of Columbia; commonwealths, territories, and minor outlying islands of the United States; State and local governments; and multi-State, regional, or interstate entities which have governmental functions). These buildings and works may include, without limitation, bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals, and the construction, alteration, maintenance, or repair of such buildings and works.

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements.

B. Iron, steel, and manufactured goods.

1. The award term and condition described in this section implements—
(i) Section 1605(a) of the American Recovery and Reinvestment Act of 2009 (Pub. L. 111–5) (Recovery Act), by requiring that all iron, steel, and manufactured goods used in the project are produced in the United States; and
(ii) Section 1605(d), which requires application of the Buy American requirement in a manner consistent with U.S. obligations under international agreements. The restrictions of section 1605 of the Recovery Act do not apply to designated country iron, steel, and/or manufactured goods. The Buy American requirement in section 1605 shall not be applied where the iron, steel or manufactured goods used in the project are from a Party to an international agreement that obligates the recipient to treat the goods and services of that Party the same as domestic goods and services. This obligation shall only apply to projects with an estimated value of $7,443,000 or more.

2. The recipient shall use only domestic or designated country iron, steel, and manufactured goods in performing the work funded in whole or part with this award, except as provided in paragraphs (b)(3) and (b)(4) of this section.
3. The requirement in paragraph (b)(2) of this section does not apply to the iron, steel, and manufactured goods listed by the Federal Government as follows:

4. The award official may add other iron, steel, and manufactured goods to the list in paragraph (b)(3) of this section if the Federal Government determines that—
   (i) The cost of domestic iron, steel, and/or manufactured goods would be unreasonable. The cost of domestic iron, steel, and/or manufactured goods used in the project is unreasonable when the cumulative cost of such material will increase the overall cost of the project by more than 25 percent;
   (ii) The iron, steel, and/or manufactured good is not produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality; or
   (iii) The application of the restriction of section 1605 of the Recovery Act would be inconsistent with the public interest.

C. Request for determination of inapplicability of section 1605 of the Recovery Act or the Buy American Act.
   1. (i)Any recipient request to use foreign iron, steel, and/or manufactured goods in accordance with paragraph (b)(4) of this section shall include adequate information for Federal Government evaluation of the request, including—
      (A) A description of the foreign and domestic iron, steel, and/or manufactured goods;
      (B) Unit of measure;
      (C) Quantity;
      (D) Cost;
      (E) Time of delivery or availability;
      (F) Location of the project;
      (G) Name and address of the proposed supplier; and
      (H) A detailed justification of the reason for use of foreign iron, steel, and/or manufactured goods cited in accordance with paragraph (b)(4) of this section.
      (ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed cost comparison table in the format in paragraph (d) of this section.
      (iii) The cost of iron, steel, or manufactured goods shall include all delivery costs to the construction site and any applicable duty.
      (iv) Any recipient request for a determination submitted after Recovery Act funds have been obligated for a project for construction, alteration, maintenance, or repair shall explain why the recipient could not reasonably foresee the need for such determination and could not have requested the determination before the funds were obligated. If the recipient does not submit a satisfactory explanation, the award official need not make a determination.

   2. If the Federal Government determines after funds have been obligated for a project for construction, alteration, maintenance, or repair that an exception to section 1605 of the Recovery Act applies, the award official will amend the award to allow use of the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is non-availability or public interest, the amended award shall reflect adjustment of the award amount, redistribution of budgeted funds, and/or other appropriate actions taken to cover costs associated with acquiring or using

the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is the unreasonable cost of the domestic iron, steel, or manufactured goods, the award official shall adjust the award amount or redistribute budgeted funds, as appropriate, by at least the differential established in 2 CFR 176.110(a).

3. Unless the Federal Government determines that an exception to section 1605 of the Recovery Act applies, use of foreign iron, steel, and/or manufactured goods other than designated country iron, steel, and/or manufactured goods is noncompliant with the applicable Act.

D. Data. To permit evaluation of request under paragraph (d) of this section based on unreasonable cost, the Recipient shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Items Cost Comparison

Description	Unit of Measure	Quantity	Cost (dollars)*
Item 1:			
Foreign steel, iron, or manufactured good			
Domestic steel, iron, or manufactured good			
Item 2:			
Foreign steel, iron, or manufactured good			
Domestic steel, iron, or manufactured good			

6. Wage rate requirements under section 1606 of the Recovery Act (May 2009)

THIS AWARD TERM IS APPLICABLE TO RECOVERY ACT PROGRAMS OR ACTIVITIES THAT MAY INVOLVE CONSTRUCTION, ALTERATION, MAINTENANCE ARE REPAIR. THIS AWARD TERM ALSO APPLIES TO ALL SUBGRANTS AND CONTRACTS.

a. Section 1606 of the Recovery Act requires that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the Federal Government pursuant to the Recovery Act shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code.

Pursuant to Reorganization Plan No. 14 and the Copeland Act, 40 U.S.C. 3145, the Department of Labor has issued regulations at 29 CFR parts 1, 3, and 5 to implement the Davis-Bacon and related Acts. Regulations in 29 CFR 5.5 instruct agencies concerning application of the standard Davis-Bacon contract clauses set forth in that section. Federal agencies providing grants, cooperative agreements, and loans under the Recovery Act shall ensure that the standard Davis-Bacon contract clauses found in 29 CFR 5.5(a) are incorporated in any resultant covered contracts that are in excess of $2,000 for construction, alteration or repair (including painting and decorating).

b. For additional guidance on the wage rate requirements of section 1606, contact your awarding agency. Recipients of grants, cooperative agreements and loans should direct their initial inquiries concerning the application of Davis-Bacon requirements to a particular federally assisted project to the Federal agency funding the project. The Secretary of Labor retains final coverage authority under Reorganization Plan Number 14.

7. **Recovery Act Transactions Listed in Schedule of Expenditures of Federal Awards and Recipient Responsibilities for Informing Sub recipients (May 2009).**

   a. To maximize the transparency and accountability of funds authorized under the American Recovery and Reinvestment Act of 2009 (Pub. L. 111–5) (Recovery Act) as required by Congress and in accordance with 2 CFR 215.21 "Uniform Administrative Requirements for Grants and Agreements" and OMB Circular A–102 Common Rules provisions, recipients agree to maintain records that identify adequately the source and application of Recovery Act funds. OMB Circular A–102 is available at http://www.whitehouse.gov/omb/circulars/a102/a102.html.

   b. For recipients covered by the Single Audit Act Amendments of 1996 and OMB Circular A–133, "Audits of States, Local Governments, and Non-Profit Organizations," recipients agree to separately identify the expenditures for Federal awards under the Recovery Act on the Schedule of Expenditures of Federal Awards (SEFA) and the Data Collection Form (SF–SAC) required by OMB Circular A–133. OMB Circular A–133 is available at http://www.whitehouse.gov/omb/circulars/a133/a133.html. This shall be accomplished by identifying expenditures for Federal awards made under the Recovery Act separately on the SEFA, and as separate rows under Item 9 of Part III on the SF–SAC by CFDA number, and inclusion of the prefix "ARRA-" in identifying the name of the Federal program on the SEFA and as the first characters in Item 9d of Part III on the SF–SAC.

   c. Recipients agree to separately identify to each sub-recipient, and document at the time of sub-award and at the time of disbursement of funds, the Federal award number, CFDA number, and amount of Recovery Act funds. When a recipient awards Recovery Act funds for an existing program, the information furnished to sub-recipients shall distinguish the sub-awards of incremental Recovery Act funds from regular sub-awards under the existing program.

   d. Recipients agree to require their sub-recipients to include on their SEFA information to specifically identify Recovery Act funding similar to the requirements for the recipient SEFA described above. This information is needed to allow the recipient to properly monitor sub-recipient expenditure of ARRA funds as well as oversight by the Federal awarding agencies, Offices of Inspector General and the Government Accountability Office.

8. Davis Bacon Act Requirements (May 2009)

REQUIREMENTS UNDER SECTION 1606 OF THE RECOVERY ACT TERM IS APPLICABLE. THIS AWARD TERM IS ALSO APPLICABLE TO SUBGRANTS AND CONTRACTS. THIS AWARD TERM IS APPLICABLE TO ARRA AWARDS WHEN WAGE RATE

Note: Where necessary to make the context of these articles applicable to this award, the term "Contractor" shall mean "Recipient" and the term "Subcontractor" shall mean "Sub-recipient or Subcontractor" per the following definitions.

Recipient means the organization, individual, or other entity that receives an award from DOE and is financially accountable for the use of any DOE funds or property provided for the performance of the project, and is legally responsible for carrying out the terms and conditions of the award.

Sub-recipient means the legal entity to which a sub-award is made and which is accountable to the recipient for the use of the funds provided. The term may include foreign or international organizations (such as agencies of the United Nations).

Davis-Bacon Act
(a) *Definition.* – "Site of the work"—

1. Means--
   (i) The primary site of the work. The physical place or places where the construction called for in the award will remain when work on it is completed; and
   (ii) The secondary site of the work, if any. Any other site where a significant portion of the building or work is constructed, provided that such site is—
      (A) Located in the United States; and
      (B) Established specifically for the performance of the award or project;

2. Except as provided in paragraph (3) of this definition, includes any fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, too yards, etc., provided—
   (i)They are dedicated exclusively, or nearly so, to performance of the award of project; and
   (ii) They are adjacent or virtually adjacent to the "primary site of the work" as defined in paragraph (a)(1)(i), or the "secondary site of the work" as defined in paragraph (a)(1)(ii) of this definition;

3. Does not include permanent home offices, branch plant establishments, fabrication plants, or tool yards of a Contractor or subcontractor whose locations and continuance in operation are determined wholly without regard to a particular Federal award or project. In addition, fabrication plants, batch plants, borrow pits, job headquarters, yards, etc., of a commercial or material supplier which are established by a supplier of materials for the project before opening of bids and not on the Project site, are not included in the "site of the work." Such permanent, previously established facilities are not a part of the "site of the work" even if the operations for a period of time may be dedicated exclusively or nearly so, to the performance of a award.

(b) (1) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona-fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, or as may be incorporated for a secondary site of the work, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Any wage determination incorporated for a secondary site of the work shall be effective from the first day on which work under the award was performed at that site and shall be incorporated without any adjustment in award price or estimated cost. Laborers employed by the construction Contractor or construction subcontractor that are transporting portions of the building or work between the secondary site of the work and the primary site of the work shall be paid in accordance with the wage determination applicable to the primary site of the work.

(2) Contributions made or costs reasonably anticipated for bona-fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (e) of this article; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period.

(3) Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the article entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

(4) The wage determination (including any additional classifications and wage rates conformed under paragraph (c) of this article) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(c)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the award shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits; therefore, only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona-fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), report of the action taken shall be sent by the Contracting Officer to the Administrator of the:

Wage and Hour Division
Employment Standards Administration
U.S. Department of Labor
Washington, DC 20210

The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (c)(2) and (c)(3) of this article, shall be paid to all workers performing work in the classification under this award from the first day on which work is performed in the classification.

(d) Whenever the minimum wage rate prescribed in the award for a class of laborers or mechanics includes a fringe benefit, which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona-fide fringe benefit or an hourly cash equivalent thereof.

(e) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona-fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

Rates of Wages

The minimum wages to be paid to laborers and mechanics under this award involved in performance of work at the project site, as determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the pertinent locality, are included as an attachment to this award. These wage rates are minimum rates and are not intended to represent the actual wage rates that the Contractor may have to pay.

Payrolls and Basic Records

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona-fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the article entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b) (1) The Contractor shall submit weekly for each week in which any award work is performed, a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurate and complete information required to be maintained under paragraph (a) of this article, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the –

Superintendent of Documents U.S. Government Printing Office Washington, DC 20402

The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Contracting Officer if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to

the applicant, sponsor, or owner, as the case may be for transmission to the Contracting Officer, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the award and shall certify --

(i) That the payroll for the payroll period contains the information required to be provided under paragraph (b)(1) of this article, the appropriate information is being maintained under paragraph (a) of this article and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the award during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the award.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this article.

(4) The falsification of any of the certifications in this article may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this article available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

Withholding of Funds

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this award or any other Federal award with the same Prime

Contractor, or any other federally assisted award subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the award. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the award, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

Apprentices and Trainees

(a) Apprentices.

(1) An apprentice will be permitted to work at less than the predetermined rate for the work they performed when they are employed—
   (i) Pursuant to and individually registered in a bona-fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship and Training, Employer, and Labor Services (OATELS) or with a State Apprenticeship Agency recognized by the OATELS; or
   (ii) In the first 90 days of probationary employment as an apprentice in such an apprenticeship program, even though not individually registered in the program, if certified by the OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeymen on the job site in any craft classification, shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program.

(3) Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph (a)(1) of this article, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination.

(5) Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(6) In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees.

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer, and Labor Services (OATELS). The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by OATELS.

(2) Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the OATELS shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed.

(3) In the event OATELS withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(4) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this article shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

Compliance with Copeland Act Requirements

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this award.

Subcontracts (Labor Standards)

(a) Definition. "Construction, alteration or repair," as used in this article means all types of work done by laborers and mechanics employed by the construction Contractor or construction subcontractor on a particular building or work at the site thereof, including without limitation—

(1) Altering, remodeling, installation (if appropriate) on the site of the work of items fabricated offsite;

(2) Painting and decorating;

(3) Manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work;

(4) Transportation of materials and supplies between the site of the work within the meaning of paragraphs (a)(1)(i) and (ii) of the —site of the work□ as defined in the article entitled Davis Bacon Act of this award, and a facility which is dedicated to the construction of the building or work and is deemed part of the site of the work within the meaning of paragraph (2) of the "site of work" definition; and

(5) Transportation of portions of the building or work between a secondary site where a significant portion of the building or work is constructed, which is part of the "site of the work" definition in paragraph (a)(1)(ii) of the Davis-Bacon Act Article, and the physical place or places where the building or work will remain (paragraph (a)(1)(i) of the Davis Bacon Act article, in the "site of the Work" definition).

(b) The Contractor or subcontractor shall insert in any subcontracts for construction, alterations, and repairs within the United States the articles entitled—

(1) Davis-Bacon Act;

(2) Contract Work Hours and Safety Standards Act -- Overtime Compensation (if the article is included in this award);

(3) Apprentices and Trainees;

(4) Payrolls and Basic Records;

(5) Compliance with Copeland Act Requirements;

(6) Withholding of Funds;

(7) Subcontracts (Labor Standards);

(8) Contract Termination – Debarment;

(9) Disputes Concerning Labor Standards;

(10) Compliance with Davis-Bacon and Related Act Regulations; and

(11) Certification of Eligibility.

(c) The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor performing construction within the United States with all the award articles cited in paragraph (b).

(d) (1)Within 14 days after issuance of the award, the Contractor shall deliver to the Contracting Officer a completed Standard Form (SF) 1413, Statement and Acknowledgment, for each subcontract for ocnstruction within the United States, including the subcontractor's signed and dated acknowledgment that the articles set forth in paragraph (b) of this article have been included in the subcontract. Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(e) The Contractor shall insert the substance of this article, including this paragraph (e) in all subcontracts for construction within the United States.

Contract Termination – Debarment

A breach of the award articles entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act -- Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the whole award or in part for the Recovery Act covered work only, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

Compliance with Davis-Bacon and Related Act Regulations

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this award.

Disputes Concerning Labor Standards

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes and Appeals as defined in 10 CFR 600.22. Disputes within the meaning of this article include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

Certification of Eligibility

(a) By entering into this award, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government awards by virtue of section 3(a) of the Davis Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this award shall be subcontracted to any person or firm ineligible for award of a Government award by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

Approval of Wage Rates

All straight time wage rates, and overtime rates based thereon, for laborers and mechanics engaged in work under this award must be submitted for approval in writing by the head of the contracting activity or a representative expressly designated for this purpose, if the straight time wages exceed the rates for corresponding classifications contained in the applicable Davis-Bacon Act minimum wage determination included in the award. Any amount paid by the Contractor to any laborer or mechanic in excess of the agency approved wage rate shall be at the expense of the Contractor and shall not be reimbursed by the Government. If the Government refuses to authorize the use of the overtime, the Contractor is not released from the obligation to pay employees at the required overtime rates for any overtime actually worked.

9. Warranty:

Proposals submitted *without* the following written warranties will be considered non-responsive. **The brand warranties are used to establish quality and characteristics of the lighting system required and not are not to exclude any other products and services of equal or greater quality and characteristics.**

A. Provide manufacturer's warranty covering 5 years on solar lighting system from date of purchase.
B. Solar Photovoltaic Panel covered for minimum 20 years
C. Mounting hardware, arms & brackets covered for a minimum of 20 years
D. LED light engine, lamps and fixtures covered for a minimum of 10 years
E. Wire harnessing, connectors and terminals covered for a minimum of 10 years
F. Electronics: LED driver, charge controller, communications covered for a minimum of 10 years
G. Batteries have a limited warranty with a replacement cost credit for up to 5 years with the following minimum coverage: 100% credit for the first 2 years, 60% credit for year 3, 40% coverage for year 2 and 20% credit for year 5.

10. References and guidelines:

A. American National Standards Institute/ Institute of Electrical and Electronic Engineers (ANSI/IEEE)
   - ANSI/ESD S20.20-2007 Development of an Electrostatic Discharge Control Program
B. International Electro Technical Commission.
   - (IEC) 801-2 Electrostatic Discharge Testing Standard.
C. International Organization for Standardization (ISO)
   - 9001 (2001) – Quality Management Systems.

D. National Electrical Manufacturers Association (NEMA)
   - PE 5-1997 (R2003) – Utility Type Battery Chargers
   - NEMA 250-2003 – Enclosures for Electrical Equipment
   - ANSI/IEC 60529-2004 –Degrees of Protection Provided by Enclosures

E. Underwriters Laboratories, Inc. (UL):
   - UL 1598 Luminaries
   - UL 2108 Low Voltage Lighting Systems

11. Light Levels:

Light level requirements must comply with IESNA (The Illuminating Engineering Society of North America) recommendations to determine appropriate lighting level requirements for application.

PRODUCTS

1. Performance Criteria and Considerations

a. Solar panels protected on top by tempered glass
b. Free Standing, each unit self-contained
c. Powered by power management technology
d. Cobrahead glass swag style lens
e. State of the art LED light source – multi-junction strip type LED's
f. 100,000 hours rated life
g. 2182 lumens total output with no lens losses from LED packaging
h. 5100 Kelvin – bright white color light – excellent for security
i. CRI <80
j. Operational hours – full dusk to dawn all year round (13.5 hours)
k. 10 days autonomy (battery reserve) for all weather conditions
l. Advanced Power Management LED driver to extend lamp operation and conserve battery power in times of extended inclement weather
m. Mounted high on pole for vandal resistance – no wires running through pole to the ground.
n. Sized according to US DOE, Sandia Labs formula
o. Durability in design and manufacture
p. Warranty on solar panels ≥ 20-years
q. USA based ISO certified manufacturing facility

2. Solar Power Unit:

The solar module shall contain polycrystalline solar cells, protected on the upper surface by low iron tempered glass. The solar module shall have a rugged aluminum frame, which connects to brackets for attachment to the mounting arm at a 45-degree tilt. All wiring connections shall be with weather resistant plugs as to keep installation simple, eliminate incorrect wiring, and prevent exposure to corrosion. Stainless steel hardware shall be used throughout.

The solar module array must exhibit the following characteristics: **The Brand manufacturing names are used to establish quality and characteristics of the lighting system required and not are not to exclude any other products and services of equal or greater quality and characteristics.**

a. Type: SOL, INC Model –SPM-250
b. Cells: Poly-crystalline silicon cells
c. Total watts: 250 watts
d. Tilt angle: 45 degrees
e. Connections: Weather resistant plug, 4 & 2 pin, color-coded

3. Fixture:

The overhead fixture shall be a die cast corrosion resistant aluminum Cobrahead style fixture with a glass swag lens. Fixture enclosure is water tight, sealed, dust and insect free – IP-69. Electrostatic powder-coated finish. Fixture and light source will contain no mercury or lead and present no environmental disposal issues. Proprietary SOL INC, power management with algorithm will adjust light in periods of bad weather to ensure that the light is always on. The electrical connection shall be with weather resistant plugs to simplify installation, eliminate reverse wiring, and prevent exposure to corrosion. **The Brand manufacturing names are used to establish quality and characteristics of the lighting system required and not are not to exclude any other products and services of equal or greater quality and characteristics.**

The fixture must exhibit the following characteristics:
a. Type: Die cast corrosion resistant aluminum cobrahead style fixture
b. Finish: Electrostatic powder-coated finish
c. Fixture Enclosure: Water tight, sealed, dust and insect free
d. Lens: Swag glass lens
e. Intrusion Protection: IP-69

4. Light Source (LED Light Emitting Diode No 5mm Allowed):

The light source shall be solid-state strip LED (light emitting-diode) with digital driver. 100,000 hour rated lamp life, 22 watt LED, 78 lumens per watt out of fixture at rated power. CRI <75. LED's should be multi-junction strip type LED's – 4 strips per quad, and 48 LED's per strip for a total of 192 LED's per quad. Each fixture shall have two quads for a total of 384 LED's. LED's mount directly to heat sinking plate. Reflector system captures light emitted from the LED and directs to the target area. No lens losses from the LED packaging. Reflector coated to prevent degradation of reflective surface. 50G shock rating. The advanced power management LED driver extends lamp operation and conserves battery power in times of extended inclement weather.

The light source (LED) must exhibit the following characteristics:
a. Type: Strip LED with digital driver
b. Rated lamp life: 100,000 hours
c. Lamp Lumens: 78 lumens per watt at rated power
d. LED: LED 30 watt, 5100 Kelvin 50,000 hour guaranteed lamp
e. life
f. Heat Removal: LED's mounted directly to heat sinking plate
g. Reflector: Reflector system captures light emitted from the LED and directs to the targeted area.
h. Shock Rating: 50 G's

i. Environmental Issues: No environmental disposal issues. Contains no mercury or lead.
j. LED Driver: Electronic driver
k. Capacitors: No electrolytic capacitors shall be used.
l. Power Management: Sol's advanced power management feature extends lamp operation and conserves battery power in times of extended inclement weather.

5. Controller:

The SOL-Eterno 12/24v controller is a microprocessor based charge controller designed exclusively for the running of solar lighting applications. SOL-Eterno Controller will feature automatic charge termination for Gel and AGM batteries. LVD (low voltage disconnects) set to extend battery life. Built in test routines for checking the installation of solar lighting system. PWM (pulse width modulation) charging algorithm. Controller auto senses system voltage. Weatherproof connectors. Circuit protected with UL approved weather sealing charge current rating of 20 amps. SOL-Eterno Controller shall be located inside the battery box. SOL-Eterno Controller shall be factory pre-set for full dusk to dawn each evening (13.5 hours). **The Brand manufacturing names are used to establish quality and characteristics of the lighting system required and not are not to exclude any other products and services of equal or greater quality and characteristics.**

SOL-Eterno Charge/Load Controller must exhibit the following characteristics:

a. Method of charge: Pulse width modulation charging algorithm
b. LVD Disconnect: Set to extend battery life
c. Test routines: Built in for checking installation of solar lighting system
d. Connectors: Weatherproof connectors.
e. Location: Controller located inside battery box.
f. Run time: Factory pre-set for full dusk to dawn – 13.5 hours
g. **The Brand manufacturing names are used to establish quality and characteristics of the lighting system required and not are not to exclude any other products and services of equal or greater quality and characteristics.**

6. Battery and Battery Enclosure:

Battery shall be of sealed valve, regulated gel type, requiring no maintenance, air shippable, capable of 1300 minimum cycles to 30% depth of discharge, and rated for 99 amp hours at the 100-hour rate. 10 days autonomy (battery reserve) for all weather conditions. The wire harness shall include a weather resistant ATO fuse holder and plug to eliminate system failure due to corrosion, and accommodate quick/easy installation. The battery enclosure shall be aluminum, vented and shaded by solar array with access door loaded from front. Battery enclosure houses battery and controller. Proprietary power management with algorithm that protects battery life in periods of bad weather to ensure that the light is always on. Entire unit shaded by the panels to avoid heat. Mounted high on the pole, avoids vandalism.

The battery must exhibit the following characteristics:

a. Type: Sealed valve regulated gel
b. Voltage: 12 (volts) each
c. Location of box High on pole, under panels, avoids heat and vandalism
d. Enclosure: Aluminum vented
e. Access Door: Loaded from front
f. Battery reserve: 10 days autonomy
g. Power management: Protects battery life in periods of bad weather
h. Regular maintenance: None

7. **Brackets and Arms:**

The support frame is constructed of tubular extruded aluminum. The fixture support arm is constructed of aluminum tube. All hardware is stainless steel. The overall Effective Projected Area (EPA), of the entire system including luminaire shall not exceed 14 sq. ft. and total weight of 326 lbs.

Solar Array Support Frame Side of pole must exhibit the following characteristics:

a. Angle of tilt 45 degrees
b. Fixture Support Arm 10 foot aluminum
c. Material Aluminum
d. Hardware Stainless steel

Installation

1. **Installation:**
Installation and design shall follow all national and local codes and ordinances, UL standards, the national Electrical Code and standards established by the Occupational Safety and Health Administration. Contractor shall have a minimum of 1 year installation and design experience and Contractor shall provide 1 year workmanship.

2. **Supplied Pole:**
System to mount on side of 45' foot Type 1 grey Square Tappered pre-stressed concrete pole with factory supplied mounting hardware. Pole must be able to withstand EPA and total weight for each system.

3. **Wire Connections:**
All wire connections shall be with weather resistant plugs, keyed to make installation quick and easy and to eliminate failure due to corrosion and incorrect wiring.