GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF GENERAL SERVICES

ON-SITE SOLAR POWER PURCHASING AGREEMENT AT VARIOUS MUNICIPAL FACILITIES

Solicitation #: DCAM-14-CS-0123

Addendum No. 3
Issued: April 29, 2014

This Addendum Number 03 is issued by e-mail on April 29, 2014. Except as modified hereby, the Request for Proposals ("RFP") remains unmodified.

Item #1

Clarifications

1. PV Watts v. PV Syst. – For purposes of the first phase of this procurement, Offerors shall provide data from PV Watts. Offerors shortlisted for the second phase of this procurement shall submit data from PV Syst during the second phase of this procurement as discussed in Part V, Section E of the RFP.

2. The selected developers shall not bear the risk of changes downstream of the systems installed. For example, Pepco costs associated with network upgrades, environmental costs, curtailment costs, fees or similar items up to and including the Pepco meter that might not yet be identified or may arise after PPA execution shall be borne by the Department. The Offeror's price shall represent the unit price for purchase of power as measured at the customer side of the meter (i.e. after inversion). The selected developer shall bear the risk of costs associated with the construction and installation of the systems as well as all other costs associated with the systems and actual production and transmission through the inverter to the customer side of the meter.

3. Interconnection Costs – Systems installed as part of this Project will take advantage of Net Energy Metering (NEM), unless specified otherwise by Department or its agents. Offeror shall be responsible for ensuring the system design and interconnection qualifies for NEM. Offeror shall be responsible for assembling the applications for all necessary interconnection agreements with the Potomac Electric Power Company ("Pepco") for the Project and shall pay any application fees imposed by Pepco. Offeror shall be responsible for any fees, costs and expenses relating to normal and customary utility interconnection studies that may be required in connection with such agreements. All utility work required in connection with an interconnection agreement that is on the site side of the Pepco meter shall be at the sole cost and expense of the Offeror. Utility work required in connection with an interconnection agreement that is beyond Pepco's meter and is not normal and customary shall be at the Department's cost and expense and shall be coordinated with the Department.

4. Bonding & Financial Guarantees – The selected Developer(s) will be required to provide payment and performance bonds for the construction of the systems. In addition to providing the construction related bonds, the selected Developer(s) will be required to provide a financial guarantee of the Developer's obligations under the resulting PPAs. If the Innovation Bundle is purchased outright by the Department, the developer for that bundle would not be required to provide a financial guarantee. Further details regarding the financial guarantees will be provided in Phase 2 of the procurement.

5. General Schedule – The Department's goal is to have the PPAs negotiated and approved by the Council by December 2014, with the PVs installed and live by May 2015. The construction sites in the Innovation Bundle may vary depending on the schedule for the renovation/construction of those projects.

6. There is some flexibility with respect to the size of the systems at each of the sites. The Department's goal is the maximum the AC output at the sites. If there are a few sites that are less economically viable whether due to interconnection costs or otherwise, the Department will consider removing those from a bundle. If the Offeror's price assumes that a few sites will be dropped, the Offeror should note those sites as excluded in its proposal. The Department is not, however, interested in proposals which bid less than 10% of the output size indicated.

7. Offerors will be required to comply with the First Source Employment Agreement Act of 1984, as amended by the Workforce Intermediary Establishment and Reform of First Source, and implementing regulations.

8. PV systems must be installed in a first-class, workmanlike manner. The Developer will be responsible for direct damage to the structure (both directly to the roof or other parts of the structure) as well as damage that may result therefrom.

Item #2

Multiple Cost Proposals: Offerors shall provide pricing based on the assumption that the developer would retain the SRECs for the first three (3) years of the term of the PPA. If the Offeror believes that the optimal period of time for the Developer to retain the SRECs is longer than such three (3) year period, the Offeror should indicate the length of such optimal SREC retention period, and provide pricing based on such period.

For each scenario, the Offeror shall indicate the SREC value upon which its pricing proposal is based. Revised attachments to the Form of Offer Letter are included with this Addendum and available for download at: https://leftwichlaw.box.com/shared/static/bx9gy10j6am4q3jhdvbl.xlsx.

Item #3

Site Visits: Below is the schedule of site visits for representative facilities in the Large and Small Bundles.

Site Visit Date	Site Visit Time	Bundle	Facility	Address	Est. Size (kW DC)
5-May-14	9:00 AM	Large	Raymond Education Campus	915 Spring Road NW	262
6-May-14	9:00 AM	Small	Wilson High School	3950 Chesapeake Street NW	119
6-May-14	11:00 AM	Small	Wilson Aquatic Center	4551 Fort Drive NW	81
7-May-14	9:00 AM	Small	Shepherd Elementary School	7800 14th Street NW	90
12-May-14	9:00 AM	Small	Fifth District Police Station	1805 Bladensburg Road NE	126
12-May-14	12:00 PM	Small	Walker Jones Education Campus	1125 New Jersey Avenue NW	110
13-May-14	9:00 AM	Large	Saint Elizabeth's Hospital	1100 Alabama Avenue SE	798
13-May-14	12:00 PM	Large	DC Police Academy Annex	4665 Blue Plains Drive SW	705
14-May-14	9:00 AM	Large	H.D. Woodson High School	540 55th Street NE	503
14-May-14	12:00 PM	Large	Deanwood Recreation Center	1350 49th Street NE	237

Item #4

Attachment A.4: Solar PV System Design Specifications are attached hereto.

Item #5

The bid date remains unchanged. Proposals are due by **May 30, 2014 at 2:00 pm EDT**. Proposals that are hand-delivered should be delivered to the attention of: Courtney Washington, Contract Specialist, at **Frank D. Reeves Center, 2000 14th Street, NW, 8th floor, Washington, DC 20009**.

- End of Addendum No. 3 -

ATTACHMENT A.4

Solar PV System Design Specifications

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SOLAR PV SYSTEM DESIGN SPECIFICATIONS

1. SITE ACCESS

Each selected offeror ("Offeror") will be required to comply with all applicable District of Columbia laws, rules and regulations applicable to the construction of the Systems at the various sites. Prospective bidders are cautioned that the sites encompass diverse uses including several public schools and Offeror will be required to coordinate the construction activities at certain sites with the applicable agency or department so as to avoid disrupting the agency's or department's use of the site. Unless otherwise determined by the Department of General Services ("Department"), Offeror shall be responsible for providing bathroom and storage facilities for all workers on-site, and shall be responsible for procuring, installing, securing, and removing temporary security fencing and scaffolding.

2. PROJECT MANAGEMENT

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2.

2.1 Project Manager

Offeror shall assign a project manager ("Project Manager") from its firm upon execution of a power purchase agreement ("PPA") with the District of Columbia for the applicable Bundle (the "Project"). The Project Manager shall ensure that all contract, schedule, and reporting requirements of the Project are met and shall be the primary point of day-to-day contact for the Department.

2.2 Solar Incentives

Unless the Department directs otherwise, Offeror shall be responsible for the submission of any applications for available energy production incentives associated with the Project and shall be responsible for providing updated documentation to incentive program administrators throughout the Project, as required by rules of the relevant incentive program.

2.3 Interconnection

Offeror shall be responsible for assembling the applications for all necessary interconnection agreements with the Potomac Electric Power Company ("Pepco") for the Project and shall pay any application fees imposed by Pepco. Offeror shall be responsible for any fees, costs and expenses relating to normal and customary utility interconnection studies that may be required in connection with such agreements.

All utility work required in connection with an interconnection agreement that is on the site side of the Pepco meter shall be at the sole cost and expense of the Offeror. Utility work required in connection with an interconnection agreement that is beyond Pepco's meter and is not normal and customary shall be at the Department's cost and expense and shall be coordinated with the Department.

Systems installed as part of this Project will take advantage of Net Energy Metering (NEM), unless specified otherwise by Department or its agents. Offeror shall be responsible for ensuring the system design and interconnection qualifies for NEM, as applicable.

3. SYSTEM DESIGN

3.

3.1 Design Review Process

Offeror is responsible for providing designs for each site within the Project to the Department for its review and approval in accordance with the terms and conditions of the PPA. Costs for engineering reviews and approvals associated with such designs shall be borne by the Offeror. System designs must take into account Department aesthetic issues and shall not conflict with any current Department operations at the applicable site. The schedule for the Project established pursuant to the PPA shall include adequate time for Department review and approval of such submittals.

3.2 Shading

Offeror shall avoid excessive shading on modules to the extent possible. Where shading losses are encountered, Offeror shall perform a shading analysis justifying the basis for their design, including any proposed tree removal, and explaining why shading does not create an adverse performance and/or economic impact.

3.3 Offeror Licensing

Offeror shall comply with all applicable licensing requirements for the work to construct and install the Project.

3.4 Production Modeling

Production modeling of the PV systems in the Project shall be performed in accordance with the instructions provided in the RFP.

3.5 Permits And Approvals

Offeror, at its sole cost and expense, shall obtain all permits and approvals required by applicable law for the Project from the applicable departments and agencies of the District of Columbia including, without limitation, any permits for road closures.

3.6 Technical Requirements

All components of the Project and their installation and subsequent operation shall comply with all applicable industry codes and standards and all applicable laws. Offeror shall demonstrate to the Department's reasonable satisfaction that at each site the existing structures will not be compromised or adversely impacted by the installation and/or operation of the System Offeror has proposed to install. In addition, an Offeror's proposed systems shall comply with the following requirements.

A. PV Modules. The PV modules proposed by Offeror shall comply with at least the following:

- IEEE 1262 "Recommended Practice for Qualifications of Photovoltaic Modules".
- System modules shall be UL1703 listed and CEC listed.
- Modules shall be new, undamaged, fully warranted without defect.
- If PV modules using hazardous materials are to be provided, then the environmental impact of the hazardous material usage must be disclosed, including any special maintenance requirements and proper disposal/recycling of the modules at the end of their useful life.

B. *Inverters.* The inverters proposed by Offeror shall comply with at least the following:

- Inverters shall be suitable for grid interconnection and shall be compliant with all interconnection requirements.
- IEEE 929-2000 – "Recommended Practice for Utility Interface of Photovoltaic Systems".
- Inverters shall be UL 1741 and IEEE 1547 compliant.
- Inverters shall be CEC-listed with an efficiency of 95.5% or higher.
- Inverters must automatically reset and resume normal operation after a power limiting operation.
- Inverters shall be sized to provide maximum power point tracking for voltage and current range expected from PV array for temperatures and solar insolation conditions expected for Project conditions.
- Enclosures shall be rated NEMA 3R when the inverter is located outdoors. For outdoor installations in corrosive environments, NEMA 4X series 300 stainless steel enclosures must be used.
- Inverter selection shall take into account anticipated noise levels produced and minimize interference with Department activities.

C. *Electrical Balance of System Components.*

- Each proposed PV system shall include, at a minimum, one fused DC disconnect and one fused AC disconnect for safety and maintenance concerns.
- String combiner boxes shall be load-break, disconnecting types, such that opening the combiner boxes shall break the circuit between combiner box feeders and inverters.
- Offeror shall utilize lightning arrestors to protect appropriate equipment from lightning strikes.
- Offeror shall utilize surge suppressors to protect the appropriate equipment from electrical surges.
- All wiring materials and methods must adhere to industry-standard best practices, and all inter-module connections must require the use of a specialized tool for disconnecting.

D. *Mounting Systems.* The mounting systems shall be designed and installed such that the PV modules may be fixed or tracking with reliable components proven in similar projects, and shall be

designed to resist dead load, live load, corrosion, UV degradation, wind loads, and seismic loads appropriate to the geographic area over the expected term of the PPA. Mounting systems must also meet the following requirements at a minimum:

- All structural components, including array structures, shall be designed in a manner commensurate with attaining a minimum 25-year design life. Particular attention shall be given to the prevention of corrosion at the connections between dissimilar metals.
- Thermal loads caused by fluctuations of component and ambient temperatures shall be accounted for in the design and selection of mounting systems such that neither the mounting system nor the surface on which it is mounted shall degrade or be damaged over time.
- Each PV module mounting system must be certified by the module manufacturer as (1) an acceptable mounting system that shall not void the module warranty, and (2) that it conforms to the module manufacturer's mounting parameters.
- For unframed modules, bolted and similar connections shall be non-corrosive and include locking devices designed to prevent twisting over the 25-year design life of the PV system.
- Offeror shall utilize tamper-resistant PV module to rack fasteners for all PV module mounting.
- Final coating and paint colors shall be reviewed and approved by the Department during Design Review.
- Painting or other coatings must not interfere with the grounding and bonding of the array.

E. Corrosion Control. The corrosion control proposed by Offeror must comply with the following requirements:

- Fasteners and hardware throughout system shall be stainless steel or material of equivalent corrosion resistance
- Racking components shall be anodized aluminum, hot-dipped galvanized steel, or material of equivalent corrosion resistance
- Unprotected steel not to be used in any components
- Each System and associated components must be designed and selected to withstand the environmental conditions of the site (e.g., temperatures, winds, rain, flooding, etc.) to which they will be exposed.

F. Roofing Requirements. The installation of PV modules, inverters and other equipment shall provide adequate room for access and maintenance of existing equipment on building roofs. Unless applicable law requires or the Department mandates a greater distance, (i) a minimum of three (3) feet of clearance will be provided between PV equipment and existing mechanical equipment and other equipment mounted on the roof; and (ii) a minimum of four (4) feet of clearance shall be provided between PV equipment and the edge of the roof. The PV equipment shall not be installed in a way that obstructs air flow into or out of existing building systems or equipment.

Proposed roof top mounted systems may be ballasted, standing seam attachment, or penetrating systems and must meet or exceed the following requirements:

- Systems shall not exceed the ability of the existing structure to support the entire solar system and withstand increased wind uplift and seismic loads. The capability of the existing structure to support proposed solar systems shall be verified by Offeror prior to design approval.
- Roof penetrations, if part of the mounting solution, shall be kept to a minimum.
- Offeror shall perform all work so that any existing roof warranties shall not be voided, reduced, or otherwise negatively impacted.
- No work shall compromise roof drainage, cause damming or standing water or cause excessive soil build-up.
- All materials and/or sealants must be chemically compatible.
- All penetrations shall be waterproofed.
- Detail(s) for the sealing of any roof penetrations shall be approved in writing to the Department, as well as the manufacturer of the existing roofing system (if it is still under warranty), as part of system design review and approval – prior to Offeror proceeding with work. The Department will work with the Offeror to identify those roofs within the Bundle for which a warranty is known to still be in effect.
- Any damage to roofing material during installation of solar systems must be remedied by Offeror.

G. Shade Structure (Carport) Requirements. Offeror will be responsible for incorporating the following elements in the design and construction of such Systems:

- Minimum height: all shade structures shall be designed to have a minimum clear height of ten (10) feet, unless specified in a Site's Specification Sheet to be taller to accommodate larger vehicles at the site.
- All shade structures shall be installed with a fascia surrounding the exposed edge of the structure's purlins.
- Shade structures located in parking lots shall have a concrete bollards installed on support posts. The bollards shall extend up to a minimum elevation of three (3) feet above finished grade. This requirement may be waived at the Department's sole discretion.
- Shade structure columns, beams, and fascia shall be painted to match site colors or to a color of the Department's approval.

Installation of shade structure PV systems shall include new high efficiency lighting. Installation of shade structure PV systems shall include the removal of existing security light poles, foundations, and fixtures that are no longer effective. Lighting systems shall also meet the following requirements:

- Lighting shall be LED lighting or other similar energy efficient lighting system.
- New parking lot fixtures shall be installed to provide parking lot illumination compliant with IESNA requirements or recommendations for illumination and safety.

- The new lighting is required to illuminate the entire parking area and adjacent pedestrian walkways affected by the removal of existing lights, not just the area under the PV modules.
- A photometric illumination plot must be submitted for each parking lot showing all existing lighting and proposed new SSS canopy lighting.

Photocell controls shall be used in conjunction with a lighting control system for all exterior lighting and energize lighting when ambient lighting levels fall below two (2) foot-candles measured horizontally at ground level. Lighting shall also be required to operate manually without regards to photocell input. Replacement parking lot lighting shall be served from an existing parking lot lighting circuit and any existing circuits and existing control function shall be maintained, or if replaced, done so at the approval of the Department.

H. Ancillary Equipment Enclosures. The following elements will be incorporated into the design and construction of the System unless waived at the Department's sole discretion:

- All ancillary equipment be grouped to a single location per site and shall be surrounded by a fence to prevent access by unauthorized personnel. The fence shall be a six (6) foot high chain link fence with vinyl privacy slats.
- Location: all ancillary equipment shall be located in a manner that minimizes its impact to normal Department operations and minimizes the visual impacts to the site.

I. Placards and Signage.

- Placards and signs shall correspond with requirements in the National Electric Code and the applicable interconnection agreement in terms of appearance, wording, and placement.
- Permanent labels shall be affixed to all electrical enclosures, with nomenclature matching that found in As-Built Electrical Documents.

J. Infrastructure for Ground Mount Systems. The following elements will be incorporated into the design and construction of each ground mount System:

- The site shall be surrounded by an eight (8) foot high chain link fence with vinyl privacy slats to prevent unauthorized personnel from gaining access the site.
- Gates shall be installed to enable site access for trucks.
- A pathway a minimum of ten (10) feet wide passable by a maintenance truck shall be provided within the array fence to allow for access to all equipment enclosed within the fence area.
- Access to water for maintenance (module cleaning) purposes, as determined adequate by Offeror and approved by the Department.
- Access to low voltage (120V) AC power to power maintenance equipment and miscellaneous equipment.
- To the extent feasible, Offeror shall install sufficient security cameras on site to monitor the array area.
- Offeror will be responsible for installing an acceptable surface cover material under and around the modules and throughout the site that provides appropriate weed control,

erosion and dust management.

- Offeror will be responsible for creating an access road to any ground mount system for maintenance and fire access purposes. The access road shall be passable under all weather conditions.

K. Wiring and Cabling Runs.

- Offeror shall install all AC conductors in conduit.
- Direct burial wire will not be acceptable. Conduit buried underground shall be suitable for the application and compliant with all applicable codes. A tracing/caution tape must be installed in the trench over all buried conduit.
- Conduit installed using horizontal directional boring (HDB), shall include tracer tape or traceable conduit. Unless applicable law is more stringent, the minimum depth of the conduit shall be per NEC 2011 Article 300.5. The Offeror must provide documentation to the Department of final depth and routes of all conduit installed in horizontal bores.
- Conduit installed on building roofs shall not be installed near roof edges or parapets to reduce visibility. Any conduit penetrations through roof surfaces shall not be made within five (5) feet of the roof edge to reduce visibility. If conduit is installed on the exterior face of any building, it shall be painted to match the existing building color. In all cases, the visible impact of conduit runs shall be minimized and the design and placement of conduit shall be reviewed and approved by the Department as part of Design Review.
- All spare conduits shall be cleaned, mandrelled, and provided with a pullwire. Spare conduits shall be required for security cameras for ground mount systems.
- All exposed conduit runs over 100-feet in length or passing over building connection points shall have expansion joints to allow for thermal expansion and building shift.
- Offeror shall install and secure the exposed string cable homeruns along the beams or structure where the combiner box is installed.
- All exposed string wiring must be installed above the lower surface of the structural purlins and beams. Wire loops under framing members are not acceptable.
- Acceptable wire loss in DC circuits is < 1.5% and acceptable wire loss in AC circuits is < 1.5% as well.
- All cable terminations, excluding module-to-module and module-to-cable harness connections, shall be permanently labeled.
- All electrical connections and terminations shall be torqued according to manufacturer specifications and marked/sealed at appropriate torque point.

L. Grounding and Bonding.

- Module ground wiring splices shall be made with irreversible crimp connectors.
- All exposed ground wiring must be routed above the lower surface of any structural framing.
- For shade structure installations, grounding electrode conductors shall be bonded to structure columns either just below grade or below the top surface of concrete bollards.

M. Monitoring System, DAS, and Reporting. Offeror shall design, build, activate and ensure proper functioning of Data Acquisition Systems (DAS) that enable the Department to track the performance of the PV Systems as well as environmental conditions through an online web-enabled graphical user interface and information displays. Offeror shall provide equipment to connect the DAS via existing Wi-Fi network or cellular data network at all locations. The means of data connection will be determined during design. The Department will pay for the cost of cellular data service if needed, but not for the modem or other equipment needed to connect to the cellular network.

The DAS(s) shall provide access to at least the following data:

- Instantaneous AC system output (kW)
- PV System production (kWh) over pre-defined intervals that may be user configured
- In-plane irradiance
- Ambient and cell temperature
- Inverter status flags and general system status information
- System availability
- Site Load information. Available load data for the meter the system is connected to shall be collected by the solar monitoring solution as part of the DAS.

Environmental data (temperatures and irradiance) shall be collected via an individual weather station installed for each site

Data collected by the DAS shall be presented in an online web interface, accessible from any computer through the Internet with appropriate security (e.g., password controlled access). The user interface shall allow visualization of the data at least in the following increments: 15 minutes, hour, day, week, month, and year. The interface shall access data recorded in a server that may be stored on-site or remotely with unfettered access by the Department for the life of the Project. The online interface shall enable users to export all available data in Excel or ASCII comma-separated format for further analysis and data shall be downloadable in at least 15 minute intervals for daily, weekly, monthly and annual production.

Additionally, Offeror shall make available to the Department, at no additional cost, the following reports:

- Monthly Production report shall be available online to the Department personnel.
- System performance data shall be made available electronically to the Department in a format and at a frequency to be determined during the Design Review process.
- Additional reports shall be made available to the Department to assist the Department in reconciling system output with utility bills and any production guarantee under the PPA.

A monitoring manual shall be provided to the Department in printed or on-line form that describes how to use the monitoring system, including the export of data and the creation of custom reports. If requested by the Department, Offeror shall train the building operations staff on the procedures to shut down a System in the case of an emergency or for safety reasons.

3.7 Warranties

All work performed by Offeror must not render void, violate, or otherwise jeopardize any preexisting Department facility or building warranties or the warranties of system components installed therein.

4. PROCUREMENT/CONSTRUCTION

4.

4.1 Tree Removal

Any trees that are in the footprint of systems to be installed by the Offeror shall be removed by the Offeror at its expense, subject to the approval of the Department. A tree shall be considered to be in the footprint of a system if its canopy would extend over any part of the system, including structural components or modules. The Department will remove or prune, at its discretion, trees planted outside of the work area that shade PV systems (at present time or in the foreseeable future), provided the Offeror identifies these trees during the design process. The Offeror shall be responsible for any required tree remediation efforts resulting from tree removal that is deemed the Offeror's responsibility.

4.2 Line Location

Offeror will be responsible for locating, identifying and protecting existing underground utilities conduits, piping, substructures, etc. and ensuring that no damage is inflicted upon any such existing infrastructure.

4.3 Quality Control

To ensure safety and quality of the installation, Offeror shall:

- Keep each site clean and orderly throughout the duration of construction. All trash and rubbish shall be disposed of off-site by licensed waste disposal companies and in accordance with all applicable laws.
- Provide all temporary road and warning signs, flagmen or equipment as required to safely execute the work. Street sweeping services shall also be provided as required to keep any dirt, soil, mud, etc. off of roads.
- Comply with all District storm water pollution prevention ordinances.

4.4 Removal and Remediation

Offeror shall remove all construction spoils, abandoned footings, utilities, construction equipment and other byproducts of construction. All disturbed areas including landscaping, asphalt, and concrete shall be remediated to be in equal or better condition than found. Parking lots shall be re-striped if affected by construction operations.

5. REMOVAL OF SYSTEMS

At the end of the term of the PPA, Offeror shall be required, at its sole cost and expense, to remove the Systems from each of the Sites.