REQUEST FOR PROPOSAL: Solar 2018
City of Independence Solar RFP

City of Independence

Procurement Division
111 East Maple, PO Box 1019
Independence, MO 64051-0519

ATTENTION RFP RESPONDENT – COMPLETE AND RETURN WITH PROPOSAL

Responding Firm _____ Phone Number _____
(Please print or type)

Address _____ City _____ State ____ Zip _____

Name of Authorized Agent _____ Email _____

If you choose not to submit a proposal, please tell us why: _____

_____

_____

The only authorized source for Request for Proposal (RFP) forms, addenda, and information regarding this RFP is www.publicpurchase.com. Using RFP forms, addenda, and information not obtained from www.publicpurchase.com creates the risk of not receiving necessary information about the RFP that may eliminate your proposal from consideration.

Submit questions regarding this RFP online at www.publicpurchase.com by deadline in the RFP schedule.

Proposals shall be submitted online via www.publicpurchase.com by the date and time indicated. Paper, fax, or email responses will NOT be accepted and will not be returned to sender. Proposals are sealed in a virtual lockbox that can only be opened after the Request for Proposal (RFP) closing date and time, to maintain confidentiality of the proposal. All proposals are subject to the terms and conditions herein.

Submission of a proposal shall be deemed a firm offer and is not revocable within 120 days after response deadline.

Proposed RFP Schedule

These dates and times are subject to change:

Issue RFP	May 18, 2018
Pre-proposal conference (Optional Attendance)	June 11, 2018, 1:30 p.m. CPT

LOCATION: IPL Service Center, 21500 E. Truman Road, Independence, MO 64051-0519.
Respondents are strongly encouraged to attend the pre-proposal conference in order to tour one of the proposed sites for a solar facility.

Deadline for questions	**June 18, 2018, 5:00 p.m. CPT**
Proposal Deadline	**June 22, 2018, 2:00 p.m. CPT**
Evaluation	June 25 – June 29, 2018
Recommendation to Council	July 16, 2018
Notification of award	August 8, 2018
Targeted PPA Execution Date	August 29, 2018
“On-System” Project(s) Targeted Commercial Operating Date	June 1, 2019
“Off-System” Project(s) Targeted Commercial Operating Date	Respondent provided

Structure of the RFP

For the convenience of the respondent, this RFP is structured as follows:

Section 1 – Introduction
Section 2 – Background
Section 3 – Scope of Services
Section 4 – Fee Schedule and Proposed Contract Information
Section 5 – Proposal Submission Requirements
Section 6 – Evaluation Criteria
Section 7 – Evaluation Process
Section 8 – Right of Protest
Attachment 1 - Affidavit
Appendix A - Coal Ash Pond Background Information
Appendix B – Respondent Bid Forms
- Respondent Bid Form
- Respondent Qualification Form
- Solar PV Project Summary
- Solar PV Pricing and Expected Energy
- Off-System On-Peak Locational Energy Pricing
- Solar PV Technical Description
- Solar PV Monthly and Annual Energy Production
- Respondent Exclusions and Exceptions
- OPTIONAL: Battery / EES Forms

Attachment 2 – Sample Solar Photovoltaic Power Purchase Agreement (PPA)
- Annex A: Commercial Operations Date Confirmation Letter
- Annex B: Description of Facility
- Annex C: Annual Guaranteed Price

Attachment 3 – Small Generator Interconnection Agreement (SGIA)
Attachment 4 – Performance and Payment Bond Form
Attachment 5 – Prevailing Wage Order 25

Missouri Sunshine Law

The Respondent acknowledges and agrees that the City is bound by the Missouri Open Records Law (Sunshine Law) and cannot protect information for the sole reason that it is marked “confidential” or “proprietary". All information submitted in response to this RFP shall be available for public review in accordance with all federal, state and local laws after: 1) posting of the Notice of Intent to Award; 2) a contract has been executed; or 3) all proposals have been rejected. Requests must be submitted in writing to the Procurement Manager, City of Independence

1. INTRODUCTION

The City of Independence, Missouri through the City's Power and Light Department ("IPL") requests submission of proposals from qualified firms for providing utility scale solar power via Power Purchase Agreement (PPA). Proposals may include "On-System" (Inside the Independence City Limits), "Off-System", or combination On- and Off-System utility scale Solar Photovoltaic project(s).

Respondents shall provide PPA pricing for a fifteen (15) year contract Term and may also provide PPA pricing for longer or shorter contract Terms.

Minimum Qualifications

- Respondent must have been in business a minimum of three (3) years under the same name and Tax ID.
- Respondent must have developed and sold the solar PV output power via PPA from a minimum of three (3) utility-scale solar farms, each sized 2 MW or greater.
- Respondent must provide proof of a satisfactory credit history and current credit rating

Documentation of compliance with each qualification in this section must be submitted as part of the proposal. Forms for providing documentation are included in Appendix B.

Items of Note

The selected vendor(s) shall identify, and IPL shall approve of, the appropriate location(s) for solar PV inverter equipment and its related components and environmental control systems that will meet the following criteria:

- Ease of maintenance and monitoring
- Efficient operation
- Low operating losses
- Regulatory concerns
- Secured location and hardware
- Compatibility with existing facilities

Proposed Inverters shall be approved by IPL and will include communications / control systems to allow IPL to control the inverters including the ability to provide Leading or Lagging Reactive Power when deemed appropriate in IPL's sole and exclusive discretion.

The selected vendor shall secure from governing agencies and the local utility companies all necessary and required rights, permits, consents, approvals, and interconnection agreements at no additional cost to IPL. IPL maintains the right to approve all design documents and add requirements on compatibility with existing power infrastructure.

The selected vendor(s) shall complete and submit all documentation required to qualify for and obtain the maximum available rebates and incentives which shall be included in the cost component of this submittal.

Miscellaneous

1. Burns & McDonnell Engineering Company has been engaged to assist IPL in developing its Energy Master Plan. This study is scheduled to be completed in September 2018 and study outcomes may more precisely define the magnitude and timing for renewable power supply portfolio additions. Burns & McDonnell Engineering Company ("Burns & McDonnell") will assist in the evaluation of proposals received in response to this RFP.
2. All communications concerning this RFP shall be submitted through www.publicpurchase.com.
3. Nothing contained in this RFP shall be construed to require or obligate IPL to select any vendor, limit IPL's ability to select multiple vendors, or limit the ability of IPL to reject all vendors in its sole and exclusive discretion at any time for any reason. IPL further reserves the right to withdraw and terminate this RFP at any time prior to the proposal deadline, selection of a short list, further discussions, or execution of a contract.
4. All documents submitted pursuant to this RFP shall become the exclusive property of IPL and may be used for any reasonable purpose by IPL. Respondents should be aware that their proposal, even if marked "Confidential", may be subject to discovery and disclosure in regulatory or judicial proceedings and as previously noted, all documentation provided by respondents will be subject to the **Missouri Sunshine Law** on page 3).

2. BACKGROUND

The City of Independence ("City") is a suburb or Kansas City, Missouri located on the eastern edge of Kansas City. With a population of approximately 121,000, Independence is the fourth largest city in the state of Missouri and owns and operates its electric system. IPL is responsible for the operation and maintenance of the system, which covers 78 square miles of land. Roughly half of this land is undeveloped.

I PL was established in 1901 and serves over 57,000 electric customers located within the corporate limits of the City. In calendar year 2017, IPL had energy requirements of 1,138,912 MWh. The all-time system peak of 315 MW occurred in August 2003.

IPL is a member of the Southwest Power Pool ("SPP"), participates In SPP's Integrated Market (IM), and operates under SPP's Balancing Authority (BA). IPL has 161 kV interconnections with Kansas City Power & Light Company, Associated Electric Cooperative Inc., and KCPL's Greater Missouri Operating Company (GMO, formerly Aquila Networks – Missouri Public Service).

3. REQUESTED PROJECT PROPOSALS

Three Projects are included in this request. Respondents may make a proposal on any or each of the projects. For each project, Respondents may also include a separately-priced option for battery storage in conjunction with the project. Battery-only offers will also be considered.

For clarity, Respondent's submitting proposals for solar energy may offer alternate bids that include battery storage or other value added services but these proposals will not be considered unless they are accompanied by a solar-only option as the base bid.

Two project proposals will be located inside the Independence City Limits ("On-System") and one project proposal will be located at a remote site designated by the Respondent ("Off-System").

For the two On-system projects, local prevailing wage and bond requirements will be enforced. Respondents shall include these costs in their proposals.

The **Delivery Point** for each project will be the high-side bushing of the respondent-supplied step-up transformer.

"On-System" projects will interconnect at 13.2 kV L-L, 7.62kV L-G.

A. 8 MW*AC* solar farm (or highest achievable *AC* nameplate rating) located on 50 acres of closed and capped Coal Combustion Residual (CCR) Surface Impoundments at IPL's Blue Valley generating station (12500 E. Truman Road, Independence, Missouri 64051: See Appendix A for additional background information). This is an On-System project.

    1. The land will be provided at no cost to successful respondent
    2. The land is shade-free
    3. No penetration of the ash pond caps will be allowed. Solar panels will be installed at grade on sleds properly weighted to withstand regional winds; however, all construction/installation activities on or affecting the cap / cover must comply with the requirements of the Federal CCR Rule (CFR 257).
    4. Prior to construction and post construction, the successful Respondent shall be responsible for providing documentation certified by a Professional Engineer (PE) verifying that the solar farm will not disturb the integrity of the cap and this sealed PE evaluation must be submitted to the Director of the Missouri Department of Natural Resources and approved by the Missouri Department of Natural Resources before work can begin.
    5. The Respondent must ensure that the installation, operation and maintenance of the Facility will either: 1) Not inhibit the vegetative cover system currently in place to prevent erosion on the cap; or 2) Implement engineering controls that will control erosion and prevent infiltration of storm water.
    6. IPL will complete make ready modifications to the distribution system to accept energy from the high-side bushing of the respondent-supplied step up transformer. IPL will have the final decision as to the location/placement of the respondent's transformers for connection to IPL's distribution system. Respondent shall provide the necessary facilities to place the Delivery Point outside the closed CCR impoundments.

B. 3 -10 MW*AC* of solar located on IPL's system and interconnected to IPL distribution lines. Due to the short timeframe of this RFP, Respondent proposals will include the following assumptions and considerations:

    1. Solar panels will be installed at grade

2. Assume available land is adequate for the solar installation and adjacent distribution facilities will accommodate the solar project's maximum output
3. Provide cost proposals assuming the required land is available at no cost
4. In addition, include: 1) The likely area [acres] of land required; 2) Your estimated cost to purchase or lease the land in the Independence City limits; and 3) The Proposed cost of solar energy including the estimated cost of land.
5. IPL will complete make ready modifications to the distribution system to accept energy from the high-side bushing of the respondent-supplied step-up transformer. IPL will have the final decision as to the location/placement of the successful respondent's transformers for connection to IPL's distribution system. Respondent shall provide the necessary facilities providing IPL with the needed access to install billing meters and interconnect to the solar facility.

C. Participation in an Off-System solar farm. Respondent will indicate the range of available capacity (MW), the projected Commercial Operating Date (COD), the expected first year monthly and annual energy production per MW of capacity, the annual degradation in production after the first year, and the price of participation in $/MWh.

4. FEE SCHEDULE, PRICING, AND GENERAL INFORMATION

A. SEE APPENDIX B, RESPONDENT BID FORMS (FOR RELATED SUBMISSIONS)

B. CONTRACTING (GENERAL). IPL expects to procure the proposed solar energy through a Power Purchase Agreement (PPA). All pricing shall include capacity and energy and environmental attributes (other than tax-related benefits and/or incentives), and shall be all-inclusive up to the delivery point. All taxes (excluding property taxes on land owned by IPL), fees, indirect costs, development or construction costs, or other similar charges shall be the responsibility of Respondent.

For projects located inside the Independence City limits (On-System), Respondent shall also provide annual pricing for IPL to purchase the solar farm after expiration of tax benefits (See Appendix B for purchase price entries).

Respondents shall bear any and all costs and expenses required for or in connection with preparation of its Proposal, including subsequent actions taken by Respondent up to the execution of the contract, and including clarification of the Proposal and negotiation of the contract; all taxes, duties, fees, permits, and other charges that may be associated with completion of the Work; and compliance with all local, state, and federal laws that may affect the contract.

C. **GENERAL INFORMATION AND RESPONDENT'S REQUIREMENTS**

- Respondent shall Indicate if the solar installation is fixed-axis or single-axis tracking.
- Respondent shall provide expected first year monthly and annual total generation in MWhs based on normal weather for the project's proposed location.
- Respondent shall provide a schedule of annual degradation in solar conversion efficiency for the panels included in the proposal(s).

- Respondent shall include a list of all conditions that may limit Respondent's ability to complete the proposed project(s) as offered, if any.

- Respondent shall list all assumptions pertaining to the Proposal, including those activities relating to the work Respondent has assumed will be completed by IPL or others, if any.

- Respondent shall list all exclusions and exceptions to this RFP, including all Attachments.

D. Installation Timeframe. As shown in the Proposed RFP Schedule (page 2), the assumed Commercial Operating Date (COD) for "On-System" projects is on or before June 1, 2019. For "Off-System" projects, please indicate the expected COD.

E. Selected Respondent shall be required to enter into a Small Generator Interconnection Agreement (SGIA) with the City. The SGIA is provided in Attachment 3.

F. Selected Respondent shall be responsible for all aspects of the system design, installation, testing and financing.

G. Selected Respondent is required to furnish a Performance and Payment Bond Form (Attachment 4) to the Purchaser. The bond shall be executed on the form included herein, signed and sealed by a surety company authorized to do business in the State of Missouri, and acceptable as surety to the City. With the bond that shall be filed with the City one copy of the power-of attorney certified to include the date of the bond.

H. Selected Respondent and subcontractor(s) are required to pay no less than the current prevailing hourly rate of wages, including the prevailing rate for the legal holidays and overtime work, for each craft or type of workman required to execute the contract, as determined now or hereafter by the Missouri Dpartment of Labor and Industrial Relations, and all other applicable wage determinations.

5. PROPOSAL SUBMISSION REQUIREMENTS

Proposals must be received by the date and time stated on page 2, through www.publicpurchase.com. Paper, fax, or email proposals will NOT be accepted and will not be returned to sender. The respondent shall submit, at a minimum, the following information/documents as part of the proposal:

A. Cover sheet, completed
B. Letter of intent/introduction from respondent
C. Affidavit, completed and notarized (attached, scanned copy is acceptable)
D. Response to the requirements in this RFP and all Attachments, Annexs, and Appendicies.
E. All respondents shall include Exceptions and Exclusions related to Attachment 2, Sample Solar Photovoltaic Power Purchase Agreement (contract).

Proposals will not be accepted after the deadline for submission, regardless of the reason. Any exceptions to the RFP, including the proposed contract, must be submitted as part of the proposal. Firms selected for award will be required to provide proof of insurance and City of Independence business license as stipulated herein.

6. EVALUATION CRITERIA

Proposals received will be evaluated on the criteria listed in this section. There is a grand total possible score of 100 points/100%. The respondent is cautioned that it is the respondent's sole responsibility to submit information related to the evaluation categories. The City is under no obligation to solicit such information, if it is not included in the respondent's original proposal. Failure to provide such information may have an adverse impact on the evaluation of the respondent's proposal. The Evalation Criteria is listed below.

	Maximum % Weight
1. Evidence of relevant experience / Operating history	10%
2. Financial Stability / Financial resources	5%
3. Experience and qualifications of subcontractors	10%
4. Responses to requirements section (Substantial completion of all RFP documentation, including all Attachments, Annexs, and Appendicies) Respondent approach and understanding of scope of work	10%
5. Exclusions and Exceptions to all documents issued with this RFP	15%
6. Price	50%

The respondent is cautioned that it is the respondent's sole responsibility to submit a response to the RFP requirements including evaluation categories. The City is under no obligation to solicit the information after RFP closing if it is not included in the respondent's original proposal. Failure to provide such information may the proposal nonresponsive.

7. EVALUATION PROCESS

The City will deem a proposal nonresponsive when critical information is lacking, or the submission represents a major deviation from the requirements of this RFP. Minor omissions or informalities may be waived at the sole option and discretion of the City. The City also reserves the right to reject any and all proposals, make no award, or make multiple awards as a result of this solicitation. Responsive proposals will be evaluated in the following manner:

A. An evaluation committee will review and rank all proposals individually according to the criteria established in this RFP. The committee may contact respondents if any clarification is needed on the proposal.

B. Respondents whose proposals are ranked the highest by the evaluation committee may be asked to participate in an interview and/or demonstration process to ensure a mutual understanding of both the City's requirements and the respondent's proposal. Interviews may be conducted either in person or by telephone. However, the committee may decide that interviews or demonstrations are not necessary and make recommendations for award based on the information provided in the proposal and subsequent clarifications received.

C. The firm that provides the City with the most reliable and cost effective services based on the established evaluation criteria will be selected for possible recommendation(s) to the City Council for approval.

D. In accordance with federal, state and local laws, the proposal documents will be available for public review following: rejection of all proposals; posting of the Notice of Intent to Award; execution of the contract and/or purchase order.

8. RIGHT OF PROTEST

A Notice of Intent to Award will be posted on the Internet at www.publicpurchase.com. Any protest must be filed within five (5) business days of the date of posting of the Notice. Neither the City nor www.publicpurchase.com shall be responsible for directly notifying respondent of the Notice of Intent to Award. Protests must be received in the office of the Procurement Manager and must contain the company name, address, phone number and signature of the authorized representative; solicitation number; a detailed statement describing the grounds for the protest; and supporting evidence or documents to substantiate the claim. The Director of Finance will review the information provided and issue a written decision within five (5) business days of receipt of the protest. This decision shall be final.

AFFIDAVIT

STATE OF _____)
) SS.
COUNTY OF _____)

_____ of the City of _____

_____ , County of _____ , State of _____ ,

being duly sworn on her or his oath, deposes and says:

1. That I am the _____ (Title of Affiant) of

   _____ (Name of Respondent) and

   have been authorized by said Respondent to make this affidavit on the Respondent's behalf;

2. No Councilmember, nor the City Manager, the Director of Finance or the City Procurement Manager is financially interested in what the Respondent is offering to sell to the City pursuant to this invitation, nor is the Respondent a City employee or board member whose proposal creates a conflict of interest. A conflict of interest would arise if a City employee or board member is in a position to affect either the decision to solicit proposals or the selection of the successful respondent;

3. Respondent has not participated in collusion or committed any act in restraint of trade, directly or indirectly, which bears upon anyone's response or lack of response to this Invitation; and

4. The authorized signer of this document certifies that the organization and each of its principals are not suspended or debarred by the City of Independence, State of Missouri or Federal government.

(Name of Respondent) _____

By: _____ (Signature)

_____ (Title)

Subscribed and sworn to before me this _____ day of _____, 20____.

_____

(SEAL)

NOTARY PUBLIC in and for the County of _____

State of _____

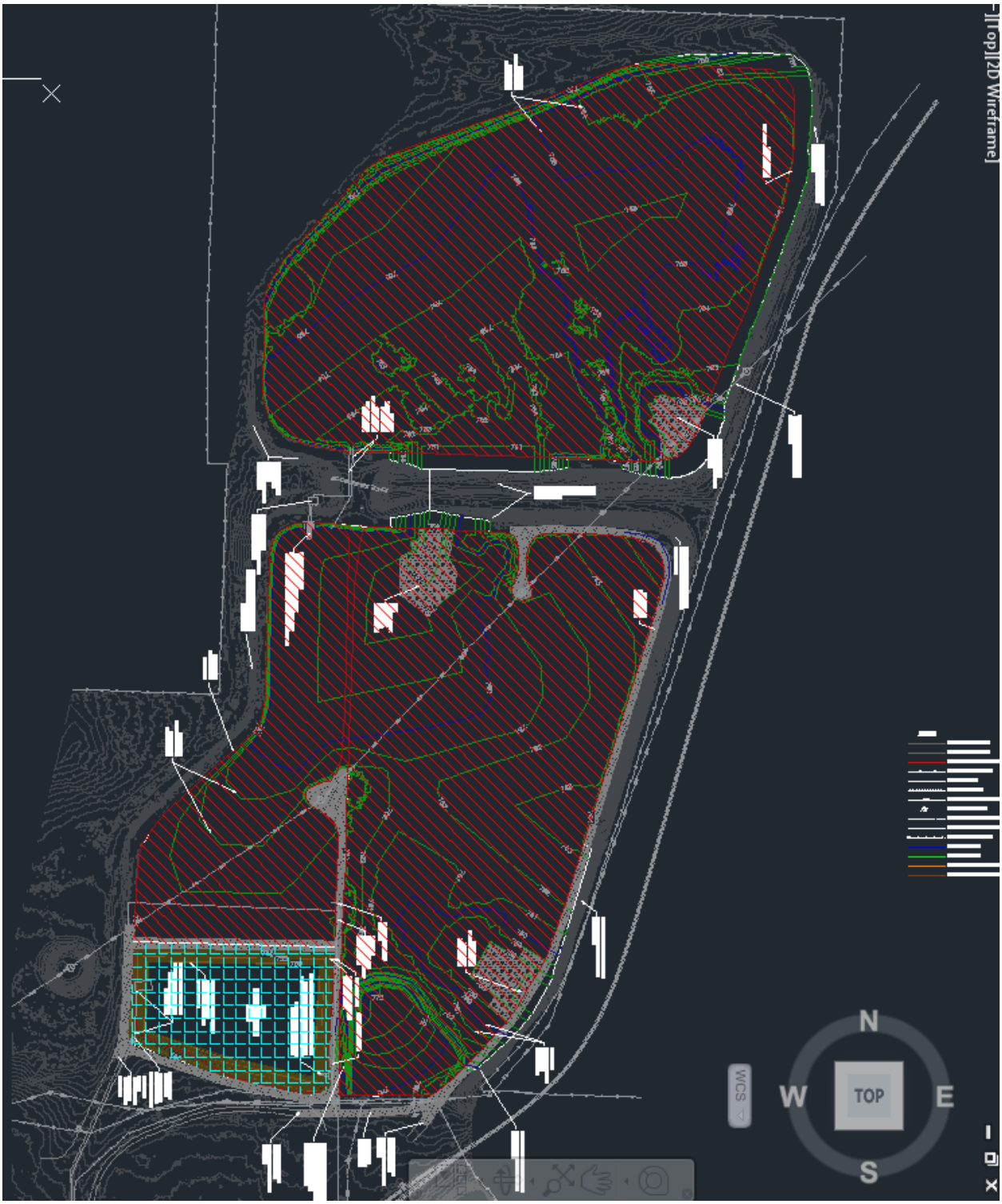
My commission expires:

APPENDIX A
COAL ASH PONDS BACKGROUND

1. Google Earth image outlining the North & South CCR Impoundments

Google Earth Image.docx

2. Ash Pond Area



3. As-Built Survey

16-209 asbuilt survey.pdf

4. Notice of Closure Completion-1

BV Notice Closure Completion.pdf

5. Notice of Closure Completion-2

BV - North CCR Impoundment Deed

6. Notice of Closure Completion-3

BV - South CCR Impoundment Deed

APPENDIX B
RESPONDENT BID FORMS

Submit additional Forms as needed for each project proposal. Additional forms or documentation may also be provided if needed.

1.) Respondent Bid Form

Company Name		
Address		
City	**State**	**Zip**
Company Representative Name		
Signature		
Email	**Phone Number**	**Fax Number**
Project Name	**Resource**	
	☐ Solar PV – Blue Valley Ash Pond ☐ Solar PV – City Site ☐ Solar PV – Offsite Location	
Nameplate Capacity MW (AC)	**Annual Capacity Factor (% Nameplate)**	**Expected Annual MWh (at Point of Delivery)**
Project Location (City, County, State)	**Proposed Commercial Operation Date**	**PPA-Contract Terms (years)**
Notes (as appropriate)		

2.) Respondent Qualification Form

Please provide the information described below.

A. COMPANY (RESPONDENT) INFORMATION

B. FINANCIAL INFORMATION

C. INSURANCE

D. LEGAL

E. SERVICES PROVIDED

E.1 Please list your top three (3) customers (work experience references) for whom you have provided utility-scale solar PV projects via (a) Power Purchase Agreement(s).

Company Name	Contact	Contact Phone	Contact Email	MW ac

E.2 Please list the top three (3) solar PV major equipment suppliers (work experience references) that have been involved in your development projects.

Company Name	Contact Name	Contact Phone	Contact Email

F. Please list three (3) major relevant solar development projects (completed or ongoing) in which your firm has been involved

Project #1	
Name of solar PV or ESS project	
Project Owner	
Project Owner Contact Information	
Respondent's Role (Prime/Subcontractor/other)	
Name of Prime Contractor (if by others)	
Project Location (Country, State, County, City)	
Respondent Scope of Work	
Project Duration	
Project Completion Date	
Size of Solar Installation (MW ac)	
Project #2	

Name of solar PV or ESS project	
Project Owner	
Project Owner Contact Information	
Respondent's Role (Prime/Subcontractor/other)	
Name of Prime Contractor (if by others)	
Project Location (Country, State, County, City)	
Size of Solar Installation (MW ac)	
Project Duration	
Project Completion Date	
Respondent Scope of Work	
Project #3	
Name of solar PV or ESS project	
Project Owner	
Project Owner Contact Information	
Respondent's Role (Prime/Subcontractor/other)	
Name of Prime Contractor (if by others)	
Project Location (Country, State, County, City)	
Respondent Scope of Work	
Project Duration	
Project Completion Date	
Size of Solar Installation (MW ac)	

3.) Solar PV Project Summary (Submit forms for each optional project)

Solar Project Summary				
Project/Facility Name				
Project Location (Street Address, City, county, state)				
Axis Type (Fixed Axis or Single Axis Tracking				
Latitude, longitude	°N	°W		
(Decimal format; accurate to three (3) decimal places)				
Bidder Contact				
Name				
Company				
Address				
Phone/Fax				
Email				
Alternate Contact				
Name				
Company				
Address				
Phone/Fax				
Email				
Technology Type	**Facility Nameplate Capacity**			
Photovoltaic Solar	kW (AC)		kW (DC)	
First Year Generation At delivery point		MWh	**Capacity Factor**	**%**
Proposed Commercial Operation Date				
Proposed PPA Term (years)				
Point of Delivery Description				
Point of Delivery is on the	❒ Distribution System ❒ Other			
Proposed Facility Status	❒ Qualifying Facility ❒ Exempt Wholesale Generator			
Estimated Useful Life of Facility at Commercial Operation Date (years)				

4.) Pricing / Expected Energy (Submit one form for each optional project and Term).

Respondentsare encouraged to offer any options that could add further value, including technology, cost savings, schedule reductions, or other value-added insights from its experience that could assist The City as Buyer. Respondents must submit pricing and energy for a fifteen (15) year Term and offer pricing for other Agreement Terms.

Solar Pricing and Expected Energy Production			
Project Description (on/off system; MW)			
Installed Cost ($/kW)			
Annual O&M Cost ($/Year)			
Commercial Operating Year	**Expected Energy (MWh)**	**Flat Payment Rate ($/MWh)**	**Escalating Payment Rate ($/MWh)**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
Notes to Pricing			

4.a.) For Off-System projects: Provide projected on-peak Wholesale Market Pricing (LMP) at the project's point of interconnection to the transmission system. Include a narrative of the basis for the projected prices.

Average On-Peak Wholesale Market Price	
Commercial Operating Year	**Projected Average On-Peak Price ($/MWh)**
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
NOTES: Basis for Market Price Projections	

5.) Solar PV Technical Description (Submit one form for each optional project)

Solar Technical Description				
Module Level Information				
Manufacturer				
Model Number				
Module Rating at STC*				
Cell Material				
Total Number of Modules				
State and/or Country of Origin				
Array Level Information				
Number of Modules per String				
Strings in Parallel				
Total Active Surface Area (m^2)				
Inverter Information				
Manufacturer				
Model Number				
Total Number of Inverters				
Confirm that inverters meet applicable UL, IEEE, IEC standards. ❒ Yes ❒ No Confirm that the facility meets NEC 2014. ❒ Yes ❒ No				
Mounting/Orientation				
❒ Fixed		Azimuth (deg)		Elevation (deg)
❒ 1-Axis Tracking		Azimuth (deg)		Elevation (deg)
❒ 2-Axis Tracking				
Facility Level Information				
Annual Plant Availability (percent)				
Ground Coverage Ratio				
Estimated Land Area (acres)				
Consumptive Water Use (gallon/MWh)				
*Standard Test Conditions (25°C, 1 kW/m^2, AM 1.5)				
Notes to PV Technical Description				

6.) Projected Energy Production (Submit one form for each project)

A.) Provide the month's total expected average generation.
B.) Indicate the average expected hourly generation from the proposed project by month and time of day.
C.) If the sum of the values in the grid differ from the first year Expected totals, explain the cause of the difference in the Notes section below.
D.) Time is hour ending Central Prevailing Time (Adjust for Daylight Savings Time.).

Monthly and Annual Energy Production												
Expected hourly generation (MWh)												
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Average												
Average (P50) Expected hourly generation (MWh)												
HE (CPT)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
Sum												
% of Total												
Total												

Notes to Energy Production Profile

7.) Exclusions and Exceptions

Respondent to provide a list of exceptions and exclusions to the terms of the RFP, including the PPA Contract in Attachment 2 and all other Attachments to this RFP.

Exclusions and Excepts	
Item	**Issue / Exclusions / Exceptions**
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

8.) Optional Energy Storage Offer

Offer any options that could add further value, including technology, cost savings, schedule reductions or other value-added insights from its experience that could assist the City as Buyer.

A. ESS pricing under 10 year LTESSA kW-month AC Power Rating

Rated Continuous Discharge Power*	2 Hours $/kW-month	4 Hours $/kW-month	( ) Hours $/kW-month
1,000 (kW)			
2,000 (kW)			
3,000 (kW)			
4,000 (kW)			
5,000 (kW)			

***Actual ratings may differ.**

B. ESS Project Summary

ESS Project Summary		
Requested Project: Ash pond, on or off site		
Project Location (Street Address, City, County, State)—IF KNOWN		
Latitude, longitude—IF KNOWN	°N	°W
(Decimal format; accurate to three (3) decimal places)		
Bidder Contact		
Name		
Company		
Address		
Phone		
Email		
Alternate Contact		
Name		
Phone		
Email		
Energy Storage Technology	(Example : battery, flywheel)	
Proposed Commercial Operation Date		
Proposed LTESSA Term (years)		
Point of Delivery Description		
Point of Delivery is on the	❒ Distribution System ❒ Other	
Estimated Useful Life of ESS at Commercial Operation Date (years)		

C. ESS Technical Description

ESS Technical Description	
Battery Information	
Manufacturer	
Model Number	
State and/or Country of Origin	
Control System Information	
Manufacturer	
Description	
Inverter Information	
Manufacturer	
Model Number	
Total Number of Inverters	
Confirm that inverters meet applicable UL, IEEE, IEC standards. ❒ Yes ❒ No Confirm that the facility meets NEC 2014. ❒ Yes ❒ No	
Facility Level Information	
Annual ESS Availability (percent)	
Estimated Land Area (acres)	
Notes to ESS Technical Description	

Key Specifications

Key Specifications			
Specification Parameter	**Definition**	**Units**	**Value**
Rated Continuous Discharge Power	The rate at which the ESS can continuously deliver energy for the energy storage component's entire *specified* SOC range.	kW	
Rated Apparent Power	The real or reactive power (leading and lagging) that the ESS can provide into the AC grid continuously without exceeding the maximum operating temperature of the ESS.	kVA	
Rated Continuous Charge Power	The rate at which the ESS can capture energy for the energy storage component's entire SOC range.	kW	
Rated Continuous AC Current	The AC current that the ESS can provide into the grid continuously and can be charged by the grid continuously without exceeding the maximum operating temperature of the ESS.	A	
Output Voltage Range	The range of AC grid voltage under which the ESS will operate in accordance with the ESS specification.	V	
Total Response Time	The response time shall be measured in accordance with figure below starting when the signal (command) is received at the ESS boundary and continuing until the ESS discharge power output (electrical or thermal) reaches 100 ± 2 percent of its rated power.	Chart	
System Round Trip Efficiency	Total round trip efficiency from beginning of life (BOL) to end of life (EOL), defined as the ratio of the delivered output energy of the energy storage system to the absorbed input energy required to restore it to the initial state of charge under specified conditions. Please disclose if value is net of HVAC energy requirements.	% Yes/No	
Ramp Rate	The maximum rate, expressed in megawatts per minute, that the ESS can change its input and output power. This may vary in multiple dimensions such as state of charge (SOC) and/or other parameters of the system that may be broken out into multiple line item values.	kW/min	
Enclosure Type	A description of the system enclosure including that supplied with the system, provided as a part of the site installation and/or comprised of building assemblies associated with the installation. Examples include building,		

	containerized–both stationary and transportable.		
Equipment Footprint	**Length x Width (LxW) of equipment only (includes ESS and all ancillary units as required) in intended layout.**	**ft^2**	
Height	**Equipment height plus safe clearance distances above the equipment.**	**ft - in**	
Weight	**Weight per individual sub-system (PCS, ESS, accessories, etc.), including maximum shipping weight of largest item that will be transported to the project site.**	**lbs**	
Grid Communication Protocols/Standards	**List of codes/standards with which the ESS is compliant.**		
General Description of Energy Storage	**Energy storage technology type (e.g. battery type, flywheel, etc.).**		
Rated Discharge Energy	**Specify the accessible energy that can be provided by the ESS at its AC terminals when discharged at its beginning of life (BOL) and end of life (EOL).**	**kWh**	
Minimum Charge Time	**The minimum amount of time required for the ESS to be charged from minimum SOC to its rated maximum SOC.**	**Hr**	
Typical Recharge Time	**This should include any time for rest a period needed between a full or partial charge or discharge cycle.**	**Hr**	
Warranty & Replacement Schedule	**Specify warranty inclusions and exclusions, include replacement schedules. Include timespan of warranty and any limitations.**		
Expected Availability of System	**Percentage of time that the system is in full operation performing application specific functions taking into account both planned and unplanned down-time.**	**Hr/yr**	
	Additional information as needed.		