REQUEST FOR PROPOSAL

Engineering, Procurement & Construction Services for

AC RANCH SOLAR IN HOBBS, NEW MEXICO
PHASE 1: 100 MW DC STC / 74.99 MW AC

Version History

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Reference Documents:

Attachment #	Document Title
A	Insurance Requirements
B	Ex B PV Scope of Work
C	Ex C PV Technical Specifications
	Cost Breakdown Form
	Preliminary Solar Plans
	Specification Sheets of Major Equipment
	Land and Topographic Survey
	Environmental Report
	Geotechnical Engineering Report
	Easement Plan

I. Introduction

General Conditions:

1. **Each respondent is responsible for reviewing and understanding all terms of this Request for Proposal. Failure to thoroughly examine or request clarification on RFP terms may result in disqualification.**
2. **Any bid may be withdrawn at any time prior to the due date with a written request signed by the authorized respondent representative. Revised proposals may be submitted up to the original due date/time.**
3. **Issuance of this RFP and receipt of proposals does not commit Akari Energy/Excelsior Energy Capital to move forward with an award or complete the project described. Akari Energy/Excelsior Energy Capital reserves the right to postpone the RFP award process, to accept or reject any or all proposals received in response to this RFP, and to modify the scope of the project at any time.**
4. **An award under this RFP may not be based solely on the lowest price but will be made to the respondent with the overall best value proposal. The successful proposal will meet the project site design guidelines and provide service level acceptable to Akari Energy/Excelsior Energy Capital.**
5. **Bid proposals shall remain valid for 60 days after private opening of the proposals. If Akari Energy/Excelsior Energy Capital decides to move forward with a certain bid, contract will be executed in the 60 day timeframe or contractors will be allowed to revise pricing.**

6. **Upon award, successful respondent shall secure all appropriate licenses to complete the scope of work included in this RFP.**

A. Summary

Excelsior Energy Capital (Excelsior) and Akari Energy (Akari) are seeking proposals for Engineering, Procurement, and Construction (EPC) services for Phase 1 of project AC Ranch Solar (ACR1). Phase 1 is 100 MW DC STC/74.99 MWac.

This Phase 1 project will be located on approximately 600 acres of land, which is a portion of the total 1,400 acres of flat land. The Phase 2 RFP will be issued 2024.

ACR1 is assigned Interconnection Request GEN-2018-004 in the Southwest Power Pool (SPP) interconnection queue, and will interconnect to an existing 115 kV transmission line owned by Xcel Energy, roughly 1 mile from the project site. The ACR1 interconnection application was submitted to SPP in April 2018 and the GIA will be completed in June 2023. ACR1 is scheduled to reach commercial operation by September 2024.

B. Confidentiality

All materials provided as part of this RFP package are considered confidential information and are governed by the Confidentiality Agreement ("CA") required between Akari/Excelsior and each Bidder. Throughout the bidding process, the treatment of confidential information shall be as set forth in the CA.

Bidders must sign and return the provided Confidentiality Agreement to Akari Energy and Excelsior Energy Capital representatives listed in Section III.B. Upon execution of the CA, Bidder will be provided access to the Reference Documents listed above.

C. Akari Background

Akari Energy LLC, is the administrator of this RFP and designated project coordinator. Akari Energy was founded in 2008 in Houston, Texas, with over 14 years of experience in developing solar projects through the United States. The principal Vance Nobe is NABCEP certified (North American Board of Certified Energy Practitioners) in Solar Photovoltaics and holds a B.S. degree in Electrical Engineering, Power Emphasis, from the California Polytechnic University in Pomona, California. Akari Energy holds construction licenses in multiple states and cities, including New Mexico.

D. Excelsior Background

Excelsior is the infrastructure fund investing in AC Ranch Solar. Excelsior's parent company, Excelsior Renewable Energy Intermediate Fund I LP ("Parent") is a pure play renewable energy private equity fund with $504MM in committed capital from 19 limited partners, including the New York Common Pension Fund. In addition, the Parent has a $150MM subscription facility with Comerica Bank that allows for a Comerica Letter of Credit (Moody's A3 rating) up to that facility amount with two (2) business days' notice. In addition, Excelsior regularly sources and places construction-to-term debt facility for utility scale and distributed generation solar and utility scale wind facilities with banks such as Nord L/B and Nomura who will provide investment grade letter of credit capacity as part of the construction-to-term debt facility.

The Excelsior team's experience working together both before and during Excelsior includes $5B USD of solar, wind and storage transactions in North America, with a focus on long term ownership and operation of assets. The team's transaction experience before working together includes $15B of transaction experience in energy and related industries. Excelsior's recent investments include:

- Purchase from Invenergy of 90.1% of Class B interests in the 109 MWAC Prairie Breeze Expansion wind projects;
- Purchase from Grupo T Solar of the controlling Class B interests in the 25 MWDC El Centro Solar, located in Imperial County, California;
- Purchase from Syncarpha Capital of controlling Class B interests in both a 7 site, 16.5 MWDC portfolio of operating assets in Massachusetts and Vermont, and a 3 site, 19.6 MWDC portfolio of construction-ready SMART assets in Massachusetts; and
- Purchase from Nokomis Partners of the controlling Class B interests in a 12 project, 15.2 MWDC construction-ready community solar portfolio located in Minnesota and the purchase of a second portfolio totaling 8 MWDC.

As part of these transactions, Excelsior has been successfully underwritten as a sponsor and asset manager by financing partners such as US Bank, BAML, Nomura, Santander and Nord LB.

E. Edelen Renewables

Edelen Renewables, headquartered in Lexington, Kentucky, is a local renewable energy developer. Edelen focuses on developing utility-scale solar projects on abandoned mine lands. Edelen's "social impact solar" model leverages the financial investments required of large-scale solar projects to the benefit of the communities where they're based, particularly with respect to jobs and local taxes.

F. Schedule

The Schedule below represents the expected timeline for conducting this solicitation. Akari Energy and Excelsior reserve the right to modify this schedule as circumstances warrant.

Table 1-1: RFP Schedule

Step	Date
Issue RFP	March 22, 2023
Non-Disclosure Agreement Due	March 24, 2023
Notice of Intent Due	March 31, 2023
Site Visit Registration	March 31, 2023
Site Visit	April 19/20, 2023
Submit Questions	April 21, 2023
Q&A Posted	April 28, 2023
Proposals Due	June 2, 2023
Proposal Evaluation Completion Target and Short List	June 16, 2023
Contract Negotiations	June 30, 2023
Notice of Award	July 7, 2023

II. Project Information

A. Overview

ACR1 is an approximate 100 MW DC STC/74.99 MWac solar photovoltaic project located in Hobbs, situated in the southeast corner of New Mexico. The project has received results of the Definitive Interconnection Study (DISIS) from Southwest Power Pool (SPP), and is proceeding to prepare the EPC proposal in order to draft the PV plan by third quarter of 2023.

The project's 60% design has been completed and included with this RFP, using the following equipment:

- Waaree Ahnay Series Bi-55-545 solar modules supplied by Kaneka North America
- Power Electronics HEM HS4200M inverters
- GameChange single-axis trackers
- Substation and transmission line to the POI, designed by American Energy Inc. (AEI).

Alternate designs with substitute equipment of equivalent quality will be considered.

The boundary and topographic surveys, geotech, environmental, and other information is included in the RFP documents.

A Q&A submittal process will be implemented per the RFP schedule as shown.

Site visit schedule is also to be implemented per the RFP schedule. Non-scheduled site visits are not allowed.

All details, documents, and schedule will be available on our RFP website. The link to our RFP website will be sent to bidder after completing and executing the attached NDA document.

B. Access

Access to the property is only allowed on predetermined schedule per the RFP. Bidders are not permitted to access the property outside of this RFP schedule.

C. Topography

The topographic plans are included in the RFP documents.

D. Soils

The geotech/soils study with test bore holes are included in the RFP documents.

E. Vegetation

Vegetation summary is contained in the SWCA environmental report.

F. Wetlands and Hydrology

Wetlands and hydrology summary is contained in the SWCA environmental report.

G. Environmental Conditions

Environmental conditions are contained in the SWCA environmental report.

H. Threatened or Endangered Species

Species summary is contained in the SWCA environmental report.

I. Culturally Sensitive Areas

Cultural summary is contained in the SWCA environmental report.

J. Interconnection

Interconnection is approved by Southwest Power Pool (SPP) and considers a hot tap into an existing Xcel Energy owned 115 kV line as indicated as the POI in the preliminary solar plans.

K. Site Control Status

Site control is maintained throughout the RFP and construction process.

L. Permit Status

Permitting has already been processed, however, a new permit needs to be submitted with final construction plans to Lea County.

III. RFP Process

A. Overview

1. This formal Request for Proposal ("RFP") process is limited to a select group of Bidders that have demonstrated the required pre-qualifications to execute projects of similar complexity and scale. Bidders in this RFP bid process are being asked to provide competitive and accurate pricing, and a realistic schedule with their response, including other supporting documentation as defined in the response requirements section of this document.
2. Bidders are asked to evaluate the project and respond with a Proposal to Construct.
3. The RFP process will be based on the provided documents and Bidder's expertise as an EPC firm.
4. Bidders will be given **sixty-seven (64) days** to complete their bid packages.
5. Akari Energy reserves the right to release a second bid package to a short-listed group of bidders based on responses from the first round of the RFP. This decision will be made after Akari Energy and Excelsior have reviewed all submittals from the first round of bidding.
6. Akari Energy and Excelsior reserve the right to exclude any Bidder from the RFP process. In no way shall any submission, request for information, technical discussion, or communication be taken as constituting an offer or commitment by Akari Energy or Excelsior. All information, electronic or hardcopy, once submitted will become the property of Akari Energy and Excelsior.
7. All expenses incurred by the Bidder in preparation for, negotiation of, or related in any manner to this RFP will be the sole responsibility of the Bidder. In no way will Akari Energy or Excelsior be responsible for reimbursing any expenses incurred by the Bidders.

8. A Bid Bond or other security instrument will not be required as a condition of Bidder submitting its Proposal.

B. Communications

Bidders must submit all communications regarding this RFP via email to rfp@akarienergy.com

Akari Energy will respond to all questions on an individual basis and will aggregate Q&A responses to all Bidders. If necessary, Akari Energy may schedule virtual meetings to address specific questions or to provide clarification to assist Bidders with preparing their Proposals.

All submittals, inquiries, and communications related to this RFP should be directed to and include all of those listed below:

C. Site Visit

A site visit for all Bidders wishing to visit the Project will be arranged on **date scheduled at 1:00 PM Mountain Time**. This visit is optional but will be the only opportunity Bidders have to visit the site in person during the bid period. Individual site visits will not be accommodated and attending Bidders must remain with the visit leader at all times. Areas pre-selected are intended to represent the variety of conditions across the site, including areas that may have unique requirements or challenges as well as those with more favorable site conditions.

Bidder representatives desiring to attend will be required to pre-register with Akari Energy in advance by providing the following information no later than the date scheduled by 5:00 PM Central Time and must be submitted through the RFP website www.acranchsolar.com

- Driver's License
- Vehicle Description
- Vehicle Insurance Information

D. Notice of Intent to Submit Due Date

Bidders' Notice of Intent to Submit to this RFP is due no later than **the date scheduled by 5:00 PM Central Time** and must be through the RFP website.

E. Proposal Due Date

All Proposal documents are due no later than **the date scheduled by 5:00 PM Central Time** and must be emailed to rfp@akarienergy.com

F. EPC Contract Requirements

Bidders are expected to review the EPC scope requirements included in the Attachments, noting any key legal or commercial concerns in addition to the following conditions:

1. Award subject to Bidder and Akari Energy/Excelsior negotiating mutually agreeable EPC terms and conditions.
2. Bidder shall include a Payment & Performance Bond for the full Proposal amount.
3. Warranty Term – include two (2) years from Substantial Completion.

G. Pricing Format & Alternates

1. Bidders shall complete the Cost Breakdown format included as Attachment: Cost Breakdown Form when submitting their Proposals.

2. Bidders are requested to provide the following Alternates ("ALT"):
   a) ALT #01 - Deduct if Modules procured and delivered to site by Akari Energy. EPC responsible for unloading and installation by EPC.
   b) ALT #02 - Deduct if integrated PCS skids (inverters + MV transformers) are procured and delivered to site by Akari Energy, including commissioning by PCS supplier for the BASE SLD. EPC responsible for unloading, installation and initial startup.

c) ALT #03 - Deduct if single-axis trackers procured and delivered to site by Akari Energy. EPC responsible for unloading and installation by EPC.
d) ALT #04 – Deduct for substation transformers procured and delivered to site by American Energy Inc., including commissioning by supplier. EPC responsible for unloading, installation, and initial startup.

H. Questions

Questions are welcomed from the Bidders per the due dates mentioned above.

I. Binding Bid Duration

Bidders must provide written attestation that Proposal Pricing will be binding for no less than sixty (60) days from the date submitted.

Bidders are required to include a narrative explaining how they view market uncertainty and what advantages/options they can offer to mitigate pricing adjustments.

J. Non-Collusion

As part of its submission pursuant to this RFP, Bidder shall affirm in writing that neither it nor any person or entity acting or purporting to act on its behalf has entered into any combination, conspiracy, agreement or other form of collusive arrangement with any person, corporation, partnership or other entity, which directly or indirectly has to any extent lessened competition between the Bidder and any other person or entity for this RFP.

IV. Scope of Work

A. Preliminary Division of Responsibility ("DOR")

1. Division of Responsibility matrix should be provided by Bidders regarding project execution, quality, and safety oversight.

B. Engineering & Design

1. General Requirements
2. EPC shall prepare all necessary Electrical Studies as required per the technical specifications, including but not limited to:
   a) Power Flow / Reactive Capability
   b) Insulation Coordination
   c) Short Circuit
   d) Protection Coordination
   e) Arc Flash
   f) Ground Step and Touch
   g) Lightning Protection
   h) Transient Recovery Voltage
   i) Pad prep & foundations – refer to Substation/Switchyard-Preliminary Earthwork Recommendations in Geotech Report.

3. PV Mechanical & Electrical

   Include all requirements referenced in Ex B PV Scope of Work and Ex C PV Technical Specifications, including but not limited to:
   a) Pile design in accordance with geotechnical report findings and racking vendor design requirements.
   b) Refer to PV Solar Array Field-Preliminary Earthwork Recommendations
   d) Site should be designed utilizing existing topography with minimal grading required.
   e) Expansive Soils — None identified
   f) Frost heave/Adfreeze — Negligible

g) Soil corrosivity — Low to moderate
h) Groundwater — None encountered
i) Seismic — Site Classification A
j) Primary and secondary access roads constructed as recommended per the geotechnical report.
k) Include a galvanized chain-link or agricultural fence with galvanized metal posts or pressure-treated lumber (6" dia minimum) around entire perimeter of PV array and access gates. Corner posts and gate posts to be set in concrete. See preliminary solar plans for details.

4. SCADA

Include all requirements referenced in Ex B.

5. Substation

Include all requirements referenced in preliminary solar plans, including but not limited to:
a) A complete interconnection facility consisting of one (1) 75 MVA 115V-34.5kV step up transformers, each fed by MV collection system feeder breakers per the SLD, with additional space allocated for capacitor banks and auxiliary power requirements.

C. Procurement

1. General
   a) The single line diagram has been provided based on the following basis of design. Bidders may propose similar modules, inverters, and batteries

2. Modules
   a) EPC to procure all required modules.
   b) EPC to include 0.25% (or 5 per MWDC) of total installed quantity as spares and is responsible for including an adequate breakage allowance during construction (non-warranty).
   c) Basis of Design ("BOD") Equipment – Waaree AHNAY SERIES Bi-55-545 (545 W DC STC)
   d) Bidder may propose a similar module from an approved Tier 1 module manufacturer on the most recent report published by Bloomberg New Energy Finance based on the following parameters:
      (1) Bifacial monocrystalline
      (2) 545 Wp
      (3) 1500V
      (4) 25-year performance warranty minimum
   e) Due to market volatility and uncertainty, Bidder shall qualify all assumptions related to taxes, tariffs, duties, fees, shipping, etc. included in the cost breakdown.

3. Power Conversion Stations ("PCS")
   a) EPC to procure inverters, MV transformers and all associated AC/DC switchgear.
   b) BOD Equipment – 4.2MW Inverters (e.g. Power Electronics HEM FS4200M)
   c) Qty = 18

4. Racking – Single Axis Tracker ("SAT")
   a) Base Bid – EPC to procure complete SAT racking system, GameChange Genius system is suggested.

5. Balance of System ("BOS")
   a) EPC to procure all BOS materials and equipment.

6. Supervisory Control and Data Acquisition ("SCADA")

a) EPC to procure all SCADA materials and equipment for PV, and Substation monitoring, protection and controls. This should include cybersecurity considerations.

7. Substation
   a) EPC to procure all substation materials and equipment up to POI. AEI has completed the initial design and may be subcontracted for the substation since they are familiar with the project.

8. Laydown Areas and Security
   a) Bidders to propose laydown areas, staging, and security plans for equipment. Bidders should explain their procedures and plans for staging equipment/material that has been delivered to the site to ensure integrity of components, security, and safety. Additionally, Bidders are requested to explain their plan for concrete and bathing as well. Please note that the site is remote and that temperatures can vary widely.

9. Permanent Local Control Room
   a) A control room for plant monitoring, NERC compliance, documentation, on site data management, hosting required site O&M staff, safety, and fire control center, will be required. The details of this should be specified and priced as a separate item in the response. Items such as water tank (for washing and safety) should be included.

D. Construction

1. PV
   Include all requirements referenced in Ex B PV Scope of Work and Ex C PV Technical Specifications.

2. SCADA
   Include all requirements referenced in Ex B PV Scope of Work and Ex C PV Technical Specifications.

E. Testing & Commissioning

All commissioning and testing required to obtain permission to operate and safely energize the system in accordance with Ex B PV Scope of Work and Ex C PV Technical Specifications.

Project Schedule Target Milestones

- LNTP: Sept. 1st, 2023
- NTP: Oct. 1st, 2023
- Mechanical Completion: To be determined during LNTP phase
- Substantial Completion: To be determined during LNTP phase
- Final Completion: Sept. 1st, 2024
- PIS/COD: Oct. 1st, 2024

G. Exclusions

1. Owner Permits by Akari Energy.

H. Health and Safety

Bidders are responsible for providing health and safety management and training to their teams and are required to provide a plan detailing their approach. This should also include Environmental regulations. Waste disposal and site cleanup, spills management should be covered. EPC will be responsible for all site access control and management of subcontractors, required site safety and compliance reporting.

V. Proposal Requirements

A. Corporate Information

All Proposals should include the following information at a minimum:

1. Name of organization
2. Mailing address
3. Company website
4. Full name of primary contact
5. Contact title
6. Contact email
7. Contact phone number
8. Contact address (if different from mailing address)
9. Type of business entity (Corp, LLC, etc.) and company organizational structure
10. Applicable license numbers to operate in NM or ability to obtain prior to award
11. Insurance policy limits
12. Company EMR rating for the most recent three (3) years

B. Statement of Bidder Qualifications

A statement of qualifications should be provided to supplement company information.

1. Bidders are asked to describe their project execution experience in New Mexico and/or the southwestern US and with Xcel Energy/Southwest Power Pool, if applicable. Projects of similar scope, size and complexity should be highlighted along with any other relevant experience or relationships that would facilitate successful project execution. This would include a description of the Bidder's understanding of and experience with the local labor market.
2. Bidders are encouraged to hire Minority Business Enterprises (MBE) subcontractors to provide labor and/or other services. An MBE subcontractor plan should be submitted with the bid package.
3. Bidder are encouraged to hire a local labor force, within the City of Hobbs, and within Lea County NM. A local labor force plan should be submitted with the bid package.
4. Along with the summary of experience in the region, bidders should provide a summary of their current project pipeline and available bandwidth during the intended timeframe and duration of the Project.
5. Current financial statements and balance sheets will not be required with the initial Proposal, but Bidders should include general company financial information along with bonding capacity (both per project and aggregate available). Short-listed Bidders will be required to provide audited financial documents provided in order to be considered for award.

C. Proposed Staffing Plan & Key Personnel Resumes

Bidders should provide a list of any key personnel and their respective backgrounds that will be involved in the Project along with a brief synopsis of their role, responsibilities, and experience. This should include all resources such as executives, home office management and support resources, day-to-day project and construction management as well as on-site management and supervision.

Bidders are encouraged to describe how they will hire, train, and include local community members for the construction phase and in conjunction with the O&M planning, how these contractors might be transferred to an O&M role in future.

D. Proposed Project Pricing and Alternates

Bidders shall provide pricing in the format attached along with the requested alternates listed in Section III.F.2.

Bidders are asked to not make any modifications to the structure of the pricing breakdown (including adding, removing or otherwise altering rows, columns or cells). Failure to submit the cost breakdown as requested may result in disqualification at the sole discretion of Akari Energy and Excelsior.

E. Proposed Project Schedule

1. Proposals should include a proposed Project schedule in Gantt format. The schedule resources should be planned appropriately for Bidder to accomplish the milestones indicated above, including anticipated weather conditions for the area throughout the project duration.
2. At a minimum, the schedule should include the following activity detail:
    a) NTP
    b) Engineering
        (1) Civil
        (2) Mechanical
        (3) Electrical
        (4) Substation
    c) Procurement of Major Equipment
        (1) Modules
        (2) PCS
        (3) GSU
        (4) Racking
        (5) Electrical Materials/BOS
        (6) SCADA
        (7) Substation Equipment
    d) PV Construction
        (1) Site Preparation
        (2) Pile Installation
        (3) Racking Installation
        (4) Module Installation
        (5) PCS Installation
        (6) AC/MV Electrical Installation
        (7) DC Electrical Installation
        (8) Electrical Installation
    e) Mechanical Completion
    f) NERC & Telecommunications Testing and Compliance
    g) Utility Backfeed Date
    h) Testing & Commissioning Complete
    i) Permission to Operate
    j) Substantial Completion
    k) Final Completion

F. Proposal Qualifications and Exclusions

Bidders are strongly encouraged to submit their Proposal in strict adherence with the RFP requirements and avoid including material exclusions that may be cause for immediate disqualification in the sole discretion of Akari Energy and Excelsior. If necessary, Bidder must clearly list any qualifications and/or exclusions to their Proposal that deviate from the RFP requirements.

G. EPC Contract

Bidders should submit a copy of their standard EPC contract for review.

END OF RFP DOCUMENT

EXHIBIT A

INSURANCE REQUIREMENTS

PART I – CONTRACTOR INSURANCE REQUIREMENTS

Unless otherwise stated herein, Contractor shall procure and maintain, or cause to be procured and maintained, in full force and effect, the minimum insurance coverages set forth herein at its sole expense. Contractor, at its own cost, may purchase any additional insurance it believes necessary to protect its interest. All such insurance carried shall be placed with such insurers having a minimum A.M. Best insurance rating of "A-, VII" and be in such form, with such other applicable terms, conditions, limits and deductibles (subject to the minimum insurance coverages and terms below) Required insurance limits may be met by a combination of primary and excess policies. Contractor shall provide customary certificates of insurance to evidence compliance with these insurance requirements. If written on a claims-basis, insurance shall be continuously maintained and provided for a two (2)-years extended reporting period:

A. Workers' Compensation Insurance. Workers' Compensation Insurance and such other forms of insurance which Contractor is required to maintain in order to comply with statutory limits under workers' compensation laws of any applicable jurisdiction in the United States (and any other location in which the Work is to be performed).

B. Employer's Liability Insurance. Employer's Liability Insurance (including occupational disease) coverage with limits of One Million Dollars ($1,000,000) each accident, One Million Dollars ($1,000,000) for disease–policy limit, and One Million Dollars ($1,000,000) disease-each employee, which shall cover all of Contractor's employees, whether full-time, part-time, who are engaged in the Work. If any Work is performed in a monopolistic state, stop-gap employer's liability insurance must be provided.

C. Commercial General Liability Insurance. Commercial General Liability Insurance written on an occurrence form and providing not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) in the general aggregate. Such coverage shall include premises/operations, contractual liability for written contracts, products/completed operations, property damage, bodily injury (including death), independent contractors, and personal/ advertising injury liability. The policy shall contain no exclusions for X.C.&U., rigging and lifting, or operations within fifty (50) feet of a railroad (if applicable). The Commercial General Liability policy shall extend coverage to claims and/or suits brought by Contractor's employees for bodily injury incurred on Owner and/or its affiliates property and/or premises, more commonly referred to as action-over claims. Coverage shall be written on a per project or per location basis.

D. Commercial Auto Liability Insurance. Commercial Auto Liability Insurance with a combined single limit of not less than One Million Dollars ($1,000,000) each accident including coverage for owned (if any), non-owned, and hired automobiles for both bodily injury (including death) and property damage.

E. Excess/Umbrella Liability Insurance. Excess/Umbrella Liability Insurance providing coverage limits in excess of the primary Employer's Liability, Commercial General Liability and Commercial Auto Liability policies. The limits of such Excess/Umbrella coverage shall be not less than Twenty-Five Million Dollars ($25,000,000). Such insurance shall not contain exclusions for punitive or exemplary damage where permitted by Applicable Law. If such coverage is written on a claims-made basis, policy will allow for a minimum 2-year extended reporting period.

F. Professional Liability Insurance. The Professional Liability requirement may be met by Subcontractors who are performing professional services. Professional Liability Insurance covering errors or omissions arising out of the performance or the failure to perform professional services under this Agreement which result in direct loss. Coverage shall be in the amount of Five Million Dollars ($5,000,000) per claim and in the annual aggregate, with deductibles or self-insured retentions, which shall be the sole obligation of the Contractor. In the event that such policy is not renewed or the retroactive date of such policy is advanced, Contractor shall obtain for each such policy or policies a minimum two (2) year extended reporting period endorsement, also known as "tail" coverage, or in the alternative, a "prior acts" endorsement from the insurer, and for each such policy or policies shall provide to Owner proof that such extended reporting period coverage ("tail" coverage) or "prior acts" coverage has been, or can be, obtained.

G. Contractor's Pollution Liability Insurance. Contractor's Pollution Liability Insurance, including sudden and accidental and gradual pollution coverage, Contractual Liability coverage, transportation risks (including loading and unloading of any hazardous waste or materials), disposal at any non-owned disposal site, remediation costs and expenses, and completed operations (on an annual basis and renewed each year for the two (2) consecutive years following the Final Completion Date). Such insurance is to be written on an "occurrence" or claims-made policy with a limit of liability of Five Million Dollars ($5,000,000) per claim/project aggregate.

H. Special Language required. Contractor and all subcontractors shall cause the insurance required herein to waive, where allowed by Applicable Law, rights of subrogation for loss or damage that may be covered under their insurance required above in (A) through (G) (except (F)) against the Owner, and their respective Affiliates, directors, officers, vendors, agents, engineers, and employees. Contractor and all subcontractors shall cause the insurance required herein in (A) through (G) (except (A), (B) and (F)) to include the Owner as an Additional Insured. Coverages (C), (D), and (G) shall be written on a primary basis with coverages (C) through (E) and (G) written on a non-contributory basis. All policies required shall provide Owner with thirty (30) days written notice of cancellation except for ten (10) days for non-payment of premium. Contractor is required to provide to Owner Certificates of Insurance for all policies required prior to accessing Project location/premises.

I. Equipment, Supplies and Materials. All equipment, supplies and materials (i) belonging to Contractor or to any of its Subcontractors or (ii) used by or on behalf of Contractor or any of its Subcontractors for its performance hereunder which is not intended to become a permanent part of the completed Work shall be brought to and kept at the Project Site at the sole cost, risk and expense of Contractor or such Subcontractor, and Owner shall not be liable for loss or damage thereto. Should such property be insured, said insurers shall waive rights of subrogation against Owner and its affiliates. Owner will not be responsible for any insurance premium payments related to the aforementioned equipment, supplies or materials.

PART II – OWNER INSURANCE REQUIREMENTS

Owner shall procure and maintain, or cause to be procured and maintained, in full force and effect, the minimum insurance coverages set forth herein at its sole expense. Owner, at its own cost, may purchase any additional insurance it believes necessary to protect its interest. All such insurance carried shall be placed with such insurers having a minimum A.M. Best insurance rating of "A-, VIII" and be in such form, with such other applicable terms, conditions, limits and deductibles (subject to the minimum insurance coverages and terms below):Owner shall provide customary certificates of insurance to evidence compliance with these insurance requirements.

A. Workers' Compensation Insurance and Employer's Liability Insurance. To extent exposure exists, Owner shall maintain in force (i) workers' compensation insurance for all of its employees, to the extent the exposure exists, in accordance with the laws of the state where the Project is located and (ii) employer's liability coverage in an amount of not less than One Million Dollars ($1,000,000) for Bodily Injury by Accident per accident, One Million Dollars ($1,000,000) for Bodily Injury by Disease – policy limit, and One Million Dollars ($1,000,000) for Bodily Injury by Disease - per employee for disease.

B. Automobile Liability Insurance. If applicable, Owner shall maintain automobile liability insurance (including coverage for owned (if any), non-owned, and hired automobiles) to the extent the exposure exists, covering vehicles used by Owner, including the loading or unloading of such vehicles, in an amount of One Million Dollars ($1,000,000) combined single limit each accident for bodily injury, and property damage. Owner's automobile liability insurance coverage shall contain appropriate no-fault insurance provisions or other endorsements in accordance with Applicable Laws.

C. Commercial General Liability Insurance. Owner shall maintain commercial general liability insurance in limits of One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) general aggregate. Such insurance shall include coverage for premises/operations, products/completed operations, contractual liability for written contracts, bodily injury and property damage and personal/advertising injury liability, and sudden & accidental pollution.

D. Umbrella or Excess Liability Insurance. Owner shall maintain umbrella/excess insurance covering claims in excess of the underlying insurance described in clauses (A)(ii), (B) and (C) hereof in the amount of Two-Million Dollars ($2,000,000) per occurrence and in the aggregate, and on a following form basis.

E. Builders All-Risk Policy. Effective on the date that any Work is to begin at the Project Site, Owner shall obtain, and thereafter at all times up to the Substantial Completion Date, maintain builder's all-risk insurance in relation to the Project (the "**Builders All- Risk Policy**") for the full insurable value of the Project on a replacement cost basis except for customary sub-limited and/or aggregated perils. The Builders All-Risk Policy shall cover all property in the course of construction, including the Work, Equipment, miscellaneous equipment, buildings and structures, machinery, fixtures, materials, supplies, furnishings, temporary work and other properties constituting a part of the Project from physical loss or damage caused by perils covered by a builder's all- risk form or equivalent coverage. This insurance shall also cover the Work stored off the Project Site and also the Work in (inland) transit subject to customary sub-limits. Coverage shall remain in effect until replaced by comparable permanent property insurance upon the occurrence of the Substantial Completion Date. Such Builders All-Risk Policy shall insure as additional insureds, Contractor, its affiliates and Subcontractors as their interests may appear and shall provide a waiver of the underwriters' right to subrogation against such parties (except as respects any Warranty obligations of such parties contained herein). The deductible shall be the responsibility of the Owner.

F. All-Risk Property Policy. After the Substantial Completion Date and through to the end of the Warranty Period, Owner shall obtain and maintain all-risk property insurance in relation to the Project for the full insurable value of the Project on a replacement cost basis except for customarily sub-limited and/or aggregated perils. Such all-risk property policy shall include Contractor, its affiliates and Subcontractors as additional insured and shall provide a waiver of the underwriters' right to subrogation against Contractor, its affiliates and Subcontractors (except as respects any Warranty obligations of such parties contained herein). The deductible shall be the responsibility of the Owner.

EXHIBIT B
PV SCOPE OF WORK

List of Abbreviations and Acronyms

AC	alternate current
A/E	architects/engineers
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
CDs	compact discs
CM	construction management
CSI	Construction Specifications Institute
DC	direct current
EPA	Environmental Protection Agency
ETL	ETL Testing Laboratories
FM	factory manual
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
kWh	kilowatt-hour
kW	kilowatt
kV	kilovolts
LED	light emitting diode
MDP	main distribution panel
MPPT	maximum power point tracking
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NRCA	National Roofing Contractors Association
POA	plane of array
POI	point of interconnection
PV	photovoltaic
QCP	Quality Control Plan

RECs	renewable energy certificates
SB1	California Senate Bill 1
STC	standard test conditions
TRECs	tradable renewable energy certificates
UL	Underwriters Laboratories
WREGIS	Western Renewable Energy Generation Information System
V	volts

1. PROJECT IDENTIFICATION

1.1. Project: AC RANCH SOLAR, Ground mounted approximately 100 MWdc/74.99 MWac solar photovoltaic system installed in Hobbs, New Mexico. Referencing AC Ranch Solar includes the owner and project coordinator throughout this document.

1.2. Location: Near 7200 Shell Road, Hobbs, NM 88240. Detailed coordinates on preliminary solar plans.

2. BACKGROUND

2.1. Objective. Contractor shall provide a total "turnkey" project including all necessary equipment, materials, design, manufacturing and installation services for the installation of a utility-interactive photovoltaic system that shall produce a minimum of 74.99 kWh AC per year at the point of interconnection, approximately 100 MW DC capacity, as per noted in the preliminary solar plans. The contractor should prepare system summary detailing each location, applicable equipment/size, predicted system energy production (kWh). This project shall meet all requirements of this Statement of Work and other specifications included that apply.

2.2. Scope. The contractor shall perform all professional services as necessary to provide AC Ranch Solar with a complete design package including the requirements outlined in this Statement of Work. The contractor shall install the project such that it is operational and compliant with all applicable standards, building codes, UTILITY interconnection requirements, and STATE requirements. The contractor shall include specifications, calculations and drawings in the design package, and turn it over to AC Ranch Solar. After approval by AC Ranch Solar of the final design package, the contractor shall provide all necessary construction to successfully complete the photovoltaic system installation.

2.2.1. Design Guidelines.

Design Guidelines for Ground-Mounted PV. The contractor shall utilize the preliminary solar plans as a design for a new photovoltaic system at LOCATION. It is the responsibility of the contractor to assess site topography and geotechnical attributes to estimate costs related to project installation.

- Mounting system shall be either directly anchored into the ground (driven piers, concrete footers, etc.) or ballasted on the surface without ground penetration. Mounting system design needs to meet applicable local building code requirements with respect to snow, wind, and earthquake factors.
- Panels' orientation shall be due true south.
- Single-axis trackers shall be utilized.
- Ground cover and vegetation management shall be included in the proposal.
- Stormwater management and erosion control management plan shall be included in the proposal.
- Gate, fencing, and security system shall be included in the proposal.
- All lines interconnecting PV arrays to substation shall be underground.
- All lines interconnecting substation to POI shall be aboveground.

2.2.2. Performance Criteria. The following performance criteria shall be met for all arrays:

- Power provided shall be as indicated in the preliminary solar plans.
- The STC-rated power value will be entered into PVSyst (http://PVSyst.nrel.gov/) using the nearest weather file to determine estimated energy delivery in kWh AC. A default value for the system losses of 14% shall be used.
- All PV hardware components shall be either stainless steel or aluminum. PV structural components shall be corrosion resistant (galvanized steel, stainless steel, composites, or aluminum).

2.2.3. Construction. Perform all construction necessary for the successful installation of the system based upon the design generated from 2.2.1.and 2.2.2.

2.3. Technical Requirements and Reference Materials

2.3.1. Code Compliance. Installation and equipment shall comply with applicable building, mechanical, fire, seismic, structural and electrical codes. Only products that are listed, tested, identified, or labeled by UL, ETL, or another Nationally Recognized Testing Laboratory shall be used as components in the project. Non-listed products are only permitted for use as project components when a comparable useable listed component does not exist. Non-listed products proposed for use as components must be identified as such in all submittals.

The contractor shall use project components that are or are made of materials that are recyclable, contain recycled materials, and that are EPA or Energy Star rated if they are available on the market. The contractor shall meet the minimum codes and references on the Preliminary Solar Plans.

2.4. Roles and Responsibilities.

2.4.1. Contractor. The contractor is required to provide:

- Construction documents and engineering calculations that are signed and sealed by a licensed architect or engineer
- Submittals for materials and products
- Construction materials, equipment and labor
- Design and construction supervision / contract management
- Quality control plan (QCP)
- Safety plan
- Inspections and tests (per QCP)
- Manuals (design calculations, operation/maintenance, shop drawing, etc.)
- Commissioning of project
- SCADA monitoring system for 20 years

2.4.2. AC Ranch Solar will:

- Review for approval design submittals and QCP
- Witness inspections and test witnesses to verify attainment of performance requirements
- Make progress payments for design / construction as agreed

3. PROPOSAL CONCEPT DRAWINGS AND SPECIFICATIONS SUBMISSIONS

3.1. Drawings. The winning contractor shall provide AC Ranch Solar with drawings. The drawings must indicate the proposed location of the PV array(s) and access points along with a one-line electrical diagram showing inverters, transformers, meters, and interconnection locations. All drawings shall be submitted with dimensions shown in English units.

3.2. Information. The winning proposal shall include major equipment information, proposed installation/interconnection information, and performance characteristics of the system. Identify an

appropriate location for the 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
- Secured location and hardware
- Visual harmony

All products shall comply with the technical requirements shown under section 8, "Solar Electric Module Array". At a minimum, the proposed concept information shall include:

Equipment Information:

- System description
- Layout of installation
- Selection of key equipment and layout of equipment
- Performance of equipment components, and subsystems
- Specifications for equipment procurement and installation
- All engineering associated with structural and mounting details
- Controls, monitors, and instrumentation
- Operation and maintenance service plan

Performance Characteristics

- Shading calculation documentation
- Total system output
- Estimated kWh/month per array (shown over a 12 month period)
- Warranties and guarantees

Interconnection Agreement

- Provide confirmation that the PV systems will be designed to comply with applicable UTILITY interconnection requirements.

Cost

- Total bid price of project including operation and maintenance for the first year, and optional service plan after the first year

4. DESIGN SERVICES

Solar PV system shall be designed and engineered to maximize the solar energy resources, taking into consideration the installation site, available solar resources, existing site conditions, and other relevant factors.

Design Services for this project shall require a schematic design submission, a design development submission, a check set submission and a construction document submission. A final set of as-built drawings shall also be provided to AC Ranch Solar. These submissions shall be delivered to AC Ranch Solar based on the project schedule submitted and approved by AC Ranch Solar. The design package shall include the following details (4.1-4.6).

4.1. Timeline/Project Schedule. Contractor is required to provide an estimate on project timeline and schedule.

4.2. Post Award Conference. Within 21 calendar days after receipt of the contract award. The meeting will be attended by AC Ranch Solar team members and the contractor's personnel. At a minimum, the prime contractor's project manager and foreman, the primary designer, and a representative of any subcontractor performing over 25% of the work must attend. The meeting will be held at the project location. The purpose of the meeting will be to discuss the contractor's plan for completing the design and construction, including a construction schedule. A walk-through of the site will occur at the end of the meeting.

4.3. Specifications. A full set of specifications shall not be required for this project. However, specifications that express all information and demonstrate sufficient detail so as to direct the construction work outlined in this Statement of Work shall be required. The specifications package shall be coherent enough that any contractor not familiar with the project would be able to construct the project design. The specifications shall include all equipment information, proposed installation and interconnection information, and performance characteristics of the system.

4.3.1. All drawings, estimates, calculations, and specifications shall be in English units.

4.4. Construction Drawings

4.4.1. Provide drawings for each discipline required (architectural, structural, electrical, etc.)

4.4.2. Each drawing shall indicate project title, project number, array identification and location, A/E firm, A/E's address and/or phone number, contract number, drawing title, drawing type, drawing number, and key plan. A cover sheet shall be provided and shall include a list of the drawings, legend, vicinity map, and location map in addition to all items required for each drawing. Each A/E submission shall be clearly dated and labeled (e.g. 75% Design Development Submission, 100% Check Set Submission, Construction Document Submission, As-Built Drawings, etc.). Each drawing sheet submitted shall include a graphic scale in the lower right-hand portion of the sheet. The final set shall be stamped by a registered engineer and/or registered architect for the state in which the building/carport is located. At a minimum, the following drawings are required:

- Site plan including utility locations and connections – shall show staging and phasing requirements.
- Electrical plans – including single line diagram and utility interconnection.
- Electrical details.
- Array support and mounting details.
- Any drawings that may be required to install a complete project.

4.4.3. The contract documents shall sufficiently define the Statement of Work and shall stand on their own.

4.4.4. Specifically address the means to keep the existing building accessible and operational by means of relocation and / or phasing.

4.5. Calculations. The contractor will provide the following calculations.

4.5.1. System Electrical Calculations. Provide with design development and again with 100% check set.

- PVSyst calculation
- System energy production calculation showing estimated monthly and yearly energy output for each array
- Energy value and project cash flow

4.6. Registration Seals. Each final working drawing and each submitted specification and calculation document shall be signed by, bear the seal of, and show the state certificate number of the architect and/or engineer who prepared the document and / or is responsible for its preparation.

5. DESIGN SUBMISSIONS

Awarded contractor will secure from governing agencies and the utility company all required rights, permits, approvals, conforming to interconnection approval, at no additional cost to AC Ranch Solar. The awarded Contractor will complete and submit in a timely manner all documentation required to qualify for available rebates and incentives.

5.1. Design Reviews. For each design / drawing submissions, AC Ranch Solar reserves the right to make comments and request changes after the receipt of the submission. Reviews will be made by AC Ranch Solar staff. As part of its review, AC Ranch Solar may offer submission reviews to local code officials.AC

Ranch Solar shall provide review comments within fourteen (14) calendar days of receipt of the 75% Design Development Submission and the 100% Check Set Submission.

5.2. Purpose.AC Ranch Solar will review the contractor design submissions to verify adherence to contract requirements. Design reviews by AC Ranch Solar are not to be interpreted as resulting in an approval of the contractor's apparent progress toward meeting contract requirements but are intended to discover any information that can be brought to the contractor's attention that might prevent errors, misdirection, or rework later in the project. The contractor shall remain completely responsible for designing, constructing, operating and maintaining the project in accordance with the requirements of this Statement of Work.

5.3. Resolution of Comments. The contractor shall respond to all design review comments in writing, indicating one of the following: (1) adoption and action taken, (2) adoption with modifications and action taken, (3) alternative resolution and action taken, or (4) rejection. In cases other than unqualified adoption, the contractor shall provide a statement as to why the reviewer's comment is inappropriate. If the contractor believes that any AC Ranch Solar design comments or requested changes will result in a change in the contract cost, they shall notify AC Ranch Solar within seven calendar days of receiving the comment(s) and provide a detailed cost estimate of anticipated contract modifications. Rejection items shall not go forward to the construction phase until adequate resolution to the rejected item has been approved by AC Ranch Solar. Design review comments shall not relieve the contractor from compliance with terms and conditions of this contract. The contractor's comment resolution shall be transmitted to AC Ranch Solar within seven (7) calendar days of comment receipt and incorporate discussions from the scheduled design comment review meetings.

6. UTILITY INTERCONNECTION AGREEMENT

6.1. The contractor shall coordinate with UTILITY to ensure that the project satisfies all UTILITY criteria for interconnection of the project to the UTILITY electric distribution system. This includes coordinating all negotiations, meeting with UTILITY, design reviews, and participating in any needed interaction between UTILITY and AC Ranch Solar.

6.2. The contractor is responsible for preparing required submissions for obtaining the Net Energy Metering (NEM) and interconnection agreement from the utility.AC Ranch Solar will sign the NEM and interconnection agreements, not the contractor.

6.3. The contractor shall manage interconnection and startup of project in coordination with the Site and UTILITY. The contractor shall at its own expense pay any interconnection, processing, and other fees and expenses as may be required by UTILITY for interconnection and operation of the project.

7. Quality Control Plan

7.1. Content. For each performance and installation requirement, the QCP shall identify: item/system to be tested, exact test(s) to be performed, measured parameters, inspection/testing organization, and the stage of construction development when tests are to be performed. Each inspection/test shall be included in the overall construction schedule. The contractor is not relieved from required performance tests should these not be included in the plan.

The QCP is intended to document those inspections and tests necessary to assure AC Ranch Solar that product delivery, quality and performance are as required. It also serves as an inspection coordination tool between the contractor and AC Ranch Solar. An example of these inspections/tests is the final test/inspection for overall performance compliance of the system. Results from tests and inspections shall be submitted within 24 hours of performing the tests and inspections.

7.2. Submissions. The QCP shall be prepared and submitted within 21 calendar days of the post award conference meeting and prior to any construction on-site. The QCP may be rejected as incomplete and returned for resubmission if there is any performance, condition or operating test that is not covered therein.

7.3. Updating. During construction, the contractor shall update QCP if any changes are necessary due to any changes or schedule constraints.AC Ranch Solar shall be notified immediately of any schedule and/or procedural changes.

8. SOLAR ELECTRIC MODULE ARRAY

8.1. Photovoltaic Modules

8.1.1. PV modules shall be a commercial off-the-shelf product, shall be UL listed, and shall be properly installed according to manufacturer's instructions, NEC, and as specified herein.

8.1.2. The solar electric system shall produce the minimum annual AC energy output. If the system is proposed to produce more than the minimum required energy output to reduce the cost per delivered kWh then the system shall produce the "proposed" energy. The output will be adjusted if the actual yearly solar insulation received is less than that indicated by PVSyst. A normalizing calculation will be made to correct the output, so a contractor is not penalized for an extremely cloudy year.

8.1.3. System wiring shall be installed in accordance with the provisions of the NEC.

8.1.4. All modules installed in a series string shall be installed in the same plane/orientation.

8.1.5. Panel installation design shall allow for the best ventilation possible of panels to avoid adverse performance impacts.

8.2. Inverter and Controls

8.2.1. Each inverter and associated controls shall be properly installed according to manufacturer's instructions.

8.2.2. Inverters shall be commercial off-the-shelf product, listed to UL 1741 and IEEE 1547

8.2.3. The inverter shall have at a minimum the following features:

- UL/ETL listed
- Peak efficiency of 96% or higher
- Inverter shall have operational indicators of performance and have built-in data acquisition and remote monitoring.
- The inverter shall be capable of parallel operation with the existing AC power. Each inverter shall automatically synchronize its output waveform with that of the utility upon restoration of utility power.

8.2.4. Warning labels shall be posted on the control panels and junction boxes indicating that the circuits are energized by an alternate power source independent of utility-provided power.

8.2.5. Operating instructions shall be posted on or near the system, and on file with facilities operation and maintenance documents.

8.2.6. Provide detailed lock out /tag out instructions for all equipment.

8.3. Transformers

8.3.1. Stand-alone boost up transformers not incorporated into the inverters shall be National Electrical Manufactures Association (NEMA) premium efficiency. Exterior transformers shall be housed in a NEMA 3R enclosure and be pad mounted. They shall be located next to switchgear housings as indicated on drawings.

8.4. Structural Requirements

8.4.1. All structures, including array structures, shall be designed in accordance with all applicable state and local codes and standards.

8.4.2. The contractor shall provide structural calculations, stamped by a licensed professional structural engineer in the appropriate state.

8.4.3. All structural components shall be non-corrosive (galvanized steel, stainless steel or aluminum). All hardware shall be stainless steel or aluminum. All components shall be designed to obtain a minimum 40 year design life.

8.5. Lightning Protection. Provide surge protection on all electrical systems.

8.6. PV System Installation Warranty. The PV systems shall carry a ten (10) year workmanship warranty by both the manufacturer and the installer including parts and labor.

9. SHOP DRAWINGS/PRODUCT DATA

9.1. Submissions. The Contractor shall submit shop drawings and product data / submittals, catalog cuts, etc. as stipulated herein. Shop drawing/product data submissions to AC Ranch Solar shall be made after review and approval by the contractor. All approved product data and shop drawings shall be delivered to AC Ranch Solar in one submission electronically.

The contractor shall combine all product data submission material into hard copy manuals for reference during all phases of construction. Shop drawings shall be bound with product data.
See also Electronic Project Management requirements in Section 1, General Requirements. .

9.2. Reviews. Reviews of shop drawings and product data by AC Ranch Solar are not to be interpreted as an approval of the Contractor's product selections. The contractor shall remain completely responsible for constructing the PV system in accordance with all contract performance requirements.

9.3. Products for Submission. The contractor shall provide shop drawings and product data for all systems, equipment and materials.

10. INSPECTIONS AND TESTS

10.1. General. The contractor shall perform inspections and tests throughout the construction process including: existing conditions/needs assessments, construction installation placement/qualification measurements and final inspections/tests performance certification. Periodic “quality” inspections shall also be conducted to support progress payments as identified in the contractor’s QCP.

10.2. AC Ranch Solar Witness. All inspections and tests, to verify documented contract assumptions, to establish work accomplishment, or to certify performance attainment shall be witnessed by AC Ranch Solar and/or construction management (CM) and coordinated through the QCP.

10.3. Final Inspections and Tests. In order to ensure compliance with provisions of the NEC, an inspection by a licensed electrical inspector is mandatory after construction is complete. Unless otherwise identified, manufacturer recommendations shall be followed for all inspection and test procedures. The NEC inspection shall be conducted by an independent third party electrical inspector familiar with PV systems. Provide qualifications of the proposed third party inspector for review and approval prior to conducting the NEC inspections.

Tests shall include a commissioning of the array. Commissioning tests shall conform with the requirements in Section 7 (QCP). Commissioning shall be performed for the entire PV system. This data shall be used to confirm proper performance of the PV system.

10.4. Documentation. Inspections/tests required in the QCP shall result in a written record of data/observations. The Contractor shall provide two (2) copies of documents containing all test reports/findings. Test results shall typically include: item/system tested, location, date of test, test parameters/measured data, state of construction completion, operating mode, contractor inspector/AC Ranch Solar witness, test equipment description and measurement technique.

11. Project Closeout

11.1. Preparation for Final Inspection and Tests. The following steps shall be taken to assure the project is in a condition to receive inspections and tests.

Finalize record drawings and manuals, indicating all “as-built” conditions.

11.2. Record Drawings. The contractor shall maintain on site the working record drawings of all changes/deviations from the original design. Notations on record drawings shall be made in erasable red pencil or other color to correspond to different changes or categories of work. Marked-up drawings shall always be maintained at the contractor’s onsite construction office, available for AC Ranch Solar and/or CM to review. Record drawings shall note related change order designations on impacted work. When shop drawings indicate significant variations over design drawings, shop drawings may be incorporated as part of record drawings. Review of record drawings may be required before monthly payments can be processed.

11.3. As-Built Drawings and Specifications. The Contractor shall provide "as-built drawings" and documents based upon actual site installation. Should AC Ranch Solar determine that variations exist between finished construction and the as-built drawings, the contractor shall correct drawings to the satisfaction of AC Ranch Solar.

The contractor shall submit the “as-built” drawings electronically.

11.4. Warranties and Guarantees. Submit specific warranties and guarantees, final certifications and similar documents to AC Ranch Solar upon substantial completion and prior to final payment. Include copies with operations and maintenance manual. All warranties shall be signed by a principal of the contractor’s firm and sealed if a corporation.

EXHIBIT C

PV SPECIFICATIONS

GENERALLY ENCOMPASSED SPECIFICATIONS

The Contractor shall provide all labor, material, equipment, engineering, maintenance, and capital to design, install, commission, interconnect, maintain, and operate solar photovoltaic (PV) systems as required herein. All one-time and recurring efforts, soft and hard costs, shall be the Contractor's responsibility.

In addition, the Contractor is responsible for all costs in establishing and maintaining grounds within the array boundary. All areas under the Contractor's control shall be maintained in a neat, clean fashion.

CODES, STANDARDS, AND REGULATIONS

Utilize the codes as stated in the Preliminary Solar Plans.

PROJECT SPECIFICATIONS

Details of the project specifications and materials are listed in the preliminary solar plans. In general, this includes:

- Waaree Tier 1 bi-facial 545 W DC STC solar modules.
- Power Electronics 4.2 MWac inverters with included step-up transformer to 34.5kV.
- GameChange Genius single-axis trackers.
- SCADA system as noted in preliminary plans.
- Substation for POI designed by AEI.

Alternate materials/design of like kind and quality/performance may be offered in the bid proposal.

LOCATING EQUIPMENT AND APPEARANCE

Major electrical components, including the inverter, isolation transformer, and metering shall be installed in code-compliant enclosures. Components shall be located indoors whenever feasible, in ventilated (or air conditioned) utility rooms and where space and codes allow. In climates and locations with high heat and/or humidity, Contractor shall install air conditioning in room housing major electrical components.

Equipment locations should be included in the submittals and approved by owner prior to installation.

EXPECTED SERVICE LIFE

Unless noted otherwise, all materials furnished for the project shall have an expected service life of twenty-five (25) years or more.

SITE SERVICE CONDITIONS

Materials shall be designed to withstand the year-round temperatures and conditions to which they are exposed (sunlight, heat, rain, cold, wind, etc.)

SAME MANUFACTURER AND PRODUCT LINE

All modules, inverters, and electrical switchgear are to be of the same manufacturer and product line for each PV system.

NEW EQUIPMENT

New equipment is to be used for all materials in the installation.

SCADA

SCADA equipment is shown in the preliminary solar plans. However, alternate SCADA equipment may be proposed.