Dublin San Ramon Services District

Water, wastewater, recycled water

Dublin San Ramon Services District

Design, Installation,

Operations, and Maintenance of

Solar Photovoltaic, EV Chargers, and Battery Storage Systems

REQUEST FOR PROPOSALS (RFP)
TO ENTER INTO A
POWER PURCHASE AGREEMENT

Date RFP Issued: June 18, 2025

Date RFP Responses Due: July 17, 2025 at 2:00 PM

Request for Proposals

1. Project Background

Dublin San Ramon Services District (DSRSD or District) is seeking proposals for a partner to design, install, operate, and maintain solar PV systems at four (4) sites, EV chargers at three (3) sites, and Battery Energy Storage Systems (BESS) at two (2) sites under a Power Purchase Agreement (PPA). DSRSD is also seeking mandatory Alternate proposals for implementation of a microgrid at the District Office facility, as further described in Exhibits B and G. The solar systems must be interconnected under PG&E's current Net Energy Metering rules, called the Net Billing Tariff (NBT).

Please note that one of the sites covered in this RFP, the Livermore-Amador Valley Water Management Agency (LAVWMA), is operated by a joint powers authority and will require a separate PPA to be executed from the PPA or PPAs covering the other three sites operated by DSRSD. The design and construction process will be managed as one project by DSRSD.

The District is interested in maximizing solar production, while achieving the lowest cost of energy. All Proposers should develop a system design that best balances system cost, production, District requirements, and the Proposer's ability to deliver a high-quality system on-time and on-budget.

Potential solar system and EV charging locations are depicted in Exhibit G. Sites include a mix of solar shade structures, roof mounted systems and ground mounted systems. A list of all District sites, estimated annual site use and preferred equipment locations are included in Exhibit G. This RFP does not specify locations for the two BESS systems. All EV chargers will be installed in parking lots that are not accessible to the public and the District's position is that this project is not subject to Cal Green Code requirements for EV charging.

Proposers are required to completely fill out the Proposal Pricing Sheet found in Exhibit F, detailing their PPA offer. PPA pricing shall include all elements of the project required to satisfy the requirements in this RFP, as well as state and local building codes, including any required accessibility improvements.

Proposers shall assume all design and permit approval risk, including, but not limited to securing all approvals from the Authority that has Jurisdiction (AHJ) and other local government entities as applicable, fire review, and utility reviews. While the District will work collaboratively with its selected Proposer throughout the design and permit approval process, no compensation other than what is included in the proposed PPA rate will be granted for either (1) the effort associated with the approval process or (2) administration, project management, overhead, or any other cost associated with approval delays.

2. Procurement Milestones

Project Milestones	Date
RFP Released	June 18, 2025
Proposers' Conference & Site Walk (mandatory)	July 2, 2025
Deadline to Submit Clarification Questions	July 9, 2025
Responses to Clarification Questions	July 10, 2025
RFP Responses Due	**July 17, 2025 at 2:00 PM Pacific Time**
Shortlist Interviews	Week of July 21
Board Approval of Agreement (tentative)	August 19, 2025
Target for Start of Construction	Spring 2026

3. Documents Comprising this RFP

Exhibit A Instructions to Proposers
Exhibit B Technical Specifications
Exhibit C Operations and Maintenance Requirements
Exhibit D Required Contract Submittals
Exhibit E Warranty Requirements
Exhibit F Proposal Forms
Exhibit G Project and Site Details
Exhibit H Utility Data
Exhibit I Performance Guarantee Requirements

4. Proposers' Conference and Bid Walk

A **MANDATORY** Proposers' conference and bid walk will take place on July 2, 2025 at 10:00 AM. Please meet at:

District Office
7051 Dublin Blvd.
Dublin, CA 94568

The planned order of site visits after the District Office is the Field Operations Facility, LAVWMA, then the Wastewater Treatment Plant. At its sole discretion, the District may schedule additional site walks. Additional site walks are not guaranteed, and all efforts should be made to make the scheduled site walk.

5. Contact Person

Questions regarding the contents of this RFP must be submitted prior to deadline for Clarification Questions in writing (via email) to the person listed below:

Russell Driver
russell@arc-alternatives.com

Firms are directed to not contact any other person associated with the District with inquiries regarding this RFP. Failure to adhere to this direction may lead to submission disqualification.

Proposals shall be submitted electronically to the email address listed above.

6. Proposal Submittal

Proposers must submit Proposals electronically to the email address listed above by the date and time indicated in the Procurement Milestone schedule. Email responses may include a link to a file hosting site if proposals are too large to attach to an email message. In no case shall proposals be accepted past the due date and time.

Each proposer is solely responsible for timely submission of its proposal; the District is not responsible for any technological issues in a proposer's ability to timely submit its proposal or portion thereof.

Exhibit A: Instructions to Proposers

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Instructions to Proposers

Attachment 1: RFP Response Structure and Forms

1. Introduction/Background

DSRSD is seeking proposals from qualified Proposers to enter into a Power Purchase Agreement (PPA) to design, engineer, procure, install, interconnect, commission, and operate and maintain solar photovoltaic systems and BESS at the sites listed in Exhibit G (Project).

The District reserves the right, before the award of the PPA, to modify the scope of this Request for Proposal (RFP) and to request adjusted pricing from any Proposer. The District additionally reserves the right to select no Proposer and reject all proposals.

The selected Proposer must be experienced in executing and operating and maintaining solar photovoltaic and battery projects similar in scope, scale, and complexity to this Project. Proposer must be a contractor licensed in the State of California, registered as a public works contractor with the Department of Industrial Relations, and qualified to perform all work. Proposers must present a proposal that meets the goals, timeline, and requirements of this RFP and specifications, as well as the requirements of any associated funding or incentive programs.

This RFP is issued in accordance with Government Code section 4217.10, et seq. and other applicable laws. However, until and unless DSRSD and LAVWMA, for its facility, approves the PPAs and/or related contracts, no binding agreement exists with the District or LAVWMA.

2. Procurement Schedule

The anticipated procurement schedule is as set forth in Section 2 of the RFP, "Procurement Milestones."

3. Project Objectives

DSRSD requires the selected Proposer to perform each of the following and to perform all required work in accordance with the Technical Specifications (Exhibit B):

1. Design, install, construct, test/commission, and operate/maintain the systems consistent with the requirements in the Technical Specifications.
2. Design the photovoltaic systems to provide the production target identified in Exhibit G – Site Details in the most cost-effective manner, as indicated in Section 1 of the RFP, "Project Background." Proposers should optimize their designs to achieve the production targets at the lowest cost, within the identified areas.
3. Meet Project submittals and completion deadlines. Effectively manage the schedule and coordinate construction activities around DSRSD's schedule of activities.

4. Scope of Work

The scope of work is defined in Section 1 "Project Background" of the RFP and Exhibit B, "Technical Specifications." The scope of work shall also include, but not be limited to:

1. Securing all clearances, permits, and approvals from all Authorities Having Jurisdiction (AHJ)
2. All labor, including but not limited to the payment of prevailing wages, taxes, services, and equipment necessary to produce fully operational solar systems.

The scope of work also includes all requirements set forth in all of the RFP documents.

5. Insurance and Legal Requirements

Legal Requirements

Proposer shall provide a 20-year or 25-year PPA and Site License Agreement (SLA) with their proposal for District review. Key provisions that must be included in Proposer's agreements are identified below.

Guaranteed Production – Provider shall include a production guarantee of at least 95% of the expected system output in the Agreement, consistent with the Performance Guarantee requirements in Exhibit F to this RFP. The Agreement shall also limit Purchaser's purchase obligations to 110% of expected system output in a given year. However, Purchaser shall retain the option to purchase all or a portion of excess energy, to be exercised solely at Purchaser's option.

Conditions Precedent to Construction – The Agreement shall include, at a minimum, the following conditions precedent to construction. Should these conditions not be met, Purchaser may (in its sole discretion) terminate the Agreement, in which case neither Party shall have any liability to the other except for any such liabilities that may have accrued prior to such termination.

1. Final approval of interconnection agreements by PG&E.
2. Approval of system design documents by Purchaser and all AHJ's.

Condition Satisfaction Date – The Agreement shall specify a mutually-agreed upon date by which all conditions precedent to construction must be met. The Agreement shall also include the following process related to a failure to meet the Condition Satisfaction Date: Should the conditions precedent not be met (or waived) by the date specified, then the parties will attempt in good faith to negotiate new dates for the satisfaction of these conditions. If the parties are unable to negotiate new dates, then the Party that has not failed to meet an obligation may terminate the Agreement without liability for costs or damages or triggering a default under the Agreement.

Change Orders – PPA must include a well-defined process and procedures for managing changes to the scope of the contract. In both cases, the District requires such procedures to include a provision requiring the Contractor or Provider to initiate a request for change within 21 calendar days of becoming aware of the condition that will lead to the change. Additionally, Contractor or Provider shall be required to provide detailed schedule and cost impacts of a potential change to the District within 10 days of such information being requested.

Assignment – The assignment provision must include prior written consent of the Purchaser, which will not be unreasonably withheld.

End of Term – The PPA shall provide options for extension of the agreement by mutual agreement by the parties, purchase of the system by the District at the District's option, and removal of the system and restoration of District facilities to their pre-project condition at Providers expense `if no other end-of-term options are exercised.

Technical and Construction Requirements – The agreement must include or incorporate the technical requirements (specifications) from the RFP, as well as any construction-specific protocols or requirements identified by the District.

Prevailing Wage – This project will be subject to the California Prevailing Wage Law and regulations.

The District intends to negotiate the terms of the proposed PPA and Performance Guarantee Agreements and reserves the right to not proceed with the Project or select another provider should Proposer and District fail to reach an agreement on all needed documents.

Insurance

Proposer shall include the following minimum coverage amount in their proposed PPA and SLA Agreements, to be finalized through negotiations with the selected Proposer:

(i) Statutory Workers' Compensation insurance, and Employer's Liability insurance with a $1,000,000 limit per accident/per employee;

(ii) Commercial General Liability, in combination with Excess Liability insurance, with a per occurrence limit of One Million Dollars ($1,000,000) and a general aggregate of Two Million Dollars ($2,000,000) for bodily injury, including death, property damage and personal injury, written on an occurrence basis; and

(iii) Automobile Liability insurance with a $1,000,000 combined single limit, with coverage extensions for owned, non-owned and hired vehicles.

(iv) Performance Bond – Is required in accordance with the District's requirements.

6. Format of Proposals

Proposals must be organized, comprehensive and tailored to this RFP using the structure and referenced forms in Attachment 1 to these Instructions to Proposers: RFP Response Structure and Forms.

7. Evaluation and Selection Process

The District reserves the right to waive irregularities in proposals received. DSRSD may choose to seek clarification from Proposers or to interview Proposers. If DSRSD holds Interviews, they will be confirmed after the initial evaluation of Proposals. The exact date, time and location will be determined at a later date.

Based on number of Proposals received, DSRSD may identify a shortlist by establishing a competitive range based on the economics of each Proposal prior to conducting a more in-depth review and evaluation of Proposals.

8. Evaluation Criteria

DSRSD will evaluate the responses from Proposers based on the following criteria, with the relative weighting indicated (out of a total possible 100 points):

A. Qualifications and Experience – including subcontractors, and specific personnel proposed for the project, as well as client references. (20 points)

B. Approach – the technical solution, equipment and systems proposed, implementation approach, project management approach, comments to form of PPA, exceptions taken, phasing plan, and project schedule. (30 points)

C. Economics – the net benefit to DSRSD when accounting for construction costs, system production, and the value of energy savings produced by the system. Points will be assigned to each proposal in proportion to the net economic benefit of their proposal relative to the net economic benefit of the proposal with the greatest benefit, as follows:

$$Proposal\ Score = \frac{Proposal\ Net\ Benefit}{Highest\ Net\ Benefit} * Possible\ Points$$

For example, if the proposal being scored has a net economic benefit of $3,000,000 and the proposal with the highest economic benefit has a net benefit of $5,000,000, then the score would be calculated as follows:

$$Proposal\ Score = \frac{\$3{,}000{,}000}{\$5{,}000{,}000} * 40 = 24\ Points$$

The net economic benefit of each proposal will be determined by DSRSD and will be based on a comprehensive 20-year or 25-year cash flow, depending on what is proposed. The cash

flow analysis will include total lifecycle costs, utility savings, and other project costs and revenues as DSRSD deems appropriate. (40 points)

D. Financial Strength – financial strength of the Proposer and its ability to uphold all obligations, guarantees, warranties, and promises for the durations of the PPA. (10 points)

9. Questions

Questions regarding this RFP shall be submitted in writing via email to the contact person listed in Section 5 of the RFP before the deadline for submitting questions stated in the Procurement Milestones table in Section 2. Questions and answers will be shared in writing with all Proposers, although the source of questions will remain anonymous.

10. Preparing and Submitting a Proposal

Each Proposer is solely responsible for the costs incurred in preparing its Proposal. DSRSD will provide no compensation for any such costs. DSRSD reserves the right to reject or accept any and all Proposals for any reason, to withhold consideration of incomplete Proposals, to waive informalities or minor irregularities, or request additional information of Proposers at its discretion. DSRSD also reserves the right to amend this RFP as necessary.

All Proposals and Exhibits submitted to DSRSD in response to this RFP shall remain the property of DSRSD.

Proposals submitted to this RFP will become the property of the District and subject to the California Public Records Act, Government Code sections 6250, et seq. Those elements in each Proposal that are trade secrets as that term is defined in Civil Code section 3426.1(d) or otherwise exempt by law from disclosure and which are prominently marked as "TRADE SECRET," "CONFIDENTIAL," or "PROPRIETARY" may not be subject to disclosure. A Firm that indiscriminately identifies all or most of its Proposal as exempt from disclosure without justification may be deemed non-responsive. Vague designations and/or blanket statements regarding entire pages or documents are insufficient and will not bind the District to protect the designated matter from disclosure. Pursuant to *Michaelis, Montanari, & Johnson v. Superior Court* (2006) 38 Cal.4th 1065, RFP Packets shall be held confidential by the District and shall not be subject to disclosure under the California Public Records Act until after either: (1) the District and the successful Respondent have completed negotiations and entered into an Agreement, or (2) the District has rejected all Proposals.

RFP responses shall be held confidential by the District and shall not be subject to disclosure under the California Public Records Act until after either: (1) the District, LAVWMA for its facility, and the successful Respondent have completed negotiations and entered into an Agreement, or (2) the District or LAVWMA for its facility have reject all Proposals.

The District shall not be liable or responsible for the disclosure of any such records including, without limitation, those so marked if disclosure is deemed to be required by law or by an order

of the Court. In the event the District is required to defend an action on a Public Records Act request for any of the contents of a Proposal marked "Confidential," "Proprietary," or "Trade Secret," the Firm agrees, by submission of its Proposal for the District's consideration, to defend and indemnify the District from all costs and expenses, including attorneys' fees, in any action or liability arising under the Public Records Act.

Any Proposer who has submitted an RFP response shall not, after the RFP Responses Due in the table under Section 2 Procurement Milestones, of this RFP, withdraw or cancel its RFP response for at least 120 days thereafter.

Acceptance of a proposal does not create a contract and does not obligate the District to take any further action. The District reserves the right to direct the Provider to install systems of different sizes than those proposed by Provider, to reject any or all responses without penalty, and to act in the District's best interests as required, in the District's sole discretion.

From the period beginning on the date of the issuance of this RFP and ending on the date of the award of the contract, no person or entity submitting in response to this RFP, nor any officer, employee, representative, agent, or consultant representing such a person or entity, shall contact through any means or engage in any discussion regarding this RFP, the evaluation/selection process, or the award of the contract with any member of the District or the Board. Any such contact shall be grounds for the disqualification of the Proposer.

11. Proposals

An electronic copy of the Proposal shall be submitted to the email addresses listed in Section 5, "Contact Person" of the RFP, before the "RFP Proposals Due" deadline listed in Section 2 Procurement Milestones. Proposers must include a table of contents and clearly label each section of their proposal. Where indicated, populate each template consistent with the format of the template.

Attachment 1

Instructions to Proposers

RFP Response Structure and Forms

Proposals must be organized by the following sections, in the order in which they are listed.

1. Cover Letter

Provide a brief cover letter and highlight any omissions or additions to the Proposal. Include any special notes which may help with the review of Proposer's Proposal.

2. Proposer Qualifications and Experience

A. Business Description - Provide a brief overall description of Proposer including information on company history, business goals, and expertise. Describe how many years the Proposer has been in business and how many years it has been installing and operating solar systems.

B. Organization & Resources

i. List Proposer's full legal name and, if Proposer is a corporation, the state and date on which Proposer was incorporated. Include California business and Contractor's license information.

ii. List the names of any of Proposer's DBAs, holding and parent companies, subsidiaries, and affiliate companies. Identify whether Proposer is a joint venture, and if so, the participating parties. The District will not accept proposals from LLCs or other corporate structures that might be temporary or structured in such way as to shield it from obligations to complete the project.

iii. List all officers, partners, proprietors, owners, and key management personnel within the Proposer, including their names, position/title, years employed with Proposer, and percentage of ownership of Proposer.

iv. Provide an organizational chart and key personnel list for the Project, including resumes and office locations (include both office and field locations for construction and corrective maintenance). Identify the Project Manager for the Project, list their relevant experience, and provide any additional information that demonstrates their suitability for this specific project.

v. State whether there has been any change within the past five years, or if there are any changes pending or anticipated, in the control of Proposer (e.g., change in owners or management personnel, or acquisition or merger with another entity).

C. Subcontractors, Subconsultants and Suppliers - Provide a complete list of subcontractors, subconsultants and suppliers that will be used to perform project management, design, engineering, procurement, installation, construction, interconnection and commissioning, and system monitoring activities. Provide licensure information and DIR Registration numbers and information for all subcontractors and subconsultants that will perform work on the project.

D. Related Project Experience – Identify at least three (3) similar solar PV and BESS projects performed by the Proposer in the past five (5) years either as an architect, an engineer, a designer, a contractor, or a combination of these. Additional weight will be given to experience where Proposer was the lead contractor. Limit response to no more than the ten (10) MOST RECENT projects. Indicate if the Proposer performed design and/or construction services and whether the structure was as a PPA or as a customer-funded/financed project. Include the following information for each project (or program, as applicable):

i. Name of project and district

ii. Name of project lead architect or engineer (if not the Proposer)

iii. Scope of projects, description of services provided

iv. Contact person and telephone number at district

v. Proposer person in charge of each project

vi. Dollar value of each project

vii. Proposer's role in the lifecycle of the project

viii. The financing structure for the project

ix. All claims or litigation arising from the project, if any. Provide information related to the issues in the litigation, the status of litigation, names of parties, and the outcome. This includes any litigation between a contractor and a school district and/or an architect in which Proposer was or was not named.

E. Litigation – Provide a comprehensive five (5)-year summary of your firm's litigation, arbitration and negotiated/settled history with previous clients. State the issues in the litigation, the status of the litigation, names of parties, and outcome. A Proposal failing to provide the requested information on lawsuits or litigation, and responses which assert attorney-client privilege and fail to provide the information requested, will be considered non-responsive, disqualified from the selection process, and will not be evaluated.

3. Approach.

A. Technical Proposal

I. Scope – Provide confirmation that the Proposer has reviewed and accepted the Scope of Work, and all associated requirements provided in the RFP and Technical Specifications. Proposer must identify any and all requests for modification in Section 7 of the proposal. Provide confirmation that Proposer agrees that it will provide reasonably required energy analyses as indicated in the RFP.

II. Layouts and Drawings – For each system (defined as any and all PV arrays and BESS behind a specific meter), include a preliminary single line diagram and general arrangement drawings representing the arrays and balance of systems installation locations. Proposed arrays must be consistent with the plans in Exhibit B.

III. Equipment Specifications and Data Sheets – Provide equipment datasheets, specifications, and manufacturer warranty coverage information of all proposed equipment including photovoltaic modules, inverters, meters, racking/support structures, combiner boxes, disconnect switches, weather stations, and other equipment installed by Proposer.

IV. EV Charging Equipment – Provide description of EV charging equipment. Include proposed chargers, specification sheets, quantities, charging power (kVA), and proposed locations. Proposal pricing shall include the procurement and installation of EV charging equipment as identified in Exhibit G, as well as any needed conduit, panelboards, and other electrical equipment. Proposers should assume no upgrades to existing switchgear or panels.

V. BESS – Describe the proposed battery energy storage system, including system type, technology, size, and technical capabilities. Also, describe how the storage system is expected to benefit DSRSD and how financial savings accrue. Provide data, models, calculations and any other information required to calculate proposed savings. Specifically, proposer shall provide an hourly data file (8760) in MS Excel format showing the combined effects of solar production plus energy storage charging and discharging. This information can be submitted marked as "Confidential" at Proposer's option.

VI. Microgrid (Alt 1) – Provide a narrative and drawing(s) describing the microgrid at District Office. Confirm battery system size, operating modes, and loads to be backed up. Identify any assumptions concerning existing conditions made as part of the pricing included in the Proposal Pricing Sheets (Exhibit F).

VII. Solar Production Modeling – Proposers shall use PVSYST or HelioScope to prepare the design of the system(s) and model the annual production values (kWh/yr). Alternative production modeling tools may be used with prior authorization, which may be granted at DSRSD's sole discretion as part of the RFP clarification process. Proposers shall submit hourly production output for each site in kilowatt-hours for one year (8760 hours) as part of the Excel Bid Form document. Do not submit a printed version of the hourly production output with the proposal. Modeling summary sheets and additional detailed excel production files may be included. For the purposes of production modeling, a system is defined as all generation behind a specific meter.

VIII. System and Production Monitoring – Provide information on the proposed system monitoring package, its capabilities, and the specific data available on-line. Indicate what can be downloaded and/or exported for analysis in MS Excel. If applicable, identify the CSI-approved Performance Data Provider ("PDP") and the PMRS capabilities of the PDP's platform. Confirm the system and production monitoring service and platform will be available for the duration of the PPA.

IX. Operations and Maintenance – Describe Proposer's capabilities and resources to conduct maintenance activities as needed ensure expected production is achieved for the duration of the PPA term. Describe Proposer's expected response time to resolve critical failures (e.g., inverter outages). Identify any subcontractors or parties other than the proposer who will be performing the work. DSRSD's Operations & Maintenance Contract form is part of the PPA. Proposer shall indicate whether it agrees to the terms of the Operations & Maintenance Contract. Proposer shall include any specific changes to the Operations & Maintenance Contract in its Proposal. DSRSD shall not accept any proposed changes to the Operations & Maintenance Contract not included with the Proposer's Proposal.

I. Value Engineering – Provide and quantify any value engineering, cost reduction, and production maximization recommendations resulting from proposed changes to the RFP requirements. Proposers are encouraged to optimize their design by balancing installation costs and production gains.

XI. Performance Guarantee – Proposer shall indicate whether it will comply with the Performance Guarantee requirements in Exhibit I and incorporate them into the proposed PPA. Proposer shall include any specific changes to the Performance Guarantee in its Proposal. DSRSD shall not accept any proposed changes to the Performance Guarantee not included with the Proposer's Proposal.

B. Implementation Approach

I. Implementation – Provide a narrative addressing how Proposer will execute the work required to complete the Project. The implementation approach shall, at a minimum, address design, permitting, construction, interconnection, management of scope, schedule, cost, quality, human resources and staffing, communications, and anticipated

Project risks. Proposer shall assume that all major mechanical construction activities shall occur during time when schools are not in session. Provide a CPM project schedule and identify the critical path. A PDF copy of the schedule should be included in the proposal document.

II. Testing – Describe how Proposer will approach this phase of the Project and identify the testing and commissioning procedures and coordination efforts to be conducted by Proposer. The testing approach shall meet the requirements indicated in the Technical Specifications. A test plan from a previous similar project executed by Proposer will also be acceptable.

III. Operations and Maintenance (O&M) – Describe Proposer's approach to providing O&M services and how the requirements of the RFP will be met or exceeded (refer to Exhibit C – Operations and Maintenance Requirements). Provide sample maintenance reports and descriptions and/or samples of any other information that would be available to DSRSD throughout the O&M period that enables them to manage asset performance and Proposer's performance of the work.

4. Proposal Pricing

Complete the Proposal Pricing Sheets included in Exhibit F. Include any additional line items necessary and include the price for all necessary fees, materials, labor costs, taxes, and tariffs.

5. Financial Strength

Provide information demonstrating the financial strength including three years of audited financial statements of the Proposer and ability to uphold all obligations, guarantees, warranties, and promises for the stated duration of the proposed design, construction and operation of the PV System(s). This information may be provided as a separate document if it is considered confidential; if Proposers seeks District confidentiality of the financial information the document must be marked "Confidential."

6. Power Purchase Agreement and Site License Agreement

Proposer shall include a PPA and Site License Agreement that it expects the District to execute. The PPA and Site License agreements shall comply with the requirements of Section 5 of the Instructions to Proposers or identify which legal and insurance requirements to which Proposer is taking exception as described in Section 7 of this Attachment, below. Proposer may offer a Site Lease agreement in lieu of a Site License agreement, though the District reserves the right to accept a lease in place of a license at its sole discretion.

7. Exceptions

Each Proposer must review all procurement documents and contract forms and identify any issues to which it takes exception, including but not limited to the Instructions to Proposers, Technical Specifications, and all Exhibits and Attachments. By submitting a response to this RFP, Proposer is certifying their intent to meet all project requirements and enter into the PPA consistent with the insurance and legal requirements described in Section 5 of Exhibit A: Instruction to Proposers.

Exhibit B – Technical Specifications

1. Applicable Codes and Standards

The System(s)'s design, engineering, construction, interconnection, startup, and testing shall follow the applicable codes, standards, and publications that are in effect at the time of design and permitting of the System, and which are consistent with current local utility standards and requirements. The codes and standards utilized shall be the latest editions in effect at the notice to proceed date. Materials manufactured within the scope of Underwriters Laboratories shall conform to UL standards and have an applied UL listing mark. If no UL compliance is available, material and equipment shall be labeled or listed by a nationally recognized testing laboratory. Where codes do not govern specific features of the equipment or system, Prudent Utility Practice, equipment manufacturer specifications, and standard industry standards shall apply. Where local codes or ordinances will have an impact on the design, Dublin San Ramon Services District (DSRSD) and Contractor shall jointly address these with the local Authority(ies) Having Jurisdiction (AHJ).

1.1 Permits

Contractor is responsible for obtaining all necessary required permits from the appropriate AHJ for project construction. Contractor shall be responsible for paying for all permits and these costs shall be included in the proposed price.

1.2 Utility Interconnection

Contractor is responsible for managing and obtaining interconnection approval from the Site(s) local utility company, PG&E. Contractor is responsible for understanding and incorporating all knowable and impactful local utility interconnection rules in accordance with the PG&E's Green Book and Rule 21 into their proposal.

2. Project Management

Contractor shall provide comprehensive project management services for the duration of the project, commencing at contract execution. Contractor shall be responsible for assigning a single project manager who will act as the lead for the design and construction phases of the project. Contractor shall be responsible for conducting weekly project management meetings, producing agendas and minutes for the weekly meetings, and keeping an up-to-date issues/actions log. Contractor shall implement and maintain an internal records management and document control system to support the project.

Additionally, Contractor shall be responsible for developing a CPM schedule, which shall be updated and submitted biweekly, showing the project's critical path as well as all

activities required to complete the work (including the design, construction, testing, and close-out phases of the project) in sufficient detail to manage the complete scope of the project. The project schedule shall include all activities necessary to coordinate the work with other parties (e.g. District, consultants, inspectors, etc.) and will explicitly show the dependencies between all tasks. At District's option, Contractor shall submit the schedule in MS Project format if requested. In addition, schedules must also be submitted in Adobe Acrobat format.

3. Design and Engineering

Contractor shall design and engineer the System(s) in accordance with Prudent Utility Practices, with the professional standards, skill, expertise, and diligence of design and construction of professionals regularly involved in utility-grade, grid-connected solar PV power projects in the United States. Contractor shall hold at least C-20 and C-46 licenses. The design must conform to the requirements and conditions of all applicable permits and laws, be in compliance with the operating guidelines, and meet District specifications. Contractor is responsible for all engineering for the System(s). Applicable to the area of expertise, a professional engineer-of-record registered in the State of California shall sign all design drawings, specifications, and calculations. Contractor is required to submit to the District complete design drawings, data, and documents for review and comment. These engineered design drawings, data, and documents must be submitted to the District for review and approval before submitting to the appropriate AHJ and in accordance with Exhibit D – Submittals. Contractor is responsible for ensuring that all components are installed above the 100-year flood plain (inverter stations, substation, supervisory control and data acquisition (DAS), control building, PV modules, switchgear, transformers, combiner boxes, etc.).

3.1 Site Audits

Contractor shall conduct detailed site audits that thoroughly document and verify the existing conditions that will inform the system design and construction. Site Audits will be used to verify impacts to site the Site(s) as part of the construction project and shall be scheduled within 14 days of Contract execution. It is the responsibility of the Contractor to document all existing conditions and demonstrate that the post-construction site conditions are equivalent to pre-construction conditions.

3.2 Geotechnical Report

A geotechnical analysis shall be provided by Contractor and performed by a qualified geotechnical engineering firm and report stamped by a California licensed Geotechnical Engineer. The results of the analysis shall be used when designing the foundations for the

structures on the site(s) and made available to the District. The geotechnical report and analysis shall comply with the requirements set forth in Section 1803 of the California Building Code. Contractor is responsible for removing all spoils from the site(s) related to the geotechnical analysis.

3.3 Engineering Design Package

Based on the review of the System(s), Site(s), and infrastructure, Contractor shall design (or have designed by consulting engineers) a System(s) (including all layout, civil, electrical, and structural components) that will produce the required electricity and that is capable of being operated in a safe, normal, reliable, and continuous manner as required by the contract documents at all operating conditions and modes specified in these specifications. The system design shall comply with all applicable laws and regulations and applicable permits. The District may utilize a third-party or independent engineering consultant to perform technical reviews. Studies prepared by the Contractor or any third-party consultants to the Contractor shall be provided to the District for review.

Design review shall consist of three phases of submittals: Schematic Design, Design Development, and Construction Documents. For Schematic Design specifically, the Engineering Design Package shall not be submitted, unless District agreement is provided, until all of the following work is complete:

- Site Audits
- Geotechnical Studies – initial reports
- Site Surveys and obtaining Title Reports
- Fire Department review and approval of layouts

The intent of the Schematic Design Engineering Design Package is to determine and finalize site layouts, equipment locations, and system sizing. All site related work that may impact these factors, including location of easements, must be complete prior to submitting the Schematic Design Engineering Design Package. It is expected that Contractor submit drafts and informal schematics in order to communicate progress and site-related issues to the District, as well as to facilitate review with the Fire Department. However, the District will not conduct a formal review of the Schematic Engineering Design Package until Contractor certifies that all site-related information impacting the layout of the system(s) has been collected, verified, and incorporated into the design.

Contractor may not order materials and equipment (e.g., modules, inverters, racking) until the District has reviewed and approved the Schematic Engineering Design Package, thereby documenting final system sizes and locations. This requirement may be waived at the sole discretion of the District.

Contractor shall submit each Engineering Design Package to the District for review and approval. The District review time shall not be more than ten business days per phase. Each Engineering Design Package must be approved by the District prior to submittal of a subsequent package. Required design submittals are further detailed in Exhibit D, "Required Contract Submittals."

Subsequent Engineering Design Packages (Design Development and Construction Documents) shall include:

- Other studies related to the project, such as photometric/lighting studies
- ADA upgrades scope
- Design calculations
- All drawings including mechanical, electrical, structural, civil, and construction drawings (site plans, schematic single lines, and detail drawings)
- Product description information
- Equipment details, descriptions, and specifications, and cut-sheets

3.4 Structural Engineering

Contractor shall design the PV arrays' mounting systems, foundations, and piers, as well as any equipment pads and buildings on the site(s). The designs shall be based on the requirements of applicable codes, standards, and permits, and the information/specifications provided by the module, inverter, transformer, switchgear, racking structures, and all other vendors.

3.5 Civil Engineering

Contractor shall design all systems in accordance with applicable codes and standards. Contractor shall perform required site(s) preparation, to include earthworks, SWPPP, WQMP, and erosion control. Contractor shall attempt to minimize earthwork and vegetation disruption for the installation of the System(s) to the extent it is compliant with the use permits; however, vegetation should be controlled to minimize fire danger and provide the ability to operate and maintain the System(s). Dust control shall be maintained in accordance with state and District requirements until Final Acceptance is achieved. Contractor shall design any necessary roads, permanent or temporary, improvements to meet State of California transportation and local codes, standards, conditional use permit stipulations and conditions, and requirements presented by construction equipment, delivery vehicles, and operation and maintenance traffic. If required, Contractor shall import engineered fill to slope the site(s) and prevent accumulation of standing water. All imported fill must have proof of environmental testing/clearance for use. Contractor shall provide other site(s) maintenance as needed during construction on any District

infrastructure affected by construction activities. Contractor shall coordinate interaction between the District and any permitting authorities (e.g. local AHJ) regarding the Work.

3.6 Electrical Engineering

Contractor shall provide all electrical engineering design services, meeting applicable codes and standards and the requirements of the interconnecting utility. The electrical engineering and design shall include the appropriate sizing and cabling (above and below ground) that will connect all applicable equipment to the point of interconnection. All protection equipment used throughout the system shall be sized and specified to reduce damage to all components to the utility interconnection point and owner's gear and infrastructure in the event of electrical failure. The aboveground portion of the electrical systems shall be neatly routed to facilitate access, troubleshooting, maintenance, etc. The electrical design shall include the design of equipment grounding. Contractor shall design and specify all communications hardware and software required for system protection and remote monitoring. All monitoring and communication supplemental equipment and cabling shall be designed and specified by Contractor, subject to District's review. The power delivered to the grid must at all times meet the interconnect requirements for power factor.

3.7 Lighting System

Contractor shall provide a lighting system for all non-roof mounted systems in parking lots and under shade structures and in areas where existing lighting must be removed to accommodate the arrays. Lighting systems shall comply with California Title 24 requirements. All lights shall be LED and bi-level with photocells and time clocks.

Lighting systems shall comply with California Title 24 requirements. All lights shall be LED and bi-level motion sensing with photocells and time clocks.

Lighting systems for shade-structure systems shall be included on the underside of the shade structure and illuminate the area under the array to an average of 0.5 foot-candles, with a minimum of 0.2 foot-candles and a maximum of 2.0 foot-candles. Lighting systems for shade-structure systems shall meet or exceed existing lighting levels of all areas impacted by the removal of the existing Lighting system, under the array or otherwise.

4. Equipment and Materials

Contractor shall purchase and furnish to the site(s) all material required to complete the System(s), including the following material:

- Miscellaneous steel

- Support steel posts
- Components (nuts, bolts, clamps, etc.)
- PV modules
- Fixed tilt racking equipment and components
- DC cabling and combiner boxes
- DC junction boxes
- AC cabling
- Power centers, including inverters
- Electrical switchgear
- Transformers
- Meteorological station
- Remotely accessible data acquisition system
- All materials related to drainage required by the civil engineering plan
- All electrical conduit and junction boxes
- Concrete equipment pads
- Fencing, gates, lighting (both temporary and permanent)
- Revenue grade generation meters

Each item of equipment to be supplied by Contractor shall be subject to inspection and testing during and upon completion of its fabrication and installation. Installed equipment and materials shall be new, of good quality and suitable grade for the intended purpose, and not a lower grade or quality than specified in the contract, design and engineering plans, or in manufacturers' recommendations. Where applicable, utility-grade equipment shall be used. All major equipment to be purchased, constructed, and installed as part of the System(s) shall be identified in the design submittals and approved plan set. Equipment shall be UL Listed whenever possible.

4.1 Modules

The PV module selected for this System(s) shall:

A. Meet IEC 61215 (crystalline silicon PV modules) or IEC 61646 (thin film PV modules) standards for the model selected for this System(s).

B. Be UL listed for the voltage specified for this System(s) (e.g., 600 V_{DC}).

C. Include all known and future duties, tariffs, export tariffs, customs, demurrage, and shipping costs.

D. Be from an equipment manufacturer regarded as a Tier 1 Supplier.

E. Demonstrate a 25-year rated lifetime via long-term outdoor testing and/or accelerated lifetime laboratory testing. Testing such as Thresher testing or Technischer Überwachungsverein (TÜV) long-term sequential testing of the

specific model of the PV module selected is an acceptable demonstration of a 25-year module rating.

District, at its sole discretion, may randomly select up to 10% of PV modules used in the PV System(s) for delivery to a third party for quality verification testing. The costs of such verification testing will be the responsibility of District. Contractor shall provide the manufacturer's flash test data for all modules to the District upon procurement of modules.

4.2 Inverters

The inverter units shall be utilized for inverting the DC input from the System(s) to AC output. These shall be calibrated and set so that the AC output, after inverter clipping and losses between the inverter to the meter, shall not exceed the System(s) AC capacity at the meter. Contractor shall supply and install inverters and wiring/cabling to this equipment in accordance with National Electrical Code (NEC) standards.

Inverters selected for this project shall:

A. Be UL listed to 1741 SA (Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources).

B. Comply with IEEE 1547, including testing to IEEE 1547.1 and IEEE C62.45. Regulatory standards compliance shall also include IEEE C62.41.2 and CSA107.1-01.1.

C. Be from an equipment manufacturer regarded as a Tier 1 Supplier.

D. Be designed for a 10-year lifetime, assuming regular maintenance.

E. Have a maximum harmonic distortion less than 3 percent of total harmonic distortion at rated power output.

F. Have an efficiency of greater than 97.5 percent without medium-voltage step-up transformer.

G. Be capable of rated output at 50°C or higher.

Incorporate a means of non-load break disconnection for all non-grounded circuit poles on the DC side for maintenance personnel safety. Inverters located outdoors shall be enclosed in lockable enclosures with a minimum rating of National Electrical Manufacturers Association (NEMA) 3R. Any sensitive electronic equipment associated with, or part of, the inverter shall be installed in a NEMA 3R rated enclosure. Inverters, integrated disconnects, and associated conduits must be installed as high as possible on structure, not accessible by unauthorized individuals. Conduits shall not protrude from

inverters or disconnects in a manner that creates a climbing hazard. Enclosure must have a door interlock system to prohibit the door(s) from being opened while energized. Inverter output shall be protected by a circuit breaker. Inverters shall employ a maximum power point tracking scheme to optimize inverter efficiency over the entire range of PV panel output for the given Site(s) design conditions. Inverters shall be equipped with all hardware for data collection and communication to the data acquisition system. Inverter shall be equipped for direct external communication and control to District System(s) design for inverters rated to 1000 V_{DC} shall comply with NEC Articles 690 and 490, and all other requirements applicable to installations rated over 1000 volts (V).

4.3 Medium Voltage Transformers

Transformers shall meet transformer efficiency standards set forth in the most recent version of the Department of Energy "Energy Conservation Program for Commercial Equipment: Distribution Transformers Energy Conservation Standards; Final Rule." Transformers shall be rated for inverter source operation and the environment in which they will operate. The transformer shall be supplied with a no-load tap changer with high-voltage taps capable of operating at 2.5 percent above and below nominal voltage at full rating. The switch/transformer configuration shall be designed for loop feed. Transformers shall be either dry-type biodegradable fluid or less-flammable oil insulating fluid. Enclosure finish shall be a top powder coat that is designed for a 25-year service life. The District shall reserve the right to attend factory witness testing of step-up transformers.

4.4 Wire, Cable, Conduit and Connectors

Contractor shall provide information about proposed wire, cable, and connectors, including all underground facilities. Copper is the preferred conductor material; however, aluminum conductors are acceptable where allowed by current building electrical codes. Cable shall be designed and installed for a service life of 30 years. Cable for DC feeders and PV panel interconnect shall be 2-kilovolt 90°C (wet or dry) power cable type USE-2 or RHH/RHW-2 with XLPE jacket and UL 1581, VW-1 rating or approved equal for intended use capable of meeting DC collection system design current requirements. Externally installed cables shall be sunlight and ultraviolet resistant, suitable for direct burial, and conform to NEC 300.5 Underground Installation, Table 300.5 Minimum Cover Requirements, rated to the maximum DC voltage of the System(s). PV panel interconnect connectors shall be: (i) latching, polarized, and non-interchangeable with receptacles in other systems, and (ii) tap branch connectors with multi-contact termination connectors. Grounding member shall be first to make and last to break contact with mating connector and shall be rated for interrupting current without hazard to operator. Cables shall be listed and identified as PV wire as stated in NEC Article 690. If a cable tray is utilized, there

shall be no self-tapping screws, only a clamping mechanism to secure the top. All underground cable shall be identified in the record drawings. Galvanized, rigid metal conduit where underground cable is exposed above ground or stubbed up to junctions or poles shall be used except where protected by concrete caissons. The use of EMT conduit is acceptable under canopies overhead but not down columns as approved by the District during design and construction. Rigid Metal Conduit shall be used for transitions to underground. Rigid metal conduit shall be included in the corrosion mitigation plan and shall be designed for a 30-year life in the Site(s) soils and conditions. All 90-degree bends shall follow NEC minimal bend requirements. There shall be no direct burial of cables. No underground cable splicing shall be acceptable under any circumstance. All cable splices shall be brought above ground and housed in a suitable enclosure or, if below grade, placed in a suitable vault that is clearly marked. Conduit in corrosive areas shall be PVC-coated rigid steel.

4.4.1 Existing Conduit

Contractor may utilize existing spare conduit when allowed by the District. If existing spare Conduit is to be used by the Contractor, the Contractor is solely responsible for verifying the conduit sizing and location as appropriate for their design. Contractor must note explicitly in their Proposal where spare conduits will be utilized otherwise the assumption will be made that all conduit runs will be newly installed by Contractor.

4.5 Medium Voltage Switchgear

Switchgear shall be located outdoors in a NEMA 3R lockable enclosure. Switchgear shall include an auxiliary compartment containing all instrument transformers associated with the protective relays and the 120/240-V CPT shown in the one-line diagram(s). The CPT shall be fused and disconnectable. The CPT shall be sized, and single-phase breakers shall be included to supply power to a 120-V convenience receptacle and a fluorescent light within the switchgear enclosure, switchgear heaters, and the 240/120-V_{AC} panelboard within the communications shelter (if applicable). Medium- voltage protective device selection and relaying should be based on the use of Schweitzer Engineering Laboratories relays or approved other, as required and specified in the Interconnection Agreement. In general, the interconnection design and components should meet the requirements of the interconnecting utility and the interconnection agreement (including the necessity of a grounding transformer if required).

4.6 Combiner Boxes

Combiner boxes shall be rated for maximum system voltage and maximum system continuous and short-circuit currents. All enclosures shall be rated NEMA 4 and shall have integral key lock or provisions for padlocking. DC inputs shall be fused with finger safe

fuse holders for both positive and negative conductors and all fuses shall have blown fuse indication. Combiner box output shall be externally disconnectable. If the combiner box has a lightning protection device, the device should include a visual trip indicator. Combiner boxes and associated conduit shall be installed as high as possible under structures and be installed in a manner that is not accessible by unauthorized individuals and does not create a climbing hazard.

4.7 DAS and Monitoring Equipment

Contractor shall supply and install a District approved Data Acquisition System (DAS) including monitoring hardware and software package. The monitoring system shall provide energy generation data, historical data, solar insolation attributes, and meteorological data.

Points to be monitored by the DAS system shall include, at a minimum:

- Irradiance in plane of array
- Global horizontal irradiation
- AC voltage and current
- DC voltage and current
- Kilowatts (kW)and Kilowatt hours (kWh)

The following shall make up the DAS calculated values list:

- Modeled production based on measured meteorological data
- Day's energy in kWh
- Month's energy in kWh
- Year to date energy in kWh
- Total lifetime energy in kWh
- PEGU provided reporting

The system shall be configured to sample data, 5-minute average intervals, and shall be configured to update the server at least once every 15 minutes. The system shall store the 1 to 15-minute averaged interval data for the life of the System. The system shall be capable of issuing alarms and notices to alert the system manager and operation and maintenance (O&M) Contractor to potential system problems and outages. The metering and monitoring system shall comply with the accuracy requirements and general standards set forth in IEC 61724, with the exception of the irradiance meter, which shall have an accuracy of better than +/- 5% of the reading. The metering scheme shall be capable of reading the net electrical energy to the grid during daylight hours and the nighttime auxiliary loads when the System(s) is in standby mode. The monitoring system data shall be accessible through an online dashboard, which allows for logging into

administrator panel views. The panel view shall display current, daily, monthly and annual data for the System. Raw data shall be downloadable for any time period of stored historical in an easy fashion. All electronics shall be enclosed in a NEMA 3R enclosure. The data shall be collected at hardwired locations and transmitted wirelessly via a cellular modem, or other means, to be provided and installed by Contractor. Contractor shall test the installed communications system to demonstrate its ability to meet the requirements of its intended use. Testing shall be done when the final system interconnections have been made.

4.8 Revenue Meter

A bi-directional revenue grade meter shall be installed to measure the total System(s) output at the switchgear for accurately metering energy (kWh) generated by the System(s). The revenue grade meter shall be American National Standards Institute (ANSI) C12.20 0.2% Class UL listed, ISO9001 certified and accepted by all authorities requiring revenue grade. The meter must have a display for easy reading of current power generation and lifetime generation and shall be compliant with Western Renewable Energy Generation Information System certification requirements for Renewable Energy Credit sales or trading. The revenue grade meter may be incorporated into a System's DAS if acceptable by the interconnecting utility. In addition to the performance requirements indicated above, all meters shall be compliant to the respective domestic or international standards, including Underwriters Laboratories, Inc. (UL) Standard 1449 3rd edition. SPDs for Measurement, Control, Instrumentation, and Communications Circuits

4.9 Mounting and Racking Systems

4.9.1 Fixed Tilt Racking Structure

The fixed tilt racking system (if applicable) shall include the racking structure and all module-mounting hardware. The racking vendor may supply the supports if desired, or a third party may provide the supports. The rack's azimuth and tilt angle shall be specified on the engineering drawings. The racking system shall be designed using the environmental loads and the Occupancy Category appropriate for the installation condition and specified by local codes. The racking structures, support attachments, module mounting brackets, fastening hardware, and supports (if applicable) shall have a 30-year design lifetime. Equipment shall have corrosion protection coatings as included in this specification and utilize appropriate fasteners that are similar metals.

4.9.2 Shade Structure Racking Systems

All wiring shall be run in a neat manner where there are no wires running below purlin supports. All conduit shall be mounted on the support structure shall be mounted in a

manner that inhibits climbing or hanging. Columns and steel beams shall be painted, color to be selected and approved by the District. All shade-structure systems shall include fascia on all sides. All columns on all systems must include a minimum 30" height above grade concrete bollard. All Shade-structures shall have a minimum clearance height of ten (10) feet as defined from grade to bottom of beams. All shade structures shall include metal baseplate covers to conceal and protect exposed bolts at column bases. Plastic covers will not be accepted.

4.9.2.1 Shade Structures in Parking Lots

Column locations shall minimize impacts to existing parking and placed to maintain all existing parking spot dimensions. Contractor shall provide concrete wheel stops in parking spots that will have a column in the front of the parking spot. Contractor is responsible for verifying and understanding existing ADA parking, striping, and paths of travel and what code required upgrades will be necessary as a result of the solar project. Contractor is responsible for all required ADA upgrades, striping, and path of travel under arrays and to connecting ADA compliant path of travel including any new curb cuts, truncated dome pads, and other work as necessary to connect to the existing path of travel.

4.9.3 General Racking Requirements

Clearance labels shall be provided on all systems at all exposed sides of the PV structures.

4.10 Microgrid

4.10.1 Load Control Integration and Gear Upgrades

Designer/Builder shall be responsible for full design, engineering, permitting, interconnection, procurement, installation, and commissioning of any necessary modifications or upgrades to the existing electrical infrastructure and for verifying protective device settings and coordination necessary to design and construct a fully functioning microgrid.

The microgrid shall consist of solar and battery storage assets and supply power to maintain operation of the following at the District Office facility:

A. The computer server room that is currently backed up by a diesel generator; and

B. The emergency operations center, which consists of lighting and electrical plugs for the main conference room.

At a minimum, the main service breaker for the Site will need to be tripped and held open during microgrid operation by a shunt trip signal from an approved relay. Designer/Builder shall be responsible for identifying necessary, additional modifications

to existing load breakers and distribution feeders to support the end uses identified above. Documentation related to the District Office site, including the estimated load profile of backup operations, is included in Exhibit G to this RFP.

4.10.2 Battery Energy Storage System (BESS)

Battery energy storage capacity shall be the primary grid-forming resource. Assuming optimal BESS state of charge (SoC) at the outset of microgrid islanding, as well as application of appropriate load-control protocols, storage resources shall be specified to provide power and energy capacity sufficient to support at least four (4) hours of microgrid service when utility power is down. The target BESS system size is 60kW / 720kWh.

Battery System Shall Include:

A. Provisions to augment storage capacity based on projected degradation for cycling to support the proposed grid-tied economic optimization (peak demand shaving) proposed by the Designer/Builder;

B. Minimum 87% AC round trip efficiency;

C. THD < 5% as per inverter spec and Institute of Electrical and Electronics Engineers (IEEE) 519;

D. Ambient temperature operating range based on published historical weather data. All components to operate at safe rated sustainable operating temperatures over the required ambient temperature range;

E. Meet the harmonic specifications of IEEE 519;

F. DC disconnect switches shall be UL listed, blade-type, heavy duty fused safety switches on the output of the Battery array in NEMA enclosure rating as required by installation location or may be integrated to the Inverters; and

G. AC disconnect switches shall be UL listed, blade-type, heavy duty fused safety switches on the output of Inverter(s) in NEMA enclosure as required by installation location or may be integrated to the Inverter.

4.10.3 Microgrid Controller

Designer/Builder shall be responsible for full design, engineering, installation, and configuration all communications, telemetry, controls, and human interfaces required to manage and execute all microgrid functions. The microgrid may be designed to connect only to those loads being backed up, such that during grid outages no other loads are served at the facility.

Designer/Builder shall utilize secure communication and control protocols and human operator interface systems for monitoring and managing the microgrid. The District prefers to have load management systems and associated Human Machine Interfaces (HMI).

The microgrid controls and resources shall, at a minimum:

A. Comply with applicable industry standards, notably including IEEE 2030.7-2017, and shall support safe transitions to and from grid-connected modes in compliance with utility interconnection standards;

B. Manage BESS SoC;

C. Capable of Island-to-grid transition (re-synchronization);

D. Include functionality and protections for intentional islanding, unintentional islanding, and back start;

E. Be integrated to support automatic islanding of the microgrid during grid outages, including integration of onsite solar, energy storage, and load controls;

F. Be capable of automatically managing a seamless transition between grid-connected and islanded states, assuming sufficient onsite power at the time of an outage, with minimal down time to the facility loads;

G. Include an electric load-management system designed and integrated to manage loads in order to reduce peak demand to within the limits of the power delivery capabilities of the microgrid system, and to manage energy use and BESS SoC for extended grid outages. The District may, in its discretion, accept a design that can manage loads to mitigate peak demand charges in grid-tied mode with demonstrated energy savings are also encouraged.

H. Be designed and integrated to enable user-configurable operating modes;

I. Provide energy management services both in islanded and grid-connected modes, supporting economic objectives with functionality such as demand response (DR), peak-shaving, and load-shifting. For example, configurable modes would support, at a minimum:

- Short Duration Outage: Maintain BESS SoC for <2 hours.
- Extended Outage: Maintain BESS SoC for extended islanded operation utilizing available solar resources and adapting load shedding schema.
- Grid-tied Cost Savings: Peak shaving, load shifting, demand charge reduction, etc.

4.10.4 Monitoring System

The proposed microgrid shall include a DAS that supports: (1) monitoring energy consumption; (2) tracking and analyzing performance of each component in the

microgrid; and (3) supporting on-site decision making with regards to system operation and energy loads during extended outages. Designer/Builder shall an option in the DAS to provide data for public information and education about resilient and renewable energy system performance.

The DAS shall include:

A. Energy performance data logging and reporting including consumption and demand data;

B. Visualization and display of microgrid performance;

C. A remote accessible web interface that is easy to navigate and customize views; and

D. Easy and seamless export of system data by District user(s).

4.10.5 1.5 Microgrid Testing, Commissioning, Training and Operation Requirements

Designer/Builder's Work shall include microgrid system commissioning processes and tests, including, without limitation:

A. Development of a complete Microgrid Commissioning Plan that describes in detail all procedures and tests that will be performed to validate operational performance of all systems during commissioning;

B. Coordination of commissioning reviews with verification by District staff and consultants;

C. Acceptance tests for power transformers, switchboard, protective relays and controls, instrument transformers, grounding and bonding, power metering, and network devices/software;

D. Functional tests (complete operational check of installed assemblies) for protective relays and controls, control circuits, power metering devices, and lighting systems;

E. Coordination study for circuit breakers and protective devices;

F. Arc Flash Hazard analysis;

G. Visually inspect for physical damage, clean equipment, perform insulation resistance and continuity tests, and verify proper equipment installation and connection and conductor connection torque values;

H. Perform thermal imaging checks of electrical components and systems;

I. Perform data network and DAS testing;

J. Perform Battery test including two (2) full charge/discharge cycles at rated power to ensure the battery can meet or exceed energy capacity specifications;

K. Inspect and test breakers, contactors and switches and other switches including dielectric tests, mechanical tests, electrical operation tests, control wiring tests, and polarity tests;

L. Perform in-service testing of equipment components, microgrid subsystems, and full microgrid system, including communication and control protocols and cybersecurity;

M. Verify system performance monitoring, metering/measurement, data logging, and public information visualization and display functionality;

N. Confirm signage and placards meet plan requirements;

O. Coordinate pre-parallel inspections, testing, and verifications with Utility;

P. Obtain Utility authorization of synchronization and parallel operation;

Q. Prepare and provide a final Commissioning Report;

R. District reserves the right to witness any and all testing and commissioning.

4.10.6 Training and Project Closeout

The Scope of Work shall include, and proposals shall describe, microgrid O&M training processes and documentation, including at a minimum:

A. Deliver complete microgrid system O&M documentation including Microgrid Control Manual which describes the microgrid control systems, subsystems (e.g., DER and any load management controls), and human interface systems, how they are integrated for interoperation, and all onsite user control and data retrieval processes;

B. Deliver DAS Manual and Visualization System Manual and associated documentation;

C. Deliver Security Manual describing user authentication and cybersecurity and physical protection systems, protocols, and procedures;

D. Deliver Operator Training Document Set and provide formal training in all functions to be performed by Site staff, including configuring and adjusting control modes, monitoring and analyzing performance, managing transitions between grid-connected and islanded states, retrieving system data logs and reports, and basic troubleshooting;

E. Deliver schedule of recommended periodic maintenance and testing, including identification of maintenance and testing steps required for manufacturer warranties and compliance with safety protocols and other operating standards;

F. All operator manuals and instructions shall be well organized, clearly described, accurate, and sufficient to support training and operations by site staff.

G. All operator manuals shall be subject to review and approval by the District before they are deemed final and accepted for system operation and training.

4.11 Interconnection

Contractor is responsible for the cost of designing, procuring equipment for, and installing all interconnection and metering facilities required to deliver the System(s)'s electrical output to the proposed point of connection on the interconnecting utility's electrical system, in accordance with the Agreement and the Interconnection Agreement of the interconnecting utility.

4.12 Materials

No equipment shall utilize polychlorinated biphenyls (PCBs). It is the responsibility of Contractor to identify any equipment using SF6 gas. It is the responsibility of Contractor to identify any proposed batteries and provide quantities and associated data sheets. It is the responsibility of Contractor to provide data sheets and quantities on any proposed chemicals used on the System(s).

4.13 Equipment Delivery, Staging, and Storing

Equipment and materials shall arrive at the site(s) so as to not delay System(s) completion by the Guaranteed Final Acceptance Date. Contractor shall be responsible for receiving and storing all freight at the site(s), or in an alternative agreed upon location, in a secure manner.

Prior to the arrival of equipment and materials at the site(s), the Contractor shall install a fenced, secured area and provide security for the storage of such equipment and materials. Contractor shall notify and receive approval in writing from District of the location and layout of intended staging areas, parking areas, storage areas, office areas, workshops, and other temporary facilities. All laydown and staging areas and plans shall be submitted, reviewed and approved by the District prior to commencement of construction. Temporary construction roads and staging areas not converted to permanent roads (if any) shall be restored in accordance with all permit requirements and/or restore to existing condition prior to the start of construction.

5. Other Requirements

5.1 Fit and Finish

Contractor must provide accurate locations and routing of installed underground conduit and utilities completed as part of the project on the final as-built plan sets.

Contractor is responsible for repairing any damage to the existing facilities or grounds that occur as a result of the construction including but not limited to asphalt marking, stains, track marks, cracks, holes, or damage to any vegetation or sprinkler systems. Contractor is responsible for documenting all existing conditions prior to the start of construction, as well as proposing and executing repair and potential re-routing methods that are to be reviewed and approved by District.

Contractor is responsible for maintaining the existing functionality of equipment and services impacted by the resulting work. Including but not limited to existing irrigation functionality and control, accessible parking, and lighting. Contractor will be responsible for maintaining current functionality of adjacent lighting that will not be replaced as part of the project.

5.2 Demolition and Disposal

Contractor must identify existing shading concerns as verified through a solar shading study and submit a demolition plan that identifies all existing objects or trees that are to be removed, trimmed, or otherwise modified. The plan shall identify the height that trees are to be maintained at moving forward. The contractor is responsible for tree removal as approved by the District. Light poles and concrete bollards under PV canopies are also the responsibility of the contractor to remove as approved by the District.

All demolished and removed poles, bollards, and above grade items (e.g. parking islands, etc.) shall be finished by flush cutting with existing grade and patching back with material equal to surrounding area.

5.3 Tree Replacement

Contractor shall be responsible for compliance with the District's tree replacement policy, which requires a new tree to be planted for each tree removed as a result of the project. Replacement trees are required to be of similar type as those removed and planted in a location of the District's choosing. Contractor shall cover the cost of the tree, site and soil preparation, and planting. New irrigation systems or extensions of existing irrigation systems to provide water to new trees is not included in Contractor's scope.

6. Quality Control and System Testing

6.1 Quality Control Plan

For each performance and installation requirement, the Quality Control Plan (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 the District that product delivery, quality and performance are as required. 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.

At a minimum, the QCP should conform to "IEC 62446 Grid Connected Photovoltaic Systems - Minimum Requirements for System Documentation, Commissioning Tests, and Inspections (2009)".

Performance tests will be conducted at the final commissioning/acceptance testing. Performance tests will include I-V curve traces for all PV strings. For project acceptance, measured performance at maximum power point must be at least 90% of expected performance, which will be adjusted for concurrently measured cell temperature and plane of array (POA) irradiance. This can be accomplished using a current industry standard I-V curve tracer with capability to compare measured PV string I-V curves with nameplate performance of PV string compensated for concurrent cell temperature and POA irradiance measurements. The Contractor shall supply the District with detailed documentation of malfunction or errors and all corrective actions taken.

6.1.1 Submissions

The QCP shall be prepared and submitted within 21 calendar days of the final approval of system designs 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.

6.1.2 Updating

During construction, the contractor shall update QCP if any changes are necessary due to any changes or schedule constraints. The District shall be notified immediately of any schedule and/or procedural changes.

6.2 Inspections and Tests

In addition to the required AHJ inspections, 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.

6.2.1 District Witness

All inspections and tests, to verify documented contract assumptions, to establish work accomplishment, or to certify performance attainment may be witnessed by the District and/or an Agent on their behalf and coordinated through the QCP.

6.2.2 Final Inspections and Tests

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 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 the QCP. Commissioning shall be performed for the entire PV system. This data shall be used to confirm proper performance of the PV system.

6.2.3 Documentation

Inspections/tests required in the QCP shall result in a written record of data/observations. The Contractor shall provide electronic 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, parties present, test equipment description and measurement technique.

Exhibit C – Solar Operations and Maintenance Requirements

Operations and Maintenance

Contractor is to provide Operations and Maintenance (O&M) for the entire duration of the PPA period.

Operations and Maintenance services to include annual preventative maintenance as well as comprehensive corrective and reactive maintenance. All corrective and reactive maintenance will be performed at no additional cost to the District or LAVWMA, with the exception of items outside the Contractor's control such as vandalism and Force Majeure, as negotiated in the final PPA.

Below is a summary table of services and frequency of implementation to be included in the PPA.

Service	**Frequency**
Preventative Maintenance	
Panel Washing	Minimum twice per year, more if required to maintain performance within 5% of design
Vegetation Management	Minimum annually, but more frequently as required
Pest Control (Identify intrusions, eliminate infestations, perform action to prevent future infestations)	Annually
Required manufacturers inspections, testing and routine service	As specified by manufacturers
Visual Inspections	
Identify any new shading concerns	Annually
Ensure penetrations are watertight where applicable	Annually
Ground erosion and corrosion near supports for ground mount systems	Annually
Confirm electrical enclosures are secured with locks and have restricted access	Annually
Check and document any corrosion issues	Annually
Check for loose hanging wires	Annually
Inspect equipment pads for cracking and wear	Annually
Inspect PV modules for defects (burn marks, discoloration, delamination, or cracked glass)	Annually
Inspect racking system for rust, corrosion, sagging, missing or broken clips or bolts	Annually
Inspect conduits for proper support and expansion joints where necessary	Annually

Open combiner boxes and check torque marks on lugs	Annually
Open disconnects and inspect for corrosion or damage	Annually
Inspect all combiner boxes and disconnects for water ingress and debris, seal and clean where necessary	Annually
Inspect inverter interior and exterior for water ingress rodent, pests, dust intrusion, and torque settings	Annually
Verify weather sensor placements and cleanliness	Annually
Testing	
Verify torque settings for major equipment (structures, inverters, modules, BOS)	Annually
Voltage and current testing at inverters and string level	Annually
Sensor calibration	Annually
Corrective and Reactive Maintenance	As Needed
Warranty Administration	As Needed
Includes labor for defective equipment replaced under warranty	As Needed

Contractor shall provide the following documentation as part of their O&M services:

- Written reports detailing all Corrective and Reactive Maintenance issues. Reports shall include the system issue or problem that was addressed, what was done to address it, a list of parts and materials used during the repair, the number and classification of labor hours required, the date and time Contractor was made aware of the problem (either through monitoring, inspection, or notification by other parties), the elapsed time taken to resolve the problem, and the date and time the problem was resolved.
- An Annual Report summarizing system performance and all maintenance performed on the system (Preventative, Corrective and Reactive, Warranty-related, or otherwise). The Annual Report shall consist of the following information (at a minimum):

    - Summary of system operations;
    - Weather and system performance/energy production data;
    - All Preventative Maintenance performed on the system, including panel washing, weed/vegetation abatement, inspections, and other actions;
    - Summary of Additional Services, if any;
    - Reports of any system outages, service interruptions, safety incidents or environmental issues;
    - Maintenance and inspection logs, checklists, and other field documentation (with signatures verifying the work performed); and
    - List of proposed actions to be taken by the District, if any.

    All documentation will be provided electronically in native file formats (e.g., MS Word, MS Excel) unless otherwise agreed to by the District. Documentation that does not demonstrate required maintenance was performed will be considered incomplete.

Exhibit D – Required Contract Submittals

Submittals

The table below identifies each submittal that will be submitted by the Contractor to Dublin San Ramon Services District for review and approval. DSRSD shall have ten full working days to provide comments and an approval status. Contractor is responsible for addressing comments to DSRSD's satisfaction.

Below is a summary table of required submittals:

Submittal	Description	Submittal Time
Project Schedule	Provide CPM project schedule in MS Project which meets the project completion deadline provided in Section 1 of the RFP.	Bi-monthly
Site Audit Reports	Documents verifying sites existing conditions will be submitted to the client, including, title reports, geotechnical reports and findings and any and all other site audits conducted by the Contractor.	Site Discovery
Schematic Design	A visual representation of the layout of the system including the location of the major pieces of equipment and required boring or trenching paths shown over aerials and/or site plans.	Schematic Design Phase
Design Development Plans	A clear and coordinated plan set including all major components of the design consisting of, Architectural, Structural, and Electrical designs, supporting calculation, reports and equipment cut sheets that represents roughly 85-90% of the intended design. Along with responses to previous comments.	Design Development Phase
Complete Construction Documents	A complete plan set and ancillary documentation that set forth the detailed requirements for the construction of the system and represent 100% of the intended design.	Construction Document Design Phase
Monitoring System Design Documentation	Shall include DAS schematic, monitoring system on-line user interface, description of data fields and their availability, and access to a test environment (or other customer implementation) of the system and interface.	Construction Document Design Phase
Quality Assurance / Quality Control Plan	A detailed QA/QC plan that will be implemented during construction to ensure	14-days before construction starts

(QA/QC)	safety and quality of construction and final product per contract specifications.	
Testing and Commissioning Plan	Shall include acceptance testing and system start up plans.	14-days before testing and commissioning starts
Testing and Commissioning Results and Sheets	Results from testing and commissioning in approved plan.	After commissioning is complete
Proving Period Report	Shall include system description, test period of 30 calendar days, test results, anomalies identified, any corrective action performed, measured performance, supporting calculations indicating expected performance, measured 15-minute interval data, AC output (kW), production (kWh), AC and DC Voltage, in-plan irradiance, ambient and cell temperature, inverter status, system availability.	35-days after proving period start date (proving period commences after commissioning is finalized)
Operations and Maintenance Manual	Scheduled preventative maintenance, user manuals, training sheets and materials, and data sheets.	14-days before training starts
Warranty Documentation and Certifications	Warranty registration, certificates, and required O&M to maintain warranties for each major piece of equipment.	14-days before training starts
As-built Plans	Final drawings, including boring logs, clearly showing any changes or variations from the approved design as well as construction details not captured on approved.	14-days before training starts

Exhibit E – Warranty Requirements

Warranty Requirements

The Provider shall confirm that all manufacturer warranties apply on an "as installed basis," i.e., Provider will confirm the equipment was installed according to the requirements and specifications for installation.

Below is a summary table of the minimum warranty requirements for each major system component:

Component	Warranty
Modules	25-year 80% power output full parts and labor replacement warranty
Inverters	5-year minimum full parts and labor replacement warranty with options for at least a 20-year extended warranty
Transformers	10-year minimum full parts and labor replacement warranty with options for at least a 20-year extended warranty
Structures and Racking Systems	10-year minimum full parts and labor replacement warranty for the installed structure and racking system with an option for at least a 20-year extended warranty
SCADA Monitoring System	5-year full parts and labor replacement and software upgrade warranty
Balance of System (BOS)	Balance of system components to have standard manufacturer warranty
Workmanship	Contractor shall provide a minimum 10-year warranty to provide for no-cost repair and replacement of the system for any expenses not otherwise covered by the manufacturer.

Exhibit F – Proposal Forms

Proposal Forms

Follow the link below to the folder, Proposal Forms, for all forms that need to be submitted with each proposal:

https://arcalternatives.box.com/s/pdtzl2kipcifryna23b42gpfas0dzgsb

Exhibit G – Site Details

EXHIBIT G - SITE DETAILS

Exhibit G includes details regarding desired locations for solar arrays and EV chargers, site consumption, location of points of interconnection, and notes on existing site conditions. The array locations indicated are initially identified potential locations identified by the District and the base bids should focus on these areas.

Not all areas need to be utilized in proposed layouts. Proposers are encouraged to propose their most cost-effective layouts, such that benefit is optimized under NEM 3.0, using the locations as design constraints. The District will consider alternate locations if a compelling reason is provided for the change. **Final array locations will be subject to contract negotiations with the District, as well as their approval through the design review process.**

Additional information concerning the District Office, including as-built electrical drawings and the target load to be supported by the microgrid can be found here:

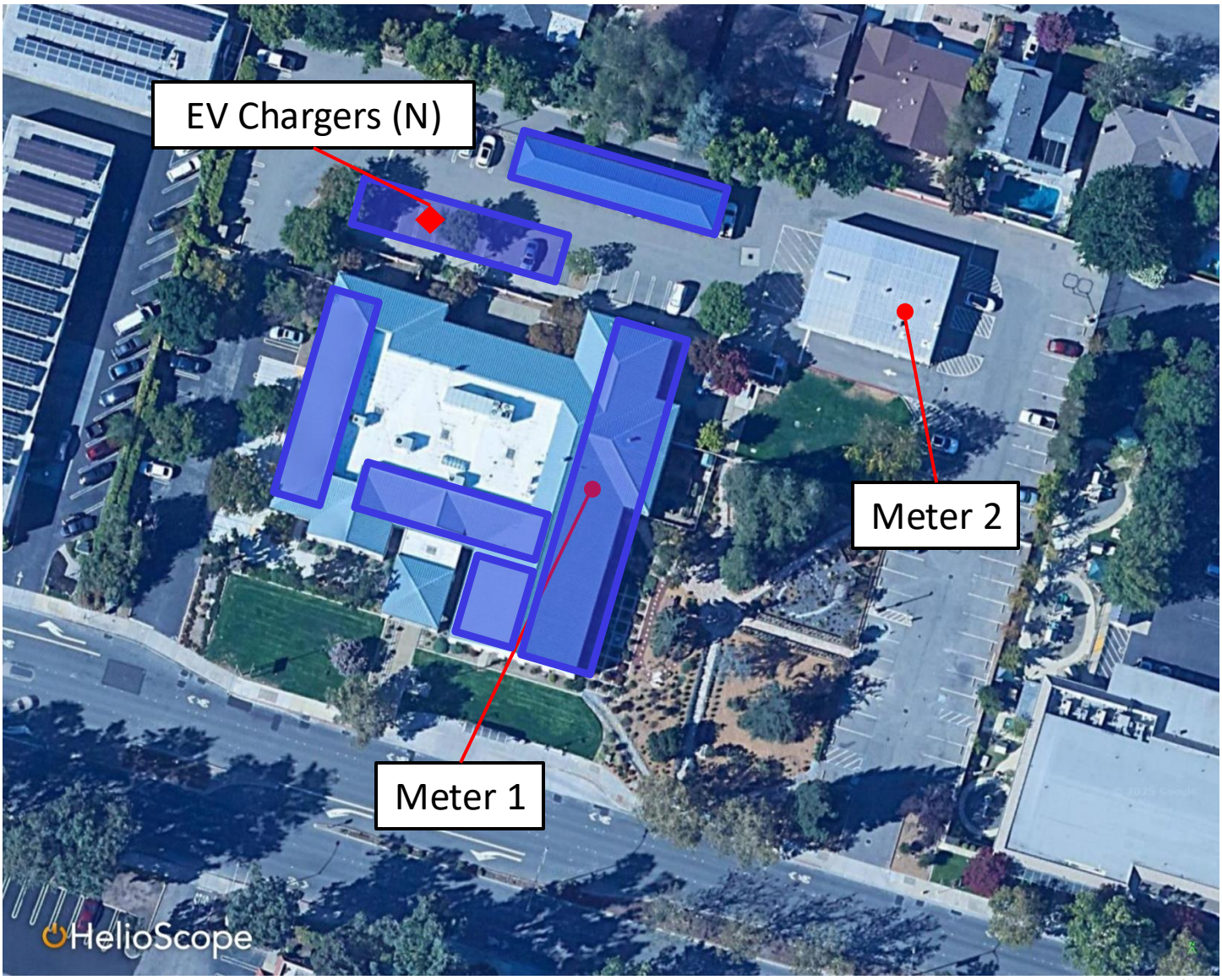
https://arcalternatives.box.com/s/1hq1a62qrhsrkii10qf272nmebttsu30

Site Summary

#	Site Name	Address	Annual Load (kWh)	EV Chargers (Y/N)	BESS (Y/N)
1	District Office	7051 Dublin Blvd, Dublin, CA 94568	238,000	Y	N
2	Field Operations Facility	7035 Commerce Cir, Pleasanton, CA 94588	256,000	Y	N
3	Livermore-Amador Valley Water Management Agency (LAVWMA)	7176 Johnson Dr, Pleasanton, CA 94588	8,499,000	N	Y
4	Wastewater Treatment Plant	7399 Johnson Dr, Pleasanton, CA 94588	3,680,000	Y	Y
	Total		**12,673,000**		

DISTRICT OFFICE

7051 Dublin Blvd, Dublin, CA 94568

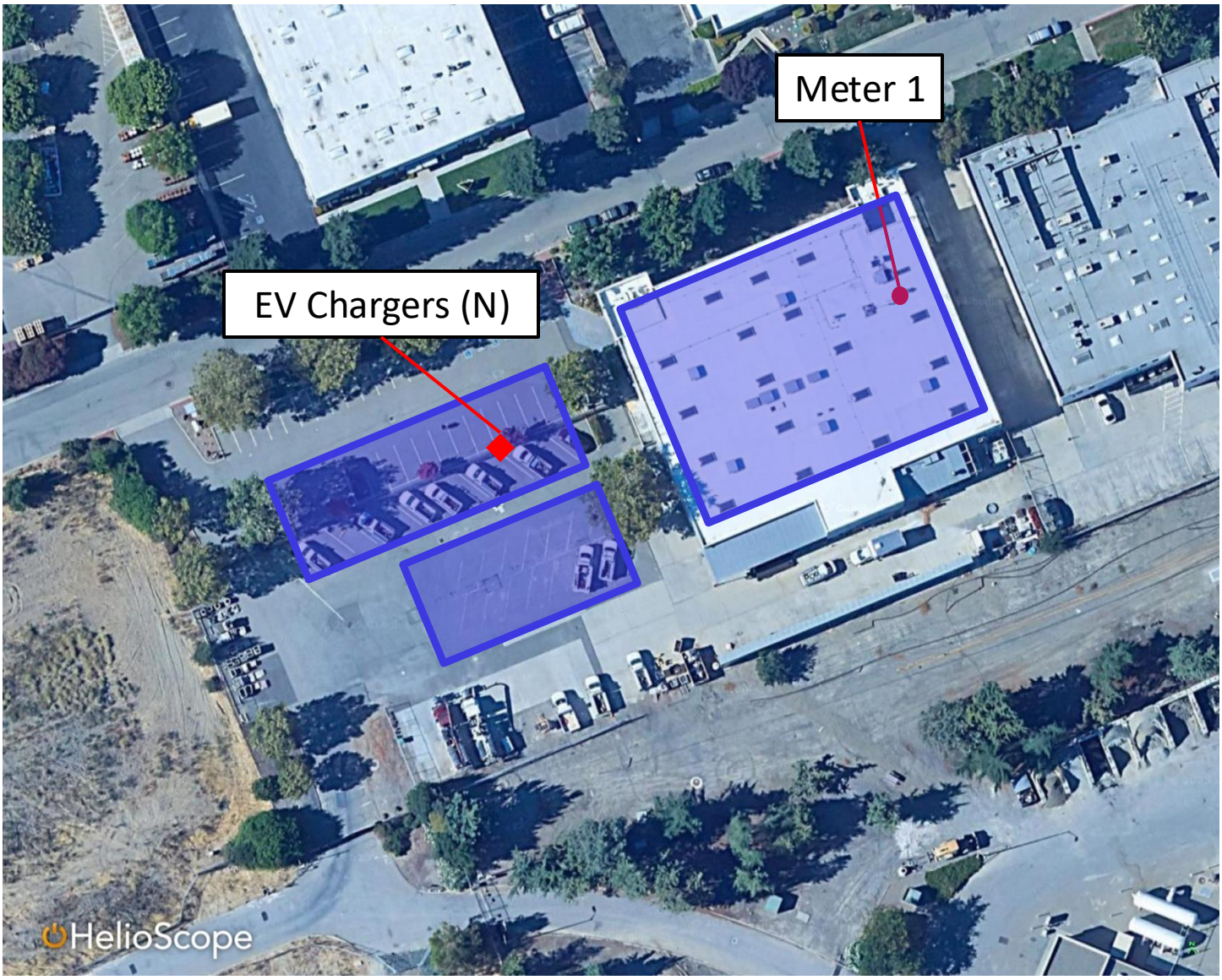


Meter	SA Number	Meter Number	Voltage	Amps	Interconnection Type	Annual Load (kWh)
1	2472675653	1009542707				233,000
2	2753993428	1010864033				5,000
3						
4						
5						
Total						238,000

Notes	Meter 2707 (main meter) is in the electrical room in main building. Meter 4033 is on the outside of the utility room. Two 40-amp EV chargers, each with two ports, will be located as indicated in the drawing above.
Documents	

FIELD OPERATIONS FACILITY

7035 Commerce Cir, Pleasanton, CA 94588



Meter	SA Number	Meter Number	Voltage	Amps	Interconnection Type	Annual Load (kWh)
1	6775567960	1010759964				256,000
2						
3						
4						
5						
Total						256,000

Notes	Meter is in electrical utility room. Two 40-amp EV chargers, each with two ports, will be located as indicated in the drawing above.
Documents	

LAVWMA

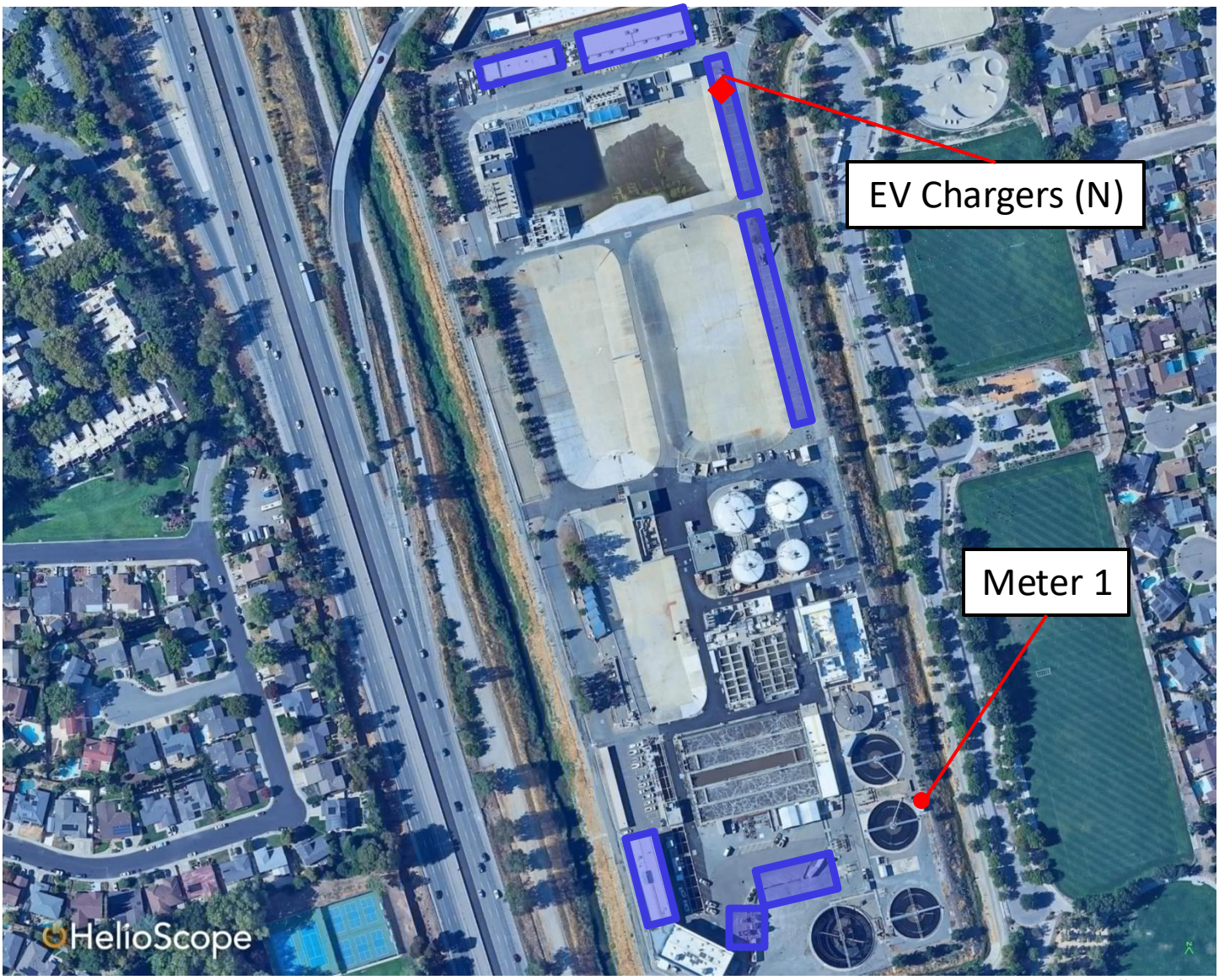
7176 Johnson Dr, Pleasanton, CA 94588

Meter	SA Number	Meter Number	Voltage	Amps	Interconnection Type	Annual Load (kWh)
1	8440395888	1010422557				4,268,000
2	8482061741	1010422558				4,231,000
3						
4						
5						
Total						8,499,000

Notes	Both meters are located in the same utility room. BESS was found to be favorable with this site in combination with the “Option S” rate switch for the B-20 tariff on either meter.
Documents	

WASTEWATER TREATMENT PLANT

7399 Johnson Dr, Pleasanton, CA 94588



Meter	SA Number	Meter Number	Voltage	Amps	Interconnection Type	Annual Load (kWh)
1	4053823005	1011041302				3,680,000
2						
3						
4						
5						
Total						3,680,000

Notes	BESS was found to be favorable with this site in combination with the "Option S" rate switch for the B-20 tariff on the meter. Two 40-amp EV chargers, each with two ports, will be located as indicated in the drawing above.
Documents	

Exhibit H – Utility Data

Utility Data

Follow this link to the folder Utility Data for all provided utility data related to this project:

https://arcalternatives.box.com/s/ezccuu56gmjmb7q6rdr437inki68x1zh

Exhibit I – Performance Guarantee Requirements

Performance Guarantee Requirements

Contractor must guarantee that during the period of the PPA, the system will produce 95% of the mutually agreed guaranteed kilowatt-hours (kWh). The Performance Guarantee can be structured in one of the following two ways:

1. The true-up period shall be every five years at which point actual system output is compared to the guaranteed amount, without any adjustments for weather.
2. The true-up period shall be annual, with the guaranteed output adjusted for variations in weather.

Under either option, if the cumulative system output is less than the guaranteed amount the Contractor will be responsible for compensating DSRSD for the difference in under production equal to the amount of the mutually agreed guaranteed energy price per kWh. Under no circumstances will the Contractor be permitted to receive credits for overproduction relative to the guaranteed amount and or carry these credits forward from one true-up period to another.