

SPECIFICATION SECTION 01 10 00: SCOPE OF WORK

PART 1 - GENERAL

1.01 SUMMARY

- A. This section describes the Scope of Work for the Project. Requirements provided in this section may be addressed in further detail elsewhere in the Contract or Bridging Documents.
- B. This specification applies to a design-build project and includes the scope for design, construction, commissioning and operation of a complete energy system as described here and elsewhere in the Contract and Bridging Documents.
- C. In this document, "Judicial Council" shall refer to Judicial Council of the State of California, owner of the site(s) where project will be located, regardless of system ownership, and include any representative of the site Judicial Council, such as, project managers, independent engineers, consultants or inspectors. "Contract" refers to the design-build and/or construction contract and any associated design-build bridging documents, inclusive of requirements outlined in the request for proposals (RFP). "Contractor" refers to the entity performing the work, inclusive of Engineer(s) and Architect(s) of Record for design-build contracts, post construction system operator, and financier.
- D. Contractor shall perform all work and provide submittals consistent with this specification, Section 01 33 00: Design-Build Process & Submittals, other technical specifications, and the Contract and Bridging Documents for all stages of work.
- E. Bridging Documents may be amended or supplemented to include elements or ideas from Contractor's Proposal or other proposals, but only to the extent Judicial Council expressly agrees in writing. Contractor is solely responsible for confirming the extent of any changes to the Contract and Bridging Documents.

1.02 RELATED DOCUMENTS

- A. The Contract and any design-build Bridging Documents.
- B. Section 01 33 00: Design-Build Process and Submittals
- C. Other technical bridging specifications
- D. Where this specification and the Contract or other Bridging Documents are in conflict, the more stringent shall apply. Contractor shall identify conflicts and confirm recommended changes or procedures with the Judicial Council.

PART 2 - SCOPE OF WORK

2.01 FINANCING SCOPE

- A. For a public-private partnership (e.g. a PPA Contract), Contractor shall provide design, construction and operational phase financing per the approved and executed Contract. All costs

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for the work shall be paid by the Contractor, or reimbursed to the Judicial Council where the Judicial Council incurs the initial cost of any required work, excepting any cost expressly identified in the Contract as the Judicial Council's responsibility.

2.02 DESIGN PHASE SCOPE

A. Design Team

1. Contractor shall provide Electrical, Structural and all other required licensed engineers and/or architects [Engineers of Record and Architect of Record] to complete the work. All designers shall be licensed in the state where the Project is located. Designers shall provide all progress designs and a complete stamped design set as required to permit and construct a complete energy project.
2. Contractor shall perform design services using the designers listed in its Proposal. Contractor may substitute Designers identified in the Proposal only with Judicial Council's written consent.
3. Contractor shall fully coordinate all engineering and architectural disciplines and Designers involved in completing the Work. All Designers shall fully coordinate with Contractor and all architectural and engineering disciplines and Designers involved in completing the Work.
4. Contractor shall require each Designer's written agreement (1) to be bound to the terms of Contract Documents, and (2) to assume all the obligations and responsibilities that Contractor assumes toward Judicial Council under the Contract Documents.

B. Contractor shall produce progress designs for Judicial Council review and hold regular meetings per Section 01 33 00 requirements. Drawings and design shall include Schematic Design (30%), Design Development (60%), Construction Documents (90%) and Final Permitted Design Documents for Construction.

C. The design shall incorporate all energy systems described in the Contract, including, but not limited to:

1. Solar Photovoltaic System(s) (PV)
2. Battery Energy Storage System(s) (BESS)
3. Microgrid System(s)
4. All ancillary equipment, infrastructure (carport, carport lighting, spare conduits for future EV chargers) and site improvements to implement these systems.

D. DUE DILIGENCE. Contractor shall identify and perform all necessary due diligence to design and implement the Project. Due diligence shall include, but not be limited to: geotechnical investigations, structural investigations, surveying, underground utility location (including Ground Penetrating Radar (GPR)), potholing/hand-digging to verify critical UG constraints, utility coordination, title reports, geohazard review, electrical equipment inspection and testing, identification of Authorities Having Jurisdiction (AHJs), etc.

E. SCHEMATIC DESIGN (SD)

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1. Contractor shall produce SD plans that accurately describe, at a schematic level, all energy systems proposed for the project, their siting and size on the site, and the physical and electrical configuration of the systems sufficient for presentation and discussion with the Judicial Council. Work shall include design calculations, engineering, modeling and drawings of energy systems to meet the operational and functional requirements of the Bridging Documents. SD Documents shall be sufficient to present the complete concept of the Project, including all major elements of the system(s), machinery, equipment, structure(s), and site design(s).
2. Contractor shall size Solar PV, and any other energy systems subject to production targets, to meet the target production or target system size identified in the Bridging Documents. Where site constraints do not allow for a system sized to meet these requirements, Contractor shall maximize production within the footprint identified in the Bridging Documents and explore alternatives with the Judicial Council. Sizing shall include accurate and detailed modeling of production for each system and site based on site constraints (e.g. shading, code constraints, etc.) using industry standard modeling tools (for Solar PV: PVSyst or Helioscope).
3. Contractor shall also include sizing and design of all other energy systems to meet the functional and operational requirements of the Project. This shall include electrical switchgear and any balance of system equipment required for a complete and operational energy system.

F. DESIGN DEVELOPMENT (DD)

1. Contractor shall provide DDs that describe in detail all energy systems included in the Project. DDs shall include all ancillary equipment and work, required to secure permits and construct the system.
2. Contractor shall provide plans sufficient to fix and illustrate project's scope and character in all essential design elements including, without limitation, site plans; demo plans; civil, architectural, structural, mechanical, and electrical plans; elevations; cross sections and other mutually agreed upon plans deemed necessary to describe the developed design; single line electrical and mechanical plans; and structural plans with schematic sizing of major structural elements.
3. Contractor shall provide recommendations for scheduling and phasing of construction.
4. Contractor shall provide updated energy system performance modeling and operational/functional descriptions for the energy systems included in the Project.

G. CONSTRUCTION DOCUMENTS (CD)

1. Contractor shall provide CDs that fully describe in-detail all aspects of the Project and Work to be performed. CDs shall include drawings, specifications, calculations, control plans, etc. as needed for construction and AHJ/Judicial Council approval.
2. CDs shall be prepared in compliance with all relevant codes, standards, regulations, AHJ Requirements, and Contract and Bridging Document requirements. CDs must meet the approval of the Judicial Council and additional Authority(ies) Having Jurisdiction (AHJs) over

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the project, including the State of California Fire Marshal, and the Department of State Architect (DSA).

3. CDs shall include, but not be limited to: grading, landscape modifications, demolition plan, excavations, directional boring/trenching, racking and mounting systems, pads, other structural elements, electrical systems, electrical system upgrades, signage, foundations, fencing, fire and safety, lighting, conduits/spare conduits (including above and below grade), vault locations, equipment mounting details, wall mount conduit routing, photometric designs existing and future, accessibility improvements, etc. as required or implied by this specification, the Contract/Bridging Documents, AHJs and applicable codes, standards, and regulations.
4. Following receipt of the Judicial Council's comments, Contractor shall complete final Construction Documents. Such complete Construction Documents may then, with Judicial Council's approval, be submitted by Contractor to the AHJ(s). Contractor shall produce a final CD design set upon securing permit(s), incorporating final AHJ and Judicial Council comments.
5. Warranty. Contractor shall warrant to Judicial Council that the final design, as expressed in the Construction Documents:
 - a. Will be constructible, workable, and buildable within Contractor's detailed Project schedule;
 - b. Will comply in all respects with the requirements of the Contract/Bridging Documents;
 - c. Will not call for the use of hazardous or banned materials; and
 - d. Will fully comply with applicable building codes, ordinances, standards, governmental regulations, and private restrictions applicable to the Work.

H. PERMITS

1. Contractor shall identify and obtain all required permits. Permitting shall include all required coordination and submittals with the AHJ(s), including the utility the project is interconnected with, Judicial Council, and State Fire Marshall. Contractor shall take all steps to secure AHJ approvals and all other required reviews and approvals of the Construction Documents.
2. Where a permit process was begun prior to the Contract (e.g. Interconnect Applications with the utility), Contractor shall take over the permitting process from the Judicial Council upon Contract execution.
3. Contractor shall pay all permitting fees required for the project, inclusive of utility interconnect costs, except where expressly identified as an Judicial Council-cost in the Contract.
4. Contractor shall comply with all California Environmental Quality Act, codified at Public Resources Code Section 21000 et seq. ("CEQA"), mitigation requirements applicable to the activities undertaken pursuant to this SLA as directed by the Judicial Council.

I. INCENTIVES

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1. Where incentives are available for energy systems that are a part of the scope of work, Contractor shall be responsible for all requirements to ensure full incentives are received for the Project, including but not limited to: incentive management, design and construction of the Project to meet incentive requirements, documentation, coordination with the entity providing incentives, proper closeout of Project/incentive documentation, reporting and performance requirements during operation, etc.
2. Where an incentive process was begun prior to the Contract (e.g. Self Generation Incentive Program (SGIP)), Contractor shall take over the incentive process from the Judicial Council upon Contract execution.
3. Incentives shall be received by the entity identified in the Contract.

2.03 CONSTRUCTION PHASE

- A. Contractor shall provide complete Construction Phase oversight, inclusive of onsite construction management and management of all sub-contractors.
- B. Solar Photovoltaic Systems (Solar PV).
 1. Contractor shall provide and install all equipment necessary for a complete, interconnected and operational PV system, with components including, but not limited to:
 - a. Solar PV modules
 - b. Inverters
 - c. All electrical switch gear or substations, including any modification necessary to existing gear, required for a utility grid-connected PV system
 - d. All electrical conductors, conduits & components necessary for a complete PV system
 - e. All mounting systems, including canopy structures, ground or roof racking
 - f. All monitoring and communications equipment required by the Contract, Bridging Documents and the utility.
 - g. Any balance of system items for a complete, interconnected, grid-tied and operational solar PV system
 - h. Permanent fencing for all ground mounted equipment, matching other enclosures on the site.
 - i. Permanent or removable bollards around all equipment vulnerable to vehicle strikes.
 - j. All lighting, security or other ancillary equipment described in the Contract documents
 - k. Installation of accessible hardscape (concrete slabs) under canopies where required by the AHJ for access to shade.
 - l. Where PV is located on canopies provide canopy mounted parking lot lighting and remove existing unneeded parking lot lighting as applicable.
 - m. Inverters are to be controlled by the MG controller and operated in concert with the BESS to extend the back up power run time during a utility outage.
- C. Battery Energy Storage System(s) (BESS)
 1. Contractor shall provide all modeling, sizing, engineering, incentive management, design, installation, equipment, ancillary equipment, modifications to existing equipment, control systems, pads, conductors and conduits, enclosures, complete utility interconnection

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management, metering, commissioning, and all other necessary items for a complete and operational BESS.

2. A warranty of at least ten (10) years on all BESS systems.
3. A secure enclosure, matching other existing enclosures on the site.
4. Energy storage system shall include monitoring with similar capabilities and data accessibility as PV production monitoring for full life of BESS system with sufficient detail for Judicial Council to verify system performance.
5. BESS shall have a control system that optimizes energy consumption and solar production for the retail tariff at each site, including real-time tariff updates and learning algorithms to continually optimize savings.
6. BMS Services equal to the Term of the Agreement.
7. Where grid services are or will be provided by BESS, all required metering, monitoring, telemetry and software shall be provided to provide grid services.
8. A HMI or web based portal that allows Judicial Council to control BESS operations, set points, reserve capacity, notifications, similar functions.

D. Microgrid System(s)

1. Contractor shall provide all modeling, sizing, design, control descriptions, installation, associated equipment, modifications to existing equipment, control system, enclosures, complete utility interconnection management, commissioning, and all other necessary items for a complete and operational microgrid system at the site.
2. Microgrid Management Services equal to the Term of the Agreement.
3. Microgrid shall meet all operational and functional requirements for the Project site(s), including the capability for automated islanding and supply of critical load panels for resiliency scenarios identified in the Contract and Bridging Documents as well as remotely modifying the BESS operating procedure and backup reserve capacity. Where such definitions are limited or missing, Contractor shall assist Judicial Council in clearly defining microgrid operational and functional requirements.

E. Spare Conduits. Contractor shall install spare conduits with appropriate rated pull tape/strings and terminations at each site as follows (See technical bridging specifications for further detail):

- 1) BESS. At all sites where BESS is not included in the final scope, install (2) x 3-in and (2) x 1.5-in conduit from the main service to the future BESS location identified on Bridging Documents or as determined with Judicial Council. Where PV system is >500 kWp or BESS system is greater than 300 kW, increase spare conduit size from 3-in to 4-in.
- 2) Data. At all Canopies: (2) x 1.5-in conduits from nearest existing Site data connection to each canopy.
- 3) EVSE. At all Carport Canopies, provide spare conduits to support future EV charges at 30% of spaces.
- 4) Security. At all carport canopies provide a spare data conduit for use by security cameras.

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- F. Any changes to Judicial Council property required for the Project, including, but not limited to: grading, tree or vegetation removal, repair of damage caused by Contractor, light standard removal, new lighting, parking islands, ADA improvements, re-striping of parking areas, etc. are the sole responsibility of the Contractor.
- G. Where a project is installed in a parking lot, Contractor shall ensure that parking lot striping designs meet current AHJ, City and/or County standards. Where designs are out of compliance and corrective work has not been included in the Contract, Contractor shall identify corrective measures and provide a Request for Information (RFI) to Judicial Council whether to include re-design in Project scope.
- H. Contractor shall coordinate with, and provide support to, the Judicial Council, all Inspectors, and Judicial Council's Representatives during all phases of work.
- I. **SCHEDULE & MEETINGS**
 - 1. Contractor shall coordinate and schedule weekly project meetings from Notice to Proceed (NTP) through project closeout with all stakeholders.
 - 2. Contractor shall maintain formal meeting minutes and agendas, submitted to the Judicial Council prior to the next meeting for review.
 - 3. Contractor shall maintain a detailed master project schedule and three-week look ahead. Master schedules and three-week look ahead schedules shall be distributed to all attendees the day prior to the next scheduled project meeting. Master project schedules shall be promptly provided to Judicial Council upon request throughout the project life cycle.
 - 4. Frequency of meetings are allowed to change upon the stakeholder availability and approval from the Judicial Council.
- J. **UTILITY COORDINATION & INTERCONNECTION**
 - 1. Contractor shall manage and be responsible for all work and costs for the Project to be interconnected with the utility.
 - 2. Contractor shall prepare interconnection applications and manage the interconnection process, including tariff change requests, processing costs, coordination with the local utility(ies), shutdowns, inspections, testing, etc. necessary to achieve interconnection and permission to operate for all energy systems.
 - 3. Power shutdown for interconnection shall be limited to 4 hours between the hours of 10 PM and 4 AM and coordinated with the Judicial Council in advance to ensure appropriate coordination with relevant personnel in regard to building power-consuming systems that will be affected by the shutdown. Shutdown periods outside of those hours or for a longer duration may be approved by the Judicial Council but must not interfere with regular facility activities and may require the contractor to provide temporary building power.
 - 4. In the event that the Judicial Council has already submitted initial interconnection applications prior to the Contract being executed, the Contractor shall promptly review any past applications and take over coordination with the Utility, including making any proposed modifications to the system design.

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5. The Contractor should note that tariff and NEM 2.0 grandfathering is key to District's project strategy and the financial performance of the project. The Contractor shall ensure that any tariff grandfathering or other milestone achieved by the initial interconnect application is maintained.
 6. Should an issue arise, that may jeopardize the initial interconnection scheme, tariff grandfathering, some other utility milestone, substantially increase interconnection costs or the ability to interconnect the project, the Contractor shall promptly notify the Judicial Council and seek approval from Judicial Council before making any changes to the interconnect application.
- K. AMERICANS WITH DISABILITIES ACT (ADA).
1. Contractor shall be responsible for the identification all ADA deficiencies at the Project site that will require upgrades as a result of the Project.
 2. Contractor shall design all required improvements during detailed design in order to secure permits from the AHJ(s).
 3. Contractor shall be responsible for implementation of all ADA work detailed on the drawings and required by the permit, including, but not limited to: parking lot restriping, covered parking space ratios, signage, path of travel, etc.
 4. The Contractors contracted cost shall include the cost for any improvements within the footprint of any canopies and any improvements identified in the Contract or Bridging Documents. The Contractor shall receive a change order for the additional cost of any ADA improvements required by permit outside of the canopy footprints not identified in the Contract or Bridging Documents.
- L. MISCELLANEOUS. Contractor shall provide:
1. Secure storage facility at job site for all equipment and supplies, including any required security.
 2. Legal toilet and hand wash sink facilities at job Sites.
 3. Daily cleanup to "broom clean" conditions.
 4. Implementation and management of all Stormwater Pollution Protection Plan (SWPPP) and other permit required measures for construction.
 5. Return of disturbed areas to pre-construction conditions including repair of all pavement and concrete, street sweeping & cleaning, restriping, and removal of survey marks, equipment track marks & scuffs on finished concrete surfaces.
 6. Remediation of all fields, turf, landscaping and irrigation to restore to pre-construction conditions.
 7. Provide temporary ADA parking stalls during construction if construction activities make existing facility ADA parking stalls unusable. The quantity and location of temporary stalls shall be coordinated with Judicial Council.
 8. Provide temporary lighting in place of removed overhead lighting until under-canopy or other permanent lighting is fully operational.

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9. Installation of Judicial Council approved project information signage and removal at completion of project.

2.04 COMMISSIONING & CLOSEOUT

- A. See Specification 013300, Design-Build Process and Submittals, and technical bridging specifications for further details regarding commissioning and closeout.
- B. Commissioning and closeout shall follow industry best practices and applicable codes and standards identified in the Contract and Bridging Documents.
- C. Startup, Testing and Commissioning.
 1. Contractor shall provide complete startup, testing, commissioning and documentation of these activities for all energy systems installed or modified as part of the Project.
 2. Commissioning shall include all associated tasks and documentation required to successfully commission the system per Contract/Bridging Document requirements and industry best practice.
 3. Contractor shall assist Judicial Council and any third-party commissioning agents/inspectors, including provision of licensed electricians to interact with energy systems and provision of documentations.
 4. Contractor shall perform performance testing to confirm that all energy systems are performing per the design and operational/functional requirements of the Contract and Bridging Documents.
- D. Undertake punchlist walks with Judicial Council, ensure completion of punchlist work and provide comprehensive labeled, time stamped photo library of complete items.
- E. Record Documents. Contractor shall provide final, "as-built" Construction Documents clearly conformed with all changes made during construction, at a minimum in CAD and PDF formats, including all underground trenching/boring routes and depths.
- F. Closeout Documents. Contractor shall provide a comprehensive set of closeout documents per Specification 01 33 00, including an Operations & Maintenance Manual for each site that includes all energy systems.
- G. Training. Conduct a training for Judicial Council staff, with orientation to the energy systems, monitoring platforms, safety procedures, and Operations & Maintenance Manuals.
- H. Permit Closeout
 1. Contractor shall ensure that all permit requirements have been met and ensure closeout of all permits required for the Project.
 2. Contractor shall obtain confirmation from the DSA that Carport design has been reviewed and meets DSA ADA requirements. For clarity only the ADA requirements will be reviewed by DSA.

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2.05 OPERATIONAL PHASE

- A. For Contractor-owned Projects (not owned by the Judicial Council), Contractor shall provide the following minimum Operational Phase scope:
1. Comprehensive operations and maintenance for the entire term of the Contract, including all necessary maintenance to maintain system performance and performance guarantee.
 2. Monthly billing to the Judicial Council with kWh of production, per kWh cost (if applicable) for the period and total cost.
 3. Daily system monitoring and response to alarms as-needed to keep the systems operational, operating safely, and performing optimally.
 4. Annual on-site system inspection, including system testing and routine preventive maintenance, repair and/or replacement of defective parts (equipment and labor) as-needed to meet the Judicial Council's 25-year production, demand reduction, and resiliency targets.
 5. Routine preventative and unexpected maintenance to keep the systems in good working order and to meet performance guarantees, including PV module washing and BESS replacement or refurbishment as-needed.
 6. Maintenance of all ancillary equipment installed as part of the System in working order and good aesthetic condition, including maintaining fencing, canopy structures, canopy lighting, overhead or underground cabling, etc. as applicable. All non-functional light fixtures to be replaced within 30 days from notification from Site Judicial Council.
 7. Ongoing vegetation management for safe operation of the facilities and to minimize production losses from shading if deemed necessary. Vegetation management shall follow Judicial Council procedures as outlined in the RFP and Contract. Vegetation management may not include the use of any chemical sprays or application.
 8. Maintenance of all meters required by this project, including maintaining the WREGIS compliant meters in working condition and calibration of meters as required by the meter manufacturer.
 9. All costs associated with fees for monitoring, including providing web-based access to monitoring data and maintaining monitoring equipment. Detailed monitoring data (minimum hourly timestep) shall be available via internet at all times from COD to present.
 10. An Annual Report that details the following:
 - a. Annual solar PV production in kWh and (if applicable) key metrics indicating BESS demand reduction in kW and minimum observed BESS state of charge.
 - b. Total solar PV energy produced to date in kWh in comparison to pre-solar energy consumption; maximum demand reduced by BESS to date in kW in comparison to pre-project demand and current tariff thresholds; and metrics demonstrating continuous microgrid resiliency support for critical loads.
 - c. Significant issues encountered and mitigation measures taken.
 - d. Maintenance performed during that year for each individual PV system, BESS, and/or microgrid system.

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- e. Actual Performance compared with estimated performance, performance guarantee, and any true-up period accounting.
- f. 1 year of 15-minute Interval data on Solar Gen, BESS Export, and BESS SOC.

END OF SPECIFICATION SECTION 01 10 00