

Imperial County Planning & Development Services Planning / Building

Jim Minnick

February 3, 2021

Subject: Request for Proposal - Environmental Impact Report (EIR) for the ORNI 30 LLC CUP #20-0030/Initial Study #20-0041, APN 037-140-006-000 Project Applicant(s): ORNI 30, LLC

- Conditional Use Permit CUP (#20-0030)
- Water Supply Assessment (WSA)

Dear Consultant:

The Imperial County Planning & Development Services Department is soliciting proposals for the preparation of a comprehensive Environmental Impact Report (EIR) for the attached project: Conditional Use Permit (CUP #20-0030). **The Planning & Development Services Department** will act as the "Lead Agency" for the preparation of the EIR pursuant to the California Environmental Quality Act (CEQA). The successful consultant will work directly for the County Planning & Development Services Director in the preparation of the Draft and Final EIR.

The ORNI 30, LLC project includes:

Conditional Use Permit #20-0030 will allow for the development and operation of a 40 Megawatt (MW) photovoltaic (PV) solar farm and 40 MW 160 Megawatt hour (MWh) battery energy storage system (BESS) on approximately 225 acres at Brawley, Imperial County (Project). Please see additional information for review on attached CD.

It should be noted that the applicant has agreed to prepare an EIR for the proposed Project in order to satisfy compliance with CEQA. In order to assist in the preparation of the EIR, the applicant is currently preparing or plans to prepare, the following technical studies:

- Air Quality/Greenhouse Gas (GHG) Technical Report
- Nosie Technical Report
- Traffic Study
- Cultural Resources Survey and Report
- Glare Study
- Visualization Study
- Biological Resources Survey and Report
- Preliminary Jurisdictional Delineation

- Geotechnical Report
- Water Supply Assessment

Attached in a CD hereto is a copy of the application package and maps.

- I. The County hereby requests the following information; for each item (as appropriate), the hourly rate and estimated total hours for the specific task must be documented.
 - a. Identified milestones representing specific tangible work products (tasks) to which payments by the County would be linked and become part of the legal contract. (Please note that all subsequent bills/invoices will be required to include both the identified milestones and percent completed).
 - b. All potential subcontractor(s) that will be utilized along with their estimated staff time and cost breakdown;
 - c. An estimated "not to exceed cost" to prepare the Drafts (DEIR) and Final Environmental (FEIR) documents;
 - d. Review the attached proposed Conditional Use Permit and make findings of consistency on the EIR,
 - e. Review and comment on the submittal of studies prepared by applicant and their consultant, and
 - f. Submittal of 20 CD's and three (5) hard copies of proposal.

The only exception to the "not to exceed" cost shall be the response to public comments received as a result of the joint environmental document's circulation. If the County receives excessive comments on the draft document, then the costs will be determined on a "negotiated basis" when the draft document and comments on the project become available. Excessive comments are generally considered to be more than twenty (20) commenting agencies/individuals and/or over 150 comments that require answers other than "comment noted."

Also, proposals must incorporate the cost estimate for the printing of the Draft (DEIR) and Final environmental documents (EIR) for a minimum of copies. The first five (5) hard copies of DEIR & FEIR with Appendices and 20 CD's are to be included within your estimate. Any additional copies, greater than (5) shall be prepared by you at cost.

The proposal must provide that prior to any cost overruns; the consultant shall discuss <u>first and</u> <u>then seek written approval from the County Planning and Development Services Director,</u> <u>Jim Minnick</u> before such costs are incurred. Failure to get prior written approval may result in such costs being disallowed.

- **II.** We request that you provide within your cost estimate for the EIR, a preparation of the following **studies**, **analysis and or peer reviews of studies** done for this EIR and studies prepared by the applicant and their consultant(s).
- Aesthetics
- Agricultural Resources (include LESA Model)
- Air Quality & Greenhouse Gas Emissions Studies (applicant provided)
- Alternatives
- Cumulative, Growth
- Climate Change
- Hazards, Hazardous Materials Study
- Health Risk Assessment

- Hydrology/Water Quality
- Land Use
- Noise Study
- Population and Housing
- Public Health & Safety
- Public Services
- Transportation/Circulation (applicant provided)
- Utilities and Service
- Findings for Project
- Mitigation, Monitoring & Reporting Program
- Biological resources
- Cultural Resources/Archeological Study
- Geology and Soils Analysis
- Geotechnical Investigation (applicant will provide).
- Traffic Study
- Glare Analysis
- Visualization Study
- Noise Study
- Energy Assessment
- Wildfire assessment

The EIR consultant will be expected to review studies submitted by applicant/consultants as a third-party review and determine whether or not they are adequate, need to be revised, updated or, in fact, be reproduced. The applicant/consultant(s) is in the process in submitting studies as indicated above.

Note: Extensive studies for a previous EIR have been done on a portion of this site, for a geothermal facility owned and operated by Ormat and all documents are available at the planning department upon request.

III. The following format should be used in preparing the proposal; additional information/items may be used to further bolster your proposal:

One page cover letter introducing your firm.

1. Project Understanding

- 2. Project Team
 - Identify all company and consultant team personnel who will work on the project and short description of their education and work experience.
 - Resumes of the prime and technical consultants should be included and can be attached to the proposal as an appendix.
 - Organization Charts-Elaborate organization charts are not necessary.

3. Scope of Work

- Describe the proposed tasks to accomplish the scope of work.
- Include deliverables, when applicable, for each task.
- Include all applicable site visits, scoping meetings, staff meetings and public hearings.
- Be specific regarding your approach to complete the CEQA noticing requirements.

4. The tasks should be presented as follows:

- <u>Project Initiation</u> Include research, site visit, data collection, CEQA notices, Notice of Preparation and Initial Study (NOP & IS), scoping meetings, EEC meeting, ALUC hearing.
- <u>Administrative Draft EIR (ADEIR)</u> Include mandatory CEQA sections, required and technical studies, peer review of applicant-prepared technical studies, number of revisions, meetings and coordination with County Staff;
- <u>Public Review Draft EIR (DEIR)</u> Include document preparation, CEQA notice, Scoping meeting, and coordination with County Staff;

d. Final EIR (FEIR)

Include document preparation, Response to Comments, CEQA notice, meetings, coordination with County Staff and attendance at Planning Commission and Board of Supervisors hearing;

- e. <u>Mitigation, Monitoring and Reporting Program</u> Include the preparation per CEQA identification of all mitigation measures, identification of all responsible parties, timing and enforcement;
- f. <u>CEQA Findings and Notice of Determination (NOD)</u>. Include the preparation per CEQA requirements;

g. Assumptions

Please provide a specific section for assumptions. Include your assumptions regarding travel time, mileage, public noticing, or anything else that needs clarification; and

h. Meetings

The number of meetings and hearings that are included in your proposal should be detailed under each task. <u>Must include Planning Commission and Board of Supervisors hearings.</u>

5. Proposed Schedule

Provide the number of weeks for each task in tabular form from project initiation to public hearings, Planning Commission, and Board of Supervisors.

6. Cost Estimate/Milestones

- Provide a discussion of the proposed cost and any optional costs.
- Include a spreadsheet that details your personnel, any subcontractors to be used, their estimated hours, and associated costs per task (can be attached as an appendix).
- A table of project milestones should be included in the Cost Estimate discussion.

7. Consultant Selection Criteria

- a) Understanding of the project: the proposer should demonstrate understanding of key elements of the project and, accordingly, provide the names of personnel and their expertise.
- **b)** Approach to the project: The selection process will evaluate the extent to which the proposer has recognized and identified special circumstances on the project and whether the proposer has provided logical approach to tasks and issues of the project.

- c) Professional qualifications necessary for satisfactory performance: The project manager and key team members should be qualified to perform the work categories on the project; and the proposer's knowledge of standards and procedures will be examined.
- d) Specialized experience and technical competence in the type of work required: The proposer should provide information about comparable projects they have been involved with and/or successfully accomplished. Past performance on contracts with government agencies and private industry along with past performance evaluations; and the capacity to accomplish this work in the required time will be evaluated.
- III. It is requested that you disclose all conflicts or potential conflict that you may have if you are submitting a proposal. The conflict by the County envisions, at the very minimum, current/ongoing or previous contracts (within the past year) with the applicant(s); this also includes current technical studies that either are or have been prepared for the applicant(s) within the last year.

IV. <u>Not providing the extent of information (including hourly rate and total estimated</u> hours per task) may negatively impact the evaluation of your proposal.

If you are interested in submitting a proposal, please submit it to the Director at Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA, 92243, **no later than** <u>March 15, 2021 at 5:00 p.m.</u> This must be postmarked on or before this date and time.

Please note that it is **not necessary to present us with voluminous references or individualized background data** on persons or personnel within your organization. We may require this at a later date. We look forward to receiving your submittal.

(Additional information can be found from a previously approved EIR (SCH # 2010061054) Orni 19 project) done in the close proximity of the proposed Orni 30 project.

Please submit a total of 5 hard copies and a 20 CD's.

Should you have any questions or comments, please feel free to contact the assigned Planner for this project, David Black IV (442) 265-1736, extension 1746, or via-email at <u>davidblack@co.imperial.ca.us</u>.

Sincerely,

Jin Minnick, Director Planning & Development Services Department

cc: Tony Rouhotas, County Executive Officer Adam Crook, County Counsel Jim Minnick, Director of Planning and Development Services Michael Abraham, AICP, Asst. Director of Planning & Development Services Project File: CUP 20-0030, Initial Study # 20-0041 APN 037-140-006-000

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Attachments: CUP Project Applications, Project Description and Site Plans

APPENDIX A – Project Description

SECTION 1.0 – PROJECT DESCRIPTION

1.1 **PROJECT OVERVIEW**

ORNI 30, LLC (ORNI) is proposing to build, operate and maintain the Brawley Solar Energy Facility, a 40 Megawatt (MW) photovoltaic (PV) solar farm and 40 MW/160 Megawatt hour (MWh) battery energy storage system (BESS) on approximately 225 acres in Brawley, Imperial County (proposed Project). Power generated by the proposed Project would be low voltage direct current (DC) power that would be collected and routed to a series of inverters and their associated pad-mounted transformers. The inverters would convert the DC power generated by the panels to alternating current (AC) power and the pad mounted transformers would step up the voltage. The Project would connect to the North Brawley Geothermal Power Plant substation southwest of the Project site via an approximately 1.6-mile-long aboveground 92 kilovolt (kV) generation tie line (gen-tie line). Energy generated and stored by the Project will be sold to the wholesale market or retail electric providers in furtherance of the goals of the California Renewable Energy Portfolio Standards and other similar renewable programs in the Pacific Southwest power market. The Project plans to start construction in the fourth quarter of 2021 and begin operations by December 2022.

1.2 PROJECT SITE AND LOCATION

The Project is located at 5003 Best Ave, Brawley, California on six privately owned parcels: Assessor's Parcel Numbers (APNs) 037-140-020, 037-140-021, 037-140-022, 037-140-023, and 037-140-006 (Project site) as shown in Figure 1. Imperial County identifies the land use of the Project site as Agriculture and zoning as General Agricultural (A-2-G; County 2020). Currently the Project site contains alfalfa fields within different levels of harvest. North and east of the Project site is undeveloped agricultural land. South of the Project site is a mixture of undeveloped agricultural land and dirt lots used for staging activities. The City of Brawley Wastewater Treatment Plant is located along the western edge of the Project site. The County of Imperial (County) has identified the Project as a Solar Energy Electrical Generator, which is a permitted use within the A-2-G zone upon approval of a Conditional Use Permit (CUP).

1.3 PROJECT DESCRIPTION

Solar cells, also called photovoltaic (PV) cells, convert sunlight directly into electricity. PV cells combine to create solar modules, or panels, and many solar panels combined together to create one system is called a solar (or PV) array. The entire array would utilize 13 inverters and transformers collectively called a Power Conversion Station (PCS) for each block of solar panels. The inverters within the PCS are rated at 3496 KVA. The power produced from the solar panels would be low voltage direct current (DC), which is routed to the inverts to convert the DC power to alternating current (AC). The transformers within each PCS would step up the voltage and the outputs from each PCS are grouped together in PV combining switchgear to the switchyard, where the power is routed to the BESS facility for storage, and then upon demand stepped up to 92kV for interconnection with the transmission system via the gen-tie to the existing Brawley Geothermal substation.

The Project's PV arrays will be comprised of approximately 106,652 Canadian Solar Bifacial High Power Dual Cell PERC (BiHIKu) PV panels in total. Panels would be organized into electrical groups referred to as "blocks," where the proposed Project will require 13 blocks. Each panel is 3.2 feet by 6.5 feet and is on single-axis horizontal trackers in blocks that each hold 3,809 PV panels in 28 strings. The panels would be oriented from east to west for maximum exposure and the foundation would be designed based on soil conditions. The PV panels are made of a poly-crystalline silicon semiconductor material encapsulated in

glass. Installation of the PV arrays would include installation of mounting posts, module rail assemblies, PV modules, inverters, transformers and buried electrical conductors. Concrete would be required for the footings, foundations and pads for the transformers and substation work. Tracker foundations would be comprised of either driven or vibrated steel posts/pipes, and/or concrete in some places (depending on soil and underground conditions).

All access to the Project site would be located off Best Avenue. Access roads would be constructed with an all-weather surface, to meet the County Fire Department's standards, and lead to a locked gate that can be opened by any emergency responders. An all-weather surface access road, to meet the County's standards, would surround the perimeter of the Project site, as well as around solar blocks no greater than 500 by 500 feet. The Project would be required to conform to all California Public Utilities Commission (CPUC) safety standards. The Project site perimeter would be fenced with a 6-foot high chain link security fence topped with barbed wire, with gates at the access points.

1.3.1 <u>Gen-Tie Line</u>

The Project would connect to a switchyard located in the southwest corner Project site and then routed through the BESS building for energy storage. Power would then be transferred to the North Brawley Geothermal Power Plant substation via a 1.6-mile-long double circuit 13.8 and 92 kV gen-tie line with 66-foot-high poles to interconnect to the Imperial Irrigation District (IID) at the North Brawley 1 substation located at Hovley Road and Andre Road, southwest of the Project site. The transmission line would span the New River. A 12-inch diameter conduit railroad undercrossing would connect the PV arrays from the western side of the railroad tracks to the inverters on the eastern side.

1.3.2 BESS Building

The Project's BESS component will be housed in a 100,800 square-foot BESS building at the southwestern corner of the Project site. The BESS building will consist of 12 banks of racks, each having 40 rack units capable of 372.7 kWh. Each bank of batteries will be supported by an inverter and transformer located on the outside of the building, along the edges. To support liquid cooling of the system, up to two 200-ton air cooled screw chillers may be needed adjacent to the building. All batteries will be lithium-ion based capable of storing 40 MW/160 MWh.

1.3.3 Fiberoptic Cable and Microwave Tower

A proposed fiberoptic line from the Project substation would be connected with the existing North Brawley substation approximately 1.6 miles to the southwest, which is required to connect the Project substation to the region's telecommunications system. Overall, this would provide Supervisory Control and Data Acquisition (SCADA), protective relaying, data transmission, and telephone services for the proposed Project substation and associated facilities. New telecommunications equipment would be installed at the Project substation within the unmanned Mechanical and Electrical Equipment Room (MEER). The proposed fiber optic telecommunications cable, once past the POI, would utilize existing transmission lines to connect to the North Brawley substation. The length of this proposed fiber optic telecommunications cable route would be approximately 1.6 miles. Alternatively, a microwave tower 40 to 100-feet tall could replace the need for a fiberoptic line to transmit data offsite. If selected, this microwave tower would be located within the Project substation footprint.

1.3.4 <u>Substation</u>

The proposed substation would be a new 92/12 kV unstaffed, automated, low-profile substation. The dimensions of the fenced substation would be approximately 300 feet by 175 feet, with the footprint encompassing approximately 1.2 acres of the approximately 225-acre Project parcel. The tallest feature of would be the dead-end portal structure (39 feet 6 inches) coming in off the gen-tie line, which would have a lighting mast attached, making it 54 feet 6 inches total. The onsite substation control room would house the SCADA, switchgear, breakers, and DC batteries. Additionally, a 20kV emergency backup generator would be located adjacent to this control room for the HVAC system. The proposed substation site would be located at the southwest quarter of the parcel, adjacent to the BESS building. The California Building Code and the IEEE 693, Recommended Practices for Seismic Design of Substations, will be followed for the substation's design, structures, and equipment.

1.4 PROJECT CONSTRUCTION

Construction activities would be sequenced and conducted in a manner that addresses storm water management and soil conservation. During construction, electrical equipment would be placed in service at the completion of each power-block, after the gen-tie line has been completed. The activation of the power-blocks is turned over to interconnection following the installation of transformer and interconnection equipment upgrades. This in-service timing is critical because PV panels can produce power as soon as they are exposed to sunlight, and because the large number of blocks and the amount of time needed to commission each block requires commissioning to be integrated closely with construction on a block-by-block basis.

1.4.1 <u>Construction Personnel and Equipment</u>

The Project's workforce would consist of laborers, electricians, supervisory personnel, support personnel and construction management personnel. Up to 120 people are expected to be on-site per day. Project laydown and construction staff parking is expected to be located on-site or at the North Brawley Geothermal Power Plan in an approximately 4-acre area.

Equipment	Use
1-ton crew trucks	Transport construction personnel
2-ton flatbed trucks; flatbed boom trucks	Haul and unload materials
Mechanic truck	Service and repair equipment
Aerial bucket trucks	Access poles, string conductor, and other uses
Shop vans	Store tools
Bulldozers	Grade pole sites; reclamation
Truck-mounted diggers or backhoes	Excavate
Small mobile cranes (12 tons)	Load and unload materials
Large mobile cranes (75 tons)	Erect structures
Transport	Haul poles and equipment
Drill rigs with augers	Excavate and install fences
Semi tractor-trailers	Haul structures and equipment
Splice trailers	Store splicing supplies

Typical equipment expected to be used during Project construction and commissioning:

Brawley Solar Energy Facility Imperial County, California

Equipment	Use
Air compressor	Operate air tools
Air tampers	Compact soil around structure foundations
Concrete trucks	Pour concrete
Dump trucks	Haul excavated materials/import backfill
Fuel and equipment fluid trucks	Refuel and maintain vehicles
Water trucks	Suppress dust and fires

1.4.2 Construction Schedule, Sequence and Phasing

Construction is anticipated to start in quarter four of 2021 and would take approximately 6-9 months to complete. Construction would commence only after all required permits and authorizations have been secured. Construction would generally occur during daylight hours, Monday through Friday. However, non- daylight work hours may be necessary to make up schedule deficiencies, or to complete critical construction activities. For example, during hot weather, it may be necessary to start work earlier to avoid pouring concrete during high ambient temperatures. If construction is to occur outside of the County's specified working hours, permission in writing will be sought at the time. The County's construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays.

Construction of the Project would occur in phases beginning with site preparation and grading and ending with equipment setup and commencement of commercial operations. Overall, construction would consist of three major phases over a period of approximately 6-9 months:

- 1. Site Preparation, which includes clearing grubbing, grading, service roads, fences, drainage, and concrete pads; (1 month)
- 2. PV system installation and testing, which includes installation of mounting posts, assembling the structural components, mounting the PV modules, wiring; (7 months) and
- 3. Site clean-up and restoration. (1 month)

1.4.2.1 <u>Site Preparation</u>

Project construction would include the renovation of existing dirt roads to all-weather surfaces (to meet the County standards) from Best Avenue to the City of Brawley wastewater treatment plant. Construction of the proposed Project would begin with clearing of existing brush and installation of fencing around the Project boundary.

Fencing will consist of a six-foot chain-link fence topped with barbed wire. A 20-foot road of engineeringapproved aggregate will surround the site within the fencing. Approximately 20,000 to 30,000 gallons of water per day would initially be required for grading, dropping to much less for the remainder of the Project construction. Construction water needs would be limited to earthwork, soil conditioning, dust suppression, and compaction efforts. Water would be obtained from a ground storage tank existing onsite which fills from the Best Canal along the eastern property boundary. Material and equipment staging areas would be established on-site within an approximate 4-acre area. The staging area would include an air-conditioned temporary construction office, a first-aid station and other temporary facilities including, but not limited to, sanitary facilities, worker parking, truck loading and unloading, and a designated area for assembling the support structures for the placement of PV modules. The size of the staging area would shrink as construction progresses throughout the Project site. The Project construction contractor would then survey, clear and grade road corridors in order to bring equipment, materials, and workers to the various areas under construction within the Project site. Road corridors buried electrical lines, PV array locations and locations of other facilities may be flagged and staked in order to guide construction activities.

1.4.2.2 <u>Start-up</u>

PV system installation would include earthwork, grading and erosion control, as well as erection of the PV modules, mounting posts and associated electrical equipment. If previously unrecorded subsurface cultural deposits located within the Project area are discovered during construction, a qualified archaeological monitor would be retained to monitor all ground-disturbing activities in native soils to mitigate against potential impacts.

The PV modules require a moderately flat surface for installation and therefore some earthwork, including grading, fill, compaction and erosion control, may be required to accommodate the placement of PV arrays, concrete for foundations, access roads and/or drainage features. Construction of the PV arrays would be expected to take place at a rate of approximately 0.10 MW to 0.25 MW per day. Construction of the PV arrays would include installation of the mounting posts, module assemblies, PV modules, inverters, transformers and buried electrical conductors. The module assemblies would then be cut off at the appropriate heights since the center posts must be completely level. Field welding would be required to attach the module assemblies to the top of the mounting posts. Finally, the PV panels would be attached to the module assemblies. Heavy equipment lifters (e.g., forklift) would be required to get the module assemblies in position, while welding and cutting equipment would be necessary to cut off the posts at the appropriate height.

Concrete would be required for the footings, foundations and pads for the transformers and substation equipment. Concrete would be produced at an off-site location by a local provider and transported to the site by truck. The PCS housing the inverters utilize a precast concrete base. Final specifications for concrete would be determined during detailed design engineering, but any related production would meet applicable building codes. Wastes generated during construction would be non-hazardous and may contain any of the following: cardboard, wood pallets, copper wire, scrap steel, common trash and wood wire spools, and as much as possible of the waste that is generated during construction would be recycled. No hazardous waste is expected to be generated during construction of the proposed Project. However, field equipment used during construction would contain various hazardous materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints and other petroleum-based products contained in most construction vehicles. The storage, handling, and potential spills of these materials contained within the field equipment would adhere to all applicable local, State, and Federal regulations. Potable water would be brought to the Project site for drinking and domestic needs.

Construction water needs would be limited to earthwork, soil conditioning, dust suppression and compaction efforts. Approximately 20,000 to 30,000 gallons of water per day would be required during construction and would be obtained from a ground storage tank existing onsite which fills from the Best Canal along the eastern property boundary. A dust palliative with low environmental toxicity would also be used to suppress dust as approved by California Air Resources Board (CARB) and the Imperial Valley Air Pollution Control District (IVAPCD).

1.4.2.3 Clean-up and Demobilization

After construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted.

Waste materials and debris from construction areas would be collected, hauled away, and disposed of at approved landfill sites. Cleared vegetation would be shredded and distributed over the disturbed site as mulch and erosion control or disposed of offsite, depending on agency agreements. Rocks removed during foundation excavation would be redistributed over the disturbed site to resemble adjacent site conditions. Interim reclamation would include also re-contouring of impacted areas to match the surrounding terrain, and cleaning trash out of gullies. Equipment used could include a blader, front-end loader, tractor, and a dozer with a ripper.

A covered portable dumpster would be kept on site to contain any trash that can be blown away. After completion of the proposed Project, the project engineer would complete a final walk-through and note any waste material left on site and any ruts or terrain damage or vegetation disturbance that has not been repaired. The construction contractor would be given this list and final payment would not be received until all items are completed.

1.5 PROJECT OPERATION AND MAINTENANCE ACTIVITIES

Once fully constructed, the Project would be operated on an unstaffed basis and be monitored remotely, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and employees would only be on-site up to four times per year to wash the panels. As the Project's PV arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Any required planned maintenance activities would generally consist of equipment inspection and replacement and would be scheduled to avoid peak load periods. Any unplanned maintenance would be responded to as needed, depending on the event.

Estimated annual water consumption for operation and maintenance of the proposed Project, including periodic PV module washing, would be approximately 0.81-acre feet annually (af/y), which would be trucked to the Project site as needed.

1.6 PROJECT DECOMMISSIONING

Solar equipment has a lifespan of approximately 20 to 25 years. At the end of the Project's operation term, the applicant may determine that the Project should be decommissioned and deconstructed. Should the Project be decommissioned, concrete footings, foundations, and pads would be removed using heavy equipment and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured.

1.7 REQUIRED PERMITS AND APPROVALS

1.7.1 Lead Agency Approval

Imperial County Planning Department would be the lead agency for the proposed Project.

1.8 OBJECTIVES

ORNI's objectives for the proposed Project are to:

- Construct, operate and maintain an efficient economic, reliable, safe and environmentally sound solar-powered electricity generating facility.
- Help meet California's Renewable Portfolio Standard (RPS) requirements, which require that by 2030, California's electric utilities are to obtain 50 percent of the electricity they supply from renewable sources.
- Generate renewable solar-generated electricity from proven technology, at a competitive cost, with low environmental impact, and deliver it to markets as soon as possible.
- Develop, construct, own and operate the Brawley Solar Energy Facility, and ultimately sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to meet California's RPS goals.
- Utilize a location that is in close proximity to an existing switching station and power lines.
- Minimize and mitigate any potential impact to sensitive environmental resources within the Project area.



Brawley Solar Project

Imperial County



January 20, 2021

David Black Imperial County 801 Main Street Centro, CA 92243

Subject: Notice of Intent to Prepare an Environmental Impact Report (EIR) for the Brawley Solar Project

Dear Mr. Black,

ORNI 30, LLC (ORNI) is proposing to build, operate and maintain the Brawley Solar Energy Facility, a 40 Megawatt (MW)/160 Megawatt hour (MWh) photovoltaic (PV) solar farm and 40 MW/160 MWh battery energy storage system (BESS) on approximately 225 acres in Brawley, Imperial County (proposed Project). Power generated by the proposed Project would be low voltage direct current (DC) power that would be collected and routed to a series of inverters and their associated pad-mounted transformers. The inverters would convert the DC power generated by the panels to alternating current (AC) power and the pad mounted transformers would step up the voltage. The Project would connect to the North Brawley Geothermal Power Plant substation southwest of the Project site via an approximately 1.6-mile-long aboveground 92 kilovolt (kV) generation tie line (gen-tie line). Energy generated and stored by the Project will be sold to the wholesale market or retail electric providers in furtherance of the goals of the California Renewable Energy Portfolio Standards and other similar renewable programs in the Pacific Southwest power market. The Project plans to start construction in the fourth quarter of 2021 and begin operations by December 2022.

It should be noted that the applicant intends to prepare an EIR for the proposed Project in order to satisfy compliance with CEQA. In order to assist in the preparation of the EIR, the applicant is currently preparing or plans to prepare, the following technical studies:

- Air Quality/Greenhouse Gas (GHG) Technical Report
- Nosie Technical Report
- Traffic Study
- Cultural Resources Survey and Report
- Glare Study

- Visualization Study
- Biological Resources Survey and Report
- Preliminary Jurisdictional Delineation
- Geotechnical Report
- Water Supply Assessment

This letter serves as authorization for the County to start the Request for Proposals process to identify an EIR consultant for preparation of the EIR.

If you have any questions, please do not hesitate to contact Project Manager, Victoria Boyd at (760) 685-4838 or vboyd@chambersgroupinc.com.

Sincerely, CHAMBERS GROUP, INC.

Wictoria Bugd

Victoria Boyd Project Manager





BESS Technology – Brawley Solar Project

BESS is currently proposed to utilize CATL manufactured indoor equipment, consisting of 280-Ah-LFP liquid cooled racks (Product Name R852280-P). To meet the Project BESS sizing, the building will contain up to 12 banks of racks, each having 40 rack units capable of 372.7 kWh. Each rack unit is approximately 36.5 inches wide, 46.6 inches deep, and 91.7 inches tall.

Each bank of batteries will be supported by an inverter and transformer located on the outside of the building, along the edges. Exact sizing and units are being evaluated at this time.

To support the liquid cooling, up to 2 200-ton air cooled screw chillers may be needed adjacent to the building. Each of the chiller units is approximately 335.7 inches long, 87.8 inches wide, and 98.4 inches tall.

Regarding more specific specs for the equipment itself;

Chillers – With the batteries being liquid cooled, most of the cooling will be via the chillers. These are just focusing on cooling the liquid that flows around the battery modules. Slight correction, now assuming 3 x 200 ton ACRB 200 Chillers from Trane. Email from the rep indicated a meager 70 dBA at 10 meters from center of unit so not the worst.

HVAC – likely need some HVAC for supplemental cooling of the building given high solar loading, but I don't have anything spec'd out yet. Can try to determine rough calculations if needed.

Inverters – the engineering team is currently digging on the SMA Inverter skids attached which are multipurpose units with inverter/transformers on a skid (Model MVPS 4600-S2-US). Assuming need ~26 skids around the building which will be fun to site. Noise is unlisted, but similar items have been reporting around 67 dBA at 10 meters.

				Oct	aves				
Unit Size	63	125	250	500	1000	2000	4000	8000	dBA
			AH	RI Rating Po	int - 100% Lo	oad			
150	62	65	62	59	66	60	52	44	68
165	64	66	63	60	68	62	52	45	70
180	64	66	63	60	68	61	53	46	69
200	64	67	64	61	68	61	54	47	70
225	64	67	64	61	67	61	53	49	69
250	64	67	64	61	68	62	54	48	70
275	65	68	64	62	68	62	54	49	70
300	65	68	65	63	69	63	55	49	71

Below is the sound data for the 200 and the 250 ACR chillers from 10 meters from the center of the chiller (on the side). The two tables represent 100% and 50% load capacities, respectively to show how different levels are at certain operating points.

AHRI Rating Point - 50% Load									
150	57	57	53	53	54	48	43	32	57
165	57	53	53	52	54	48	43	32	57
180	57	54	56	52	55	49	43	32	58
200	57	53	53	49	60	49	43	33	61
225	58	58	55	52	54	50	43	47	58
250	59	58	56	57	56	51	44	48	60
275	59	57	55	60	55	52	44	46	61
300	59	55	56	58	57	52	44	46	61



BESS BUILDING







PROPOSED TRACKER LAYOUT Scale: 1:30





BOUNDARY SITE FENCE 30' OFFSET

ARRAY SUMMARY						
SYSTEM SIZE GROSS (kW AC):	45,448					
SYSTEM SIZE NET (kW AC): *	41,812					
OVER BUILD %	13.6%					
SYSTEM SIZE (kW DC):	46,394					
POI VOLTAGE (kV AC):	138					
SYSTEM VOLTAGE (VDC):	1,500					
DC/AC RATIO:	1.16					
INVERTER SPEC #:	SMA 4000 (3496 KVA @ 46°C)					
INVERTER TOTAL QUANTITY:	13					
MODULE TYPE:	CRYSTALLINE					
MODULE SPEC:	CANADIAN SOLAR BIHIKU					
MODULE WATTAGE (w)	435					
MODULE TOTAL QUANTITY:	106,652					
MODULES PER STRING:	28					
TOTAL # OF STRINGS:	3,809					
RACKING TYPE:	FTC					
AZIMUTH (deg):	180					
ROW SPACING (ft/m):	35.27/10.75					
RACKING ROTATION (deg):	+/- 62					
GROUND COVER RATIO: %	40.6%					
SITE LATITUDE:	33.020034					
SITE LONGITUDE:	-115.509479					
SITE ACCESS GATES:						
ACREAGE (FENCE):	225					
MV CABLE LENGTH (ft)						
* = .95PF, 3% AC LOSS. PL 401	ANT CONTROLLER LIMIT TO					

GENERAL NOTES:

- 1. PROPOSED ROAD SHALL BE 20' WIDE WITH ENGINEERING APPROVED AGGREGATE
- 2. PROPOSED FENCE SHALL BE 6' TALL WITH 1' OF 3 STRAND BARBED WIRE
- 3. PROPOSED SITE CONSTRUCTION ENTRANCE SHALL BE 30' WIDE WITH PEDESTRIAN ENTRANCE

INFO USED TO PREPARE THIS DWG:

- 1. SITE BOUNDARY: ORNI Owned.KMZ
- 2. TOPO SURVEY: EARTH POINT TOPO MAP (USGS QUADRANGLES)
- 3. WETLANDS: FWS WETLANDS AND RIPARIAN
- 4. FEMA: NATIONAL FLOOD HAZARD LAYER (FEMA)
- 5. AERIAL IMAGERY: VIA GOOGLE EARTH PRO

	Fast	Fas 224 Sui Gill	et Grid, LLC 5 E Germann Road te 101 pert, AZ 85297			
REV	DESCRIP	TION	DATE			
1	CHANGED TRACKERS	. ADDED ROADS	6 09/18/2020			
2		,				
3						
5						
6						
7						
9						
PV I	BRA PLANT + BE	WLEY SS40MW	/160MWh			
	NORTH BEST AVENUE BRAWLEY, CA 92227					
SEAL:		DATE: 09/18	/2020			
	PROJECT #: 200016.05					
DRAWN BY:						
CHECKED BY: EH						
SHEET	NAME:					
OVERALL SITE PLAN						
SHEET #: E-100						