

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 02/13)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-14-054 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	Eli Harland	43	916-327-1463

Recipient's Legal Name	Federal ID Number
Humboldt State University Sponsored Programs Foundation	94-6050071

Title of Project
Demonstrating a Community Microgrid at the Blue Lake Rancheria

Term and Amount	Start Date	End Date	Amount
	7/6/2015	3/30/2018	\$ 5,000,000

Business Meeting Information
 ARFVTP agreements under \$75K delegated to Executive Director.

Proposed Business Meeting Date	6/10/2015	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Eli Harland	Time Needed: 5 minutes	

Please select one list serve. EPIC (Electric Program Investment Charge)

Agenda Item Subject and Description

HUMBOLDT STATE UNIVERSITY. Proposed resolution adopting a Negative Declaration and approving Agreement EPC-14-054 with Humboldt State University Sponsored Programs Foundation for a \$5,000,000 grant to demonstrate a renewable-based community microgrid at the Blue Lake Rancheria located in Humboldt County, California. This microgrid will incorporate an existing biomass gasifier/fuel cell with a new solar photovoltaic array and battery energy storage to provide uninterrupted power for a nationally designated American Red Cross emergency center.

California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?
 Yes (skip to question 2) No (complete the following (PRC 21065 and 14 CCR 15378)):
 Explain why Agreement is not considered a "Project":
 Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because
2. If Agreement is considered a "Project" under CEQA:
 a) Agreement **IS** exempt. (Attach draft NOE)
 Statutory Exemption. List PRC and/or CCR section number: _____
 Categorical Exemption. List CCR section number: _____
 Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section:
- b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
 Check all that apply
 Initial Study Environmental Impact Report
 Negative Declaration Statement of Overriding Considerations
 Mitigated Negative Declaration

List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget
Blue Lake Rancheria, California	\$ 2,547,103
Idaho National Laboratory	\$ 400,208
GHD, Inc.	\$ 193,124
Kernen	\$ 118,827
Colburn	\$ 694,250
	\$
	\$
	\$
	\$

EXHIBIT A Scope of Work

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2	X	Design and Install the Blue Lake Rancheria Microgrid
3		Evaluation of Project Benefits
4		Technology/Knowledge Transfer Activities
5		Production Readiness Plan

B. Acronym/Term List

Acronym/Term	Meaning
BLR	Blue Lake Rancheria
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CHIL	Controller-Hardware-in-the-Loop
CPR	Critical Project Review
INL	Idaho National Laboratories
KW	Kilowatt
KWH	Kilowatt hour
MGMS	Microgrid Management System
PG&E	Pacific Gas & Electric Company
PV	Photovoltaic
RTDS	Real Time Digital Simulator
SCADA	Supervisory Control and Data Acquisition
SERC	Schatz Energy Research Center
TAC	Technical Advisory Committee

I. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES

A. Purpose of Agreement

The purpose of this Agreement is to fund a project by Humboldt State University Sponsored Programs Foundation/Schatz Energy Research Center to build a microgrid for Blue Lake Rancheria (BLR), a Native American Tribe located in Northwestern California. The project will integrate three sources of energy generation with grid-scale energy storage and controllable loads into a microgrid capable of indefinitely islanding and providing power during a disaster or prolonged grid outage.

B. Problem/ Solution Statement

Problem

¹ Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

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Scope of Work

Humboldt County is a natural disaster-prone region of California with a majority of power generation assets in the coastal tsunami zone and constrained transmission from the greater California electric grid. Energy resiliency is a serious concern to the local community and has been a focus in recent community-wide energy and hazard mitigation planning efforts (Zoellick et al., 2011; County of Humboldt, 2014). In these planning efforts, the community has emphasized the need to expand sources of backup energy generation at critical facilities like hospitals, disaster shelters, and police and fire stations.

Microgrids with integrated renewable energy and energy storage are an alternative to stand alone diesel generation for providing emergency power. Fuel supplies can be cut off in a disaster, but most renewable energy resources remain viable. Microgrids capable of reliably integrating intermittent renewables are an emerging technology and require sophisticated control systems. While microgrid controllers have made it past the research and development phase, they need to be demonstrated at scale to prove their capabilities and move toward commercialization.

Solution

The Recipient will design, build, and demonstrate a microgrid that integrates two sources of renewable generation, biomass gasifier/fuel cell and solar photovoltaic (PV), with two diesel generators and dispatchable demand. The microgrid will be capable of serving 42 percent of annual load with renewable resources and islanding for an indefinite period of time using 80-100 percent renewable power.

C. Goals and Objectives of the Agreement

Agreement Goals

The goal of this Agreement is to design, build, and demonstrate a renewable and self-sustaining microgrid at the Blue Lake Rancheria.

Ratepayer Benefits:²

This Agreement will result in the ratepayer benefits of greater electricity reliability, lower costs, and increased safety. The BLR Microgrid will be capable of islanding, providing greater electricity reliability to BLR and will make the overall electric grid more flexible and less constrained during peak periods. The Agreement will result in multiple forms of cost savings to the BLR: the microgrid will offset electricity purchases through renewable generation, it will engage in economic dispatch of the battery system, and BLR will convert to a primary voltage customer giving access to an electric rate schedule with more favorable pricing. Finally, the Agreement will result in increased safety by providing an indefinite power generation capability to a nationally recognized, Red Cross emergency shelter in a natural disaster-prone region of California.

Technological Advancement and Breakthroughs:³

² California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF).

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This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by demonstrating the technical feasibility of integrating both established and emerging sources of renewable energy generation with battery storage, conventional diesel generators, and dispatchable demand into a single microgrid at the scale of a small commercial campus.

The Schatz Energy Research Center (SERC), BLR, and Pacific Gas & Electric Company (PG&E) are partners to an existing Energy Commission-funded Agreement (#PIR-12-022) that is building a first-of-its-kind biomass energy system at the BLR. The system will consist of a biomass gasifier that produces a hydrogen rich syngas, which is purified and fuels a 175 kilowatt (kW) hydrogen fuel cell. Under this Agreement, the integration of the biomass gasifier/fuel cell system with a 409kW AC PV array, 800 kilowatt hours (kWh) of battery storage and controllable demand will be a completely original microgrid configuration. The microgrid will require solutions to unique challenges posed by the need to maintain stability and reliability under the full range of operational circumstances that could occur during islanding and grid-connected operating conditions.

Agreement Objectives

The objectives of this Agreement are to:

- Install a microgrid capable of powering the nationally recognized American Red Cross disaster shelter on BLR land in times of emergency;
- Integrate renewable PV and biomass gasifier/fuel cell, battery storage, diesel generation, and controllable demand into the microgrid;
- Achieve renewable energy generation exceeding 40 percent of annual energy production;
- Demonstrate the ability to island and supply uninterrupted electric power for at least 7 days during a real or simulated grid outage;
- Demonstrate the ability of the microgrid to participate in one or more PG&E demand response programs;
- Achieve a reduction in annual electrical energy consumption from the grid of at least 680MWh over year 1 of operation;
- Achieve at least 25 percent energy cost savings over year 1 of operation;
- Achieve a reduction in annual greenhouse gas emissions of at least 195 metric tons CO₂e over year 1 of operation;
- Make the knowledge gained from this Agreement available to a broad audience;
- Develop a plan for commercializing the microgrid technologies and strategies demonstrated under this Agreement.

II. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below

³ California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

EXHIBIT A Scope of Work

by the dates listed in the **Project Schedule (Part V)**. Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

The Recipient shall:

For products that require a draft version

- Submit all draft products to the CAM for review and comment in accordance with the Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- Submit the final product to the CAM once agreement has been reached on the draft. The CAM will provide written approval of the final product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- If the CAM determines that the final product does not sufficiently incorporate his/her comments, submit the revised product to the CAM within 10 days of notice by the CAM, unless the CAM specifies a longer time period.

For products that require a final version only

- Submit the product to the CAM for approval.
- If the CAM determines that the product requires revision, submit the revised product to the CAM within 10 days of notice by the CAM, unless the CAM specifies a longer time period.

For all products

- Submit all data and documents required as products in accordance with the following Instructions for Submitting Electronic Files and Developing Software:

- **Electronic File Format**

Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the Energy Commission’s software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

The following describes the accepted formats for electronic data and documents provided to the Energy Commission as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
- Text documents will be in MS Word file format, version 2007 or later.
- Documents intended for public distribution will be in PDF file format. The Recipient must also provide the native Microsoft file format.
- Project management documents will be in Microsoft Project file format, version 2007 or later.

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- **Software Application Development**

Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:

- Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
- Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
- Visual Studio.NET (version 2008 and up). Recommend 2010.
- C# Programming Language with Presentation (UI), Business Object and Data Layers.
- SQL (Structured Query Language).
- Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
- Microsoft SQL Reporting Services. Recommend 2008 R2.
- XML (external interfaces).

Any exceptions to the Electronic File Format requirements above must be approved in writing by the CAM. The CAM will consult with the Energy Commission's Information Technology Services Branch to determine whether the exceptions are allowable.

MEETINGS

Subtask 1.2 Kick-off Meeting

The goal of this subtask is to establish the lines of communication and procedures for implementing this Agreement.

The Recipient shall:

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other Energy Commission staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:

- Terms and conditions of the Agreement;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and
- Any other relevant topics.

The technical portion of the meeting will include discussion of the following:

EXHIBIT A

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- The CAM's expectations for accomplishing tasks described in the Scope of Work;
 - An updated Project Schedule;
 - Technical products (subtask 1.1);
 - Progress reports and invoices (subtask 1.5);
 - Final Report (subtask 1.6);
 - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
 - Any other relevant topics.
- Provide an *Updated Project Schedule*, *List of Match Funds*, and *List of Permits*, as needed to reflect any changes in the documents.

The CAM shall:

- Designate the date and location of the meeting.
- Send the Recipient a *Kick-off Meeting Agenda*.

Recipient Products:

- Updated Project Schedule (*if applicable*)
- Updated List of Match Funds (*if applicable*)
- Updated List of Permits (*if applicable*)

CAM Product:

- Kick-off Meeting Agenda

Subtask 1.3 Critical Project Review (CPR) Meetings

The goal of this subtask is to determine if the project should continue to receive Energy Commission funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the Energy Commission and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient, and may include the CAO and any other individuals selected by the CAM to provide support to the Energy Commission.

CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR meetings generally take place at the Energy Commission, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

The Recipient shall:

- Prepare a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).

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- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and a *List of Expected CPR Participants* in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a *Schedule for Providing a Progress Determination* on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

Recipient Products:

- CPR Report(s)
- Task Products (draft and/or final as specified in the task)

CAM Products:

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- Progress Determination

Subtask 1.4 Final Meeting

The goal of this subtask is to complete the closeout of this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
 - Disposition of any state-owned equipment.
 - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented

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technology.

- The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
 - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
 - "Surviving" Agreement provisions such as repayment provisions and confidential products.
 - Final invoicing and release of retention.
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
 - Prepare a *Schedule for Completing Agreement Closeout Activities*.
 - Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written Products

REPORTS AND INVOICES

Subtask 1.5 Progress Reports and Invoices

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

The Recipient shall:

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
 - Summarize all Agreement activities conducted by the Recipient for the preceding month, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
 - Provide a synopsis of the project progress, including accomplishments, problems, milestones, products, schedule, fiscal status, and any evidence of progress such as photographs.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions. In addition, each invoice must document and verify:
 - Energy Commission funds received by California-based entities;
 - Energy Commission funds spent in California (*if applicable*); and
 - Match fund expenditures.

Products:

- Progress Reports
- Invoices

Subtask 1.6 Final Report

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The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review and approve the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use a Style Manual provided by the CAM.

Subtask 1.6.1 Final Report Outline

The Recipient shall:

- Prepare a *Final Report Outline* in accordance with the *Style Manual* provided by the CAM.
- Submit a draft of the outline to the CAM for review and comment.
- Once agreement has been reached on the draft, submit the final outline to the CAM. The CAM will provide written approval of the final outline within 10 days of receipt.

Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

- Style Manual

Subtask 1.6.2 Final Report

The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline and the Style Manual provided by the CAM.
- Submit a draft of the report to the CAM for review and comment. Once agreement on the draft report has been reached, the CAM will forward the electronic version for Energy Commission internal approval. Once the CAM receives approval, he/she will provide written approval to the Recipient.
- Submit one bound copy of the Final Report to the CAM.

Products:

- Final Report (draft and final)

MATCH FUNDS, PERMITS, AND SUBCONTRACTS

Subtask 1.7 Match Funds

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. The Recipient may only spend match funds during the Agreement term, either concurrently or prior to the use of Energy Commission funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

The Recipient shall:

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- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state this in the letter.

If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter:

- A list of the match funds that identifies:
 - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
 - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
- A copy of a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

Products:

- Match Funds Status Letter
- Supplemental Match Funds Notification Letter *(if applicable)*
- Match Funds Reduction Notification Letter *(if applicable)*

Subtask 1.8 Permits

The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
 - The schedule the Recipient will follow in applying for and obtaining the permits.

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The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.

- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

Products:

- Permit Status Letter
- Updated List of Permits (*if applicable*)
- Updated Schedule for Acquiring Permits (*if applicable*)
- Copy of each Approved Permit (*if applicable*)

Subtask 1.9 Subcontracts

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

The Recipient shall:

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.
- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.
- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of the executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

Products:

- Subcontracts (*draft if required by the CAM*)

TECHNICAL ADVISORY COMMITTEE

Subtask 1.10 Technical Advisory Committee (TAC)

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

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- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
 - Technical area expertise;
 - Knowledge of market applications; or
 - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

The Recipient shall:

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

Products:

- List of Potential TAC Members
- List of TAC Members
- Documentation of TAC Member Commitment

Subtask 1.11 TAC Meetings

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

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The Recipient shall:

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

Products:

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

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III. TECHNICAL TASKS

*Products that require a draft version are indicated by marking “(draft and final)” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. **Subtask 1.1 (Products)** describes the procedure for submitting products to the CAM.*

TASK 2 DESIGN AND INSTALL THE BLUE LAKE RANCHERIA MICROGRID

The goal of this task is to design, install, and commission the microgrid, as well as monitor its performance for the first year of operation.

SUBTASK 2.1 Design, Engineering, and Planning

The goal of this subtask is to conduct all design, engineering, and planning activities necessary to finalize the microgrid design and prepare for construction.

The Recipient shall:

- Design and adapt the Supervisory Control and Data Acquisition (SCADA)/Microgrid controller to the specific project circumstances.
- Conduct an electrical study and design the power systems and protection scheme for the following subsystems:
 - grid storage battery system,
 - biomass gasifier/fuel cell power system,
 - contactors,
 - reclosers,
 - switchgear,
 - distribution circuits,
 - transformers,
 - and PV array.
- Conduct an electrical study to assess system stability and dynamic response during islanding circumstances.
- Design and engineer the integration of the 400kW/800kWh battery storage system (siting and interconnection).
- Design and engineer the interconnection of the 409kW AC PV array.
- Design and engineer the smart inverters (sizing and interconnection of inverters for battery and PV systems).
- Design and engineer other power electronics (switchgear, contactors, and reclosers).
- Design and engineer the civil works.
- Design and engineer structural works (anchors, foundations, etc.).
- Integrate engineering designs into an *Engineering Plan Set* (50%, 90% and 100% iterations) of the full system, including SCADA/Microgrid controller systems, power electronics systems, civil works, and structural works and provide to CAM.
- Develop and provide *Engineering Specifications* (50%, 90% and 100% iterations) for the full microgrid system.
- Develop and provide *Engineering Cost Estimates* (50%, 90% and 100% iterations) for the full microgrid system.
- Conduct a cyber security assessment.
- Conduct an environmental study for use in permitting (see Task 1 for permitting).

EXHIBIT A

Scope of Work

- Prepare and provide a *System Ownership Application* and apply to the California Public Utilities Commission for BLR to take ownership of PG&E transformers and a small amount of the local 12kV distribution circuit.
- Engage with PG&E in an interconnection study for the microgrid.
- Complete *Design and Engineering Memo* that summarizes the steps taken and lessons learned to finalize the microgrid design and prepare for construction, including final design, engineering, and planning activities.

Products

The Recipient shall provide the following:

- Design and Engineering Memo
- Engineering Plan Set
- Engineering Specifications
- Engineering Cost Estimates
- System Ownership Application

SUBTASK 2.2 System Procurement and Testing

The goal of this subtask is to procure all equipment needed for the microgrid and conduct testing on the Microgrid Management System (MGMS).

The Recipient shall:

- Procure the battery storage system.
- Procure the smart inverters.
- Procure the power electronic equipment (contactors, reclosers, and switchgear).
- Procure the PV Array.
- Procure the MGMS and related communications and monitoring equipment.
- Prepare and provide an *Equipment Procurement Memo* which will describe steps to acquire and select equipment.
- Conduct MGMS unit testing.
- Conduct MGMS simulation in the Real Time Digital Simulator (RTDS[®]).
- Develop microgrid simulation system and interface for use in functionality and integration testing of the MGMS.
- Identify critical interfaces of MGMS and site controllers and perform controller hardware in the loop (CHIL) testing as a de-risking procedure using RTDS[®].
- Conduct functionality testing of MGMS using RTDS[®].
- Conduct integration testing of MGMS using RTDS[®].
- Conduct performance assessment of MGMS deployment.
- Prepare and provide a *Microgrid Controller Testing and Compliance Assurance Report*, which will detail the testing of the MGMS and results of the performance assessment of the device when deployed at the Blue Lake Rancheria.
- Participate in CPR per Subtask 1.3.

Products:

- Equipment Procurement Memo
- Microgrid Controller Testing and Compliance Assurance Report
- CPR Report

EXHIBIT A

Scope of Work

SUBTASK 2.3 System Interfacing

The goal of this subtask is to coordinate and specify the communications and control protocols for all microgrid sub-systems.

The Recipient shall:

- Communicate protocols and coordinate interfacing between all microgrid systems and the MGMS. Systems included in this activity are:
 - battery storage system
 - PV array
 - biomass gasifier/fuel cell power system
 - 1 MW Diesel backup generator
 - controllable loads
 - power electronic equipment (switchgears and reclosers)
- Prepare and provide the *Microgrid System Interfacing Memo*, which will provide a description of each interface in the microgrid and describe how the MGMS coordinates between all sub-systems

Products:

- Microgrid System Interfacing Memo

SUBTASK 2.4 Construction / Installation

The goal of this subtask is to construct and install the microgrid.

The Recipient shall:

- Manage construction of the microgrid.
- Coordinate work between vendors.
- Coordinate access to the facility.
- Conduct site work: grading, drainage, trenching, earthwork, concrete work.
- Construct addition to casino electrical room.
- Install PV array.
- Install battery storage system.
- Install smart inverters.
- Install power electronic equipment (switchgears, contactors, and reclosers).
- Install SCADA equipment at generators, battery storage system, and controllable load panels.
- Install electric panel near control room for communications wiring, network switches, routers, and other peripherals.
- Install main supervisory and control computers in control room.
- Install front-end processors.
- Prepare and provide *Construction Activity Memo*, which will document challenges encountered and variations adopted during the construction process.

Products:

- Construction Activity Memo

SUBTASK 2.5 Commissioning

The goal of this subtask is to commission the microgrid.

EXHIBIT A

Scope of Work

The Recipient shall:

- Conduct site acceptance testing of the PV array.
- Conduct site acceptance testing of the battery storage system.
- Conduct site acceptance testing of the controllable demand systems.
- Conduct site acceptance testing of the MGMS and related SCADA sub-systems.
- Prepare and provide *Commissioning Memo*, which will report on the results of the site acceptance testing and confirm that the system has been successfully put into operation.

Products:

- Commissioning Memo

SUBTASK 2.6 Data Collection & Analysis

The goal of this subtask is to monitor the operation of the microgrid for one (1) year and assess its performance.

The Recipient shall:

- Operate the microgrid system for one (1) year.
- Periodically download operational data from the microgrid system. Data downloads will occur, at a minimum, once at commissioning and quarterly thereafter as well as immediately after any islanding event.
- Analyze the data to ensure that the system is functioning correctly.
- Prepare and provide *System Observation Memo*, which will report on the results of monitoring system over the first year of operation.
- Participate in CPR per Subtask 1.3.

Products:

- System Observation Memo
- CPR Report

TASK 3 EVALUATION OF PROJECT BENEFITS

The goal of this task is to report the benefits resulting from this project.

The Recipient shall:

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:
 - For Product Development Projects and Project Demonstrations:
 - Published documents, including date, title, and periodical name.
 - Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
 - Greenhouse gas and criteria emissions reductions.

EXHIBIT A

Scope of Work

- Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
 - Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
 - A discussion of project product downloads from websites, and publications in technical journals.
 - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
 - Additional Information for Product Development Projects:
 - Outcome of product development efforts, such copyrights and license agreements.
 - Units sold or projected to be sold in California and outside of California.
 - Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.
 - Investment dollars/follow-on private funding as a result of Energy Commission funding.
 - Patent numbers and applications, along with dates and brief descriptions.
 - Additional Information for Product Demonstrations:
 - Outcome of demonstrations and status of technology.
 - Number of similar installations.
 - Jobs created/retained as a result of the Agreement.
-
- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

Products:

- Kick-off Meeting Benefits Questionnaire
- Mid-term Benefits Questionnaire
- Final Meeting Benefits Questionnaire

TASK 4 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

The Recipient shall:

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare a *Technology/Knowledge Transfer Plan* that includes:
 - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end

EXHIBIT A

Scope of Work

users, utilities, regulatory agencies, and others.

- A description of the intended use(s) for and users of the project results.
- Published documents, including date, title, and periodical name.
- Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
- A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
- The number of website downloads or public requests for project results.
- Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop on the results of the project.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

Products:

- Initial Fact Sheet (draft and final)
- Final Project Fact Sheet (draft and final)
- Presentation Materials (draft and final)
- Technology/Knowledge Transfer Plan (draft and final)
- Technology/Knowledge Transfer Report (draft and final)

TASK 5 PRODUCTION READINESS PLAN

The goal of this task is to determine the steps that will lead to the manufacturing of technologies developed in this project or to the commercialization of the project's results.

The Recipient shall:

- Prepare a *Production Readiness Plan*. The degree of detail in the plan should be proportional to the complexity of producing or commercializing the proposed product, and to its state of development. As appropriate, the plan will discuss the following:
 - Critical production processes, equipment, facilities, personnel resources, and support systems needed to produce a commercially viable product.
 - Internal manufacturing facilities, supplier technologies, capacity constraints imposed by the design under consideration, design-critical elements, and the use of hazardous or non-recyclable materials. The product manufacturing effort may include "proof of production processes."
 - The estimated cost of production.
 - The expected investment threshold needed to launch the commercial product.
 - An implementation plan to ramp up to full production.
 - The outcome of product development efforts, such as copyrights and license agreements.
 - Patent numbers and applications, along with dates and brief descriptions.
 - Other areas as determined by the CAM.

EXHIBIT A Scope of Work

Products:

- Production Readiness Plan (draft and final)

IV. PROJECT SCHEDULE

See the attached Excel spreadsheet.

V. REFERENCES

County of Humboldt (2014). "Local Hazard Mitigation Plan."

URL: <http://www.humboldt.gov/506/Local-Hazard-Mitigation>

Redwood Coast Energy Authority (RCEA), Schatz Energy Research Center. (2013). "RePower Humboldt: A Strategic Plan for Renewable Energy Security and Prosperity."

URL: http://www.redwoodenergy.org/images/RESCO/RePower_Humboldt_Strategic_Plan_FINAL_2013-04-17.pdf

STATE OF CALIFORNIA
STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: HUMBOLDT STATE UNIVERSITY

WHEREAS, California Energy Commission staff proposes that the Energy Commission enter into a \$5,000,000 Electric Program Investment Charge (EPIC) grant agreement with the Humboldt State University Sponsored Programs Foundation, Schatz Energy Research Center to build a microgrid at the Blue Lake Rancheria (BLR) at 428 Chartin Road, Blue Lake, CA 95525; and

WHEREAS, BLR is a federally recognized Native-American Tribe located in Blue Lake, Humboldt County, California; and the project would be constructed on land that is self-governed by BLR; and pursuant to BLR's Tribal Ordinance, BLR completed an environmental assessment of the possible impacts from the project; and

WHEREAS, Energy Commission staff completed an Initial Study and Negative Declaration regarding potential off-site environmental impacts from the project; Energy Commission staff incorporated BLR's environmental assessment into the Initial Study and Negative Declaration; therefore

RESOLVED, that the Energy Commission adopts the Negative Declaration for the project entitled "Demonstrating a Secure, Reliable, Low-Carbon Community Microgrid at the Blue Lake Rancheria"; and

RESOLVED, that the Energy Commission approves Agreement EPC-14-054 from PON-14-301 with Humboldt State University Sponsored Programs Foundation for a \$5,000,000 grant to demonstrate a renewable and self-sustaining community microgrid at the Blue Lake Rancheria located in northwestern California. This microgrid will provide support for a designated American Red Cross emergency center; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on June 10, 2015.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Harriet Kallemeyn
Secretariat

California Energy Commission
STAFF REPORT

**INITIAL STUDY / PROPOSED
NEGATIVE DECLARATION FOR THE
BLUE LAKE RANCHERIA MICROGRID
PROJECT**

Proposed Electric Program Investment Charge (EPIC) Grant



CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

MAY 2015

CEC-500-2015-029

CALIFORNIA ENERGY COMMISSION

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DISCLAIMER

Staff members of the California Energy Commission prepared this report. As such, it does not necessarily represent the views of the Energy Commission, its employees, or the State of California. The Energy Commission, the State of California, its employees, contractors and subcontractors make no warrant, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the uses of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Energy Commission nor has the Commission passed upon the accuracy or adequacy of the information in this report.

ACKNOWLEDGEMENTS

The authors would like to thank the following Energy Commission staff for their contributions to this report:

Mike Conway

Eli Harland

Shahab Khoshmashrab

Matt Layton

Geoff Lesh

Marylou Taylor

ABSTRACT

California Energy Commission (Energy Commission) staff proposes that the Energy Commission enter into a \$5 million Electric Program Investment Charge (EPIC) grant agreement with the Schatz Energy Research Center of the Humboldt State University Sponsored Programs Foundation to build a microgrid at the Blue Lake Rancheria. The EPIC Program administered by the Energy Commission provides funding for applied research and development, technology demonstration and deployment, and market facilitation for clean energy technologies and approaches for the benefit of ratepayers of Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company through a competitive grant solicitation process.

Blue Lake Rancheria is a federally recognized Native-American Tribe located in Blue Lake, Humboldt County, California. The microgrid project would be constructed on land that is self-governed by the Blue Lake Rancheria. Blue Lake Rancheria conducted an environmental review according to their Environmental Policy Ordinance 02-2000, which requires a detailed report on the environmental impacts of the proposed action that is in substantial compliance with the requirements set out in the National Environmental Policy Act (NEPA). On March 31, 2015, Blue Lake Rancheria approved their Environmental Assessment (EA) of the proposed project and made a Finding of No Significant Impact (FONSI) based on the information in the EA.

Because the Energy Commission proposes to fund the microgrid project, an activity that may cause a direct or indirect physical change in the environment, the Commission must comply with the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) Energy Commission staff prepared an Initial Study that evaluates the potential effects to the environment located outside the tribal land. As described in the Initial Study, Energy Commission staff determines that the proposed project could not have a significant effect on the environment. Therefore, staff has prepared and recommends that the Energy Commission adopt a Negative Declaration for this project.

Keywords: Energy Commission, Electric Program Investment Charge, EPIC, microgrid, solar photovoltaic (PV), grant, technology, California Environmental Quality Act, CEQA, Negative Declaration, Initial Study, National Environmental Policy Act, NEPA, Environmental Assessment, Finding of No Significant Impact (FONSI), Blue Lake Rancheria

Please use the following citation for this report:

Koch, Andrea; John Hope. 2015. *Initial Study/Proposed Negative Declaration for the Blue Lake Rancheria Microgrid Project: Proposed Electric Program Investment Charge (EPIC) Grant*. California Energy Commission. Publication Number: CEC-500-2015-029.

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(CEQA) COMPLIANCE FORM
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PROPOSED NEGATIVE DECLARATION

PROJECT:

Blue Lake Rancheria Microgrid Project – EPIC Grant
428 Chartin Road
Blue Lake, CA 95525

LEAD AGENCY:

California Energy Commission

AVAILABILITY OF DOCUMENTS:

The Notice of Intent to adopt the proposed Negative Declaration has been posted on site, in three locations at 428 Chartin Road, Blue Lake, California 95525 and off site at the Blue Lake Post Office, 411 1st Street, Blue Lake, CA 95525, and at the County of Humboldt Clerk-Recorder, 825 5th Street, Eureka, California 95501.

This Energy Commission Initial Study and proposed Negative Declaration are available at the following locations:

- Online, at www.energy.ca.gov/research/epic/environmental_review_documents.html
- At the California Energy Commission Library, located at 1516 Ninth Street, Sacramento, California 95814, Monday through Friday, between the hours of 8:30 AM and 4:30 PM
- At the Blue Lake Rancheria Library, located at 428 Chartin Road Road, Blue Lake (Humboldt County), California 95525, Monday through Friday, between the hours of 8:30 AM and 4:30 PM

PROJECT DESCRIPTION:

California Energy Commission staff proposes that the Energy Commission enter into a \$5 million Electric Program Investment Charge (EPIC) grant agreement with the Schatz Energy Research Center of the Humboldt State University Sponsored Programs Foundation to build a microgrid at the Blue Lake Rancheria (BLR) at 428 Chartin Road, Blue Lake, CA 95525. BLR is a federally recognized Native-American Tribe located in Blue Lake, Humboldt County, California. The project would be constructed on land that is self-governed by BLR and is subject to BLR's Tribal Ordinance, including environmental review.



Location of Blue Lake Rancheria Microgrid Project (Source: Google Maps)

Activities associated with the project would include grading a 1.8-acre parcel for a 500 kilowatt (kW) solar photovoltaic (PV) system, a 625 square-foot concrete pad for a battery energy storage system, and digging an 800-foot long trench for conduit and electrical wires to connect the PV system and battery system. More specifically, the project includes the following activities (BLR 2015a):

- Site grading of 1.8-acre site for an approximate 500 kW ground mounted solar array;
- Paving for solar array footings (approximately 20 footings at 3 square feet each);
- Approximate 625 square-foot concrete pad for containment and enclosure for 800 kWh battery system;
- Approximate 800 linear feet of underground conduit utility and power connections between the solar array and battery system and existing onsite infrastructure;
- Approximate 100 square-foot concrete pad for ground-mounted recloser circuit breaker and associated equipment;
- New and modified electrical equipment at existing structures in BLR casino, hotel, and tribal government office;
- Purchase and transition of control of certain Pacific Gas & Electric (PG&E) electrical infrastructure from the main transformer at Chartin Road to the casino, hotel, and tribal office buildings; and
- Potential expansion of the solar array and/or battery storage banks to achieve an approximate 1 megawatt (MW) solar array and an approximate 1,600 kWh battery system.

The EPIC Program administered by the California Energy Commission provides funding for applied research and development, technology demonstration and deployment, and market facilitation for clean energy technologies and approaches for the benefit of ratepayers of Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company through a competitive grant solicitation process.

The California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) applies to discretionary projects proposed to be carried out or approved by public agencies. The definition of a “project” includes an activity that may cause a direct or indirect physical change in the environment which is supported in whole or in part through a grant from a public agency (Pub. Resources Code, § 21065). The CEQA Guidelines define a “public agency” as any state agency, board, or commission and any local or regional agency (Cal. Code Regs., tit. 14, § 15379). While CEQA applies to the Energy Commission, a state agency which proposes to fund the Blue Lake Rancheria Microgrid Project, it does not apply to the tribe.

To comply with the Tribal Ordinance, BLR conducted an environmental review according to their Environmental Policy Ordinance 02-2000. The ordinance requires the tribe’s assessment to include a:

“...detailed report on the environmental impacts of the proposed action which is in substantial compliance with the requirements set out in the National Environmental Policy Act [NEPA] (42 U.S.C. §4321, et seq.), the implementing regulations and guidance adopted by the Council on Environmental Quality, and the implementing regulations and guidance adopted by the Bureau of Indian Affairs, as they may be amended from time to time.”

On March 31, 2015, BLR approved their Environmental Assessment (EA) of the proposed project and made a Finding of No Significant Impact (FONSI) based on the information in the EA. The EA/FONSI is included in Appendix A of this Initial Study.

Because BLR completed an analysis according to their own ordinance of the potential effects of the project on their own sovereign land, Energy Commission staff prepared an Initial Study that evaluates the potential effects to the environment located outside the tribal land. The discussion and analysis provided in this Initial Study use the term “offsite” to indicate areas outside tribal land. Based on Energy Commission staff’s review, staff concluded that for the following environmental topic areas, the project would not result in any effects at offsite locations and/or could result in effects solely on tribal land and already considered in the EA/FONSI.

- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Geology / Soils
- Greenhouse Gas Emissions
- Land Use / Planning

- Mineral Resources
- Population / Housing
- Public Services
- Recreation
- Utilities / Service Systems

FINDINGS:

This Initial Study found no significant offsite impacts to the environment from the proposed Blue Lake Rancheria Microgrid Project. No mitigation measures are required.

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

For

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

Visually, the area is predominantly rural in character. The hotel and casino associated with the Blue Lake Rancheria dominate the vertical viewscape in the project area. Wastewater treatment ponds, open grasslands, and trees dominate views of the remainder of surrounding areas. Views of homes and small businesses in the Blue Lake community are visible in peripheral views. State Route (SR) 299 traverses east-west approximately 500 feet to the north of the project site. Arcata-Eureka Airport and Murray Field, the closest airports to the project site, are located approximately 8 miles to the northwest and southwest, respectively.

DISCUSSION

Would the project:

a) Have a substantial adverse effect on a scenic vista?

The site is located adjacent to developed, disturbed areas. Although located in a rural area of Humboldt County, there are no visual features in the project area consisting of a scenic vista or unique scenic resource. The project would not have a substantial adverse effect on a scenic vista.

NO IMPACT

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project site is located within viewing distance of SR 299. SR 299 in the project area is identified as an Eligible State Scenic Highway – Not Officially Designated

(CALTRANS 2015a). The project site is currently a grass area and contains no significant scenic resource. The project would not damage a scenic resource within view of a state scenic highway.

NO IMPACT

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The project site is currently a grass area and is visible offsite from SR 299 which is located approximately 500 feet north and 20 feet above the project site. The majority of offsite views of the project site would originate from travelers along SR 299. Approximately 10,000 vehicles on SR 299 pass by the intersection with Blue Lake Road on an average daily basis (CALTRANS 2015b).

As shown in the three views from SR 299 below, the Blue Lake Rancheria Casino and Hotel dominates the central view, particularly when looking to the west. Views to the south and east are obscured by vegetation and other structures.



View towards project site looking east-southeast from State Route 299 (Source: Google Maps)



View towards project site looking south from State Route 299 (Source: Google Maps)



View towards project site looking west from State Route 299 (Source: Google Maps)

Construction of the proposed solar facility on the existing grass area would change the view of a relatively small area (approximately 1.8 acres) as viewed from SR 299 and in relation to existing structures and buildings associated with the Blue Lake Rancheria. The proposed solar facility would not substantially degrade the existing visual character or quality of the project area as viewed from offsite.

Impacts would be **LESS THAN SIGNIFICANT**.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Solar panels manufactured today predominantly use a glass pane to cover the photovoltaic panel. The glass has the potential to reflect sunlight thereby creating glare in the project area. The proposed solar facility would be designed so that the solar panels are in a fixed position facing to the south with the panels themselves fixed to their bases on the ground. The solar panels would not move to track the sun. Based on this design, the front of the solar panels would face away from travelers along SR 299. Therefore, the solar facility would not create glare that could affect daytime views from offsite.

Impacts would be **LESS THAN SIGNIFICANT**.

MITIGATION MEASURES

None

CONCLUSION

The proposed Blue Lake Rancheria Project would not result in significant, adverse visual or aesthetic impacts.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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III. Air Quality.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The project site would be located in the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD). The District's responsibilities include the control of air pollution from stationary sources and fugitive emissions from construction activities (NCUAQMD 2015a). The air quality in Humboldt County is considered to be "in attainment" for state and federal ambient air quality standards except for California's 24-hour particulate matter (PM₁₀) standard. Mobile sources such as trucks, automobiles and construction equipment, and their air pollutant emissions, are under the jurisdiction of the California Air Resources Board (ARB).

The two air pollutants of greatest concern in the District are ozone and particulate matter. Humboldt County's sunny climate, pollution-trapping mountains and valleys, along with growing population, contribute to these pollutants' levels. Ozone is an invisible secondary pollutant created by a chemical reaction that involves two precursor air pollutants (nitrogen oxides and reactive hydrocarbons) and sunlight. Ozone is a powerful respiratory irritant that can cause coughing, shortness of breath, headaches, fatigue and lung damage, especially among children, the elderly, the ill and people who exercise outdoors. Particulate matter contains fine mineral, metal, soot, smoke, and/or dust particles suspended in the air. Sources of particulate matter in the project area include on-road and off-road vehicles (e.g., engine exhaust, dust from unpaved roads), open burning of vegetation, residential wood stoves, and stationary industrial sources (e.g., factories). For health reasons, the air agencies are most concerned with particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}, respectively). Particles of these sizes can permanently lodge in the deepest, most sensitive areas of the lungs and cause respiratory and other health problems (NCUAQMD 2015b).

Construction activities would include the operation of a ready mix truck (1 to 2 days total for battery storage system foundation), skid steer, mini excavator, grader, and water truck.

DISCUSSION

Would the project:

- a) **Conflict with or obstruct implementation of the applicable air quality plan?**
- b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

Construction activities and operation of the proposed project would not violate the air quality plan of the NCUAQMD. In addition, there would be no activities associated with construction or operation of the proposed project that would violate an air quality standard or contribute to an existing air quality violation. All construction activities and equipment (i.e., ready mix truck, skid steer, mini excavator, grader, water truck) would be required to comply with all rules and regulations of the NCUAQMD and the ARB including for open burning (e.g., vegetation clearing) and toxic air contaminants (e.g., operation of construction equipment).

Conflict with or obstruct implementation of the applicable air quality plan: **NO IMPACT**

Violate any air quality standard or contribute substantially to an existing or projected air quality violation: Impacts would be **LESS THAN SIGNIFICANT**.

- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

The area of disturbance on the project site would be of relatively small size, less than 2 acres, and construction activities would be limited to a 4-month period. As mentioned previously, the NCUAQMD is in non-attainment for California's 24-hour PM₁₀ standard. Site grading would create particulate matter (i.e., dust). As such, construction activities would have the potential to increase the emissions of an air pollutant for which the project region is in non-attainment. The project proponent has identified that a watering truck would be used onsite to control fugitive dust on a daily basis, or more often as needed, unless it is raining (GANION 2015a). (See Appendix B.) With use of the watering truck during site grading, emissions of particulate matter (PM₁₀ and PM_{2.5}) would be reduced and would not considerably increase the amount of this air pollutant in the project area.

Impacts would be **LESS THAN SIGNIFICANT**.

- d) **Expose sensitive receptors to substantial pollutant concentrations?**

The area of disturbance on the project site would be of relatively small size, less than 2 acres, and construction activities would be limited to a 4-month period. Activities associated with the proposed project that have the potential to create the most pollutants (e.g., dust) would occur during site grading, which could affect sensitive receptors. However, construction activities would include the operation of a water truck which would substantially reduce the amount of dust created. With use of the water

truck, the proposed project would not have the potential to expose offsite receptors to substantial pollutant concentrations.

Impacts would be **LESS THAN SIGNIFICANT**.

e) Create objectionable odors affecting a substantial number of people?

The project would not involve any activities or sources that create objectionable odors.

NO IMPACT

MITIGATION MEASURES

None

CONCLUSION

The proposed Blue Lake Rancheria Project would not result in significant, adverse impacts to air quality.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
residing or working in the project area?				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized area or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The project is not located on an identified hazardous waste site. It is located approximately 350 feet from the Blue Lake Rancheria Hotel and Casino.

DISCUSSION

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The lithium battery elements that are combined to make up the battery storage system are similar to consumer-grade lithium ion batteries. They are small, self-contained, and semi-sealed, making leaks highly unlikely. The lithium contained in lithium ion batteries is contained in an ionic form within the electrolyte, making it less flammable than actual lithium metal, and the metals in lithium ion batteries - cobalt, copper, nickel and iron - are considered safe for landfills or incinerators.

Furthermore, as stated in their submitted CEQA Compliance Form, the tribe has adopted the State of California's Uniform Building Code (UBC) and International Building Code (IBC) and would issue the project a building permit ensuring compliance with these codes (BLR 2015b). (See Appendix C for the tribe's submitted CEQA Compliance Form.) This would further ensure safe installation and operation of the battery system.

Impacts would be **LESS THAN SIGNIFICANT**.

b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

In case battery leakage were to occur, the battery system would be enclosed in a containment system and would have an additional catchment system. This would

provide protection against leaks and would prevent contamination of run-off. Although there is the very unlikely potential for fire, significant impact from a hazardous materials release would be very unlikely.

Furthermore, as stated in their submitted CEQA Compliance Form, the tribe has adopted the State of California's Uniform Building Code (UBC) and International Building Code (IBC) and would issue the project a building permit ensuring compliance with these codes (BLR 2015b). (See Appendix C for the tribe's submitted CEQA Compliance Form.) This would further ensure safe installation and operation of the battery system.

Impacts would be **LESS THAN SIGNIFICANT**.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

There is no school within one-quarter mile of the project.

NO IMPACT

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Staff reviewed two environmental hazard databases: the Department of Toxic Substances Control (DTSC) EnviroStor database and the Environmental Protection (EPA) EnviroMapper database. The EnviroStor database provides access to information about environmental clean-ups and permitted facilities in a community. The EnviroMapper database provides access to several EPA databases that provide information about environmental activities potentially affecting air, water, and land anywhere in the United States. According to these databases, the project site is not included on a list of hazardous materials sites.

NO IMPACT

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

The project is not located within an airport land use plan or within two miles of an airport.

NO IMPACT

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

The project is not located within the vicinity of a private airstrip.

NO IMPACT

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

The project would not provide any physical or hazardous material obstructions that would interfere with any emergency response plan or emergency evacuation plan.

NO IMPACT

- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

The battery storage bank contains a small amount of lithium. It is enclosed in its own containment system and is UL certified. Lithium batteries can overheat and ignite under certain conditions. It would be unlikely that the lithium battery would cause a fire. If it did, however, the fire would likely be self-contained to the battery unit area and would not threaten people or structures.

Furthermore, as stated in their submitted CEQA Compliance Form, the tribe has adopted the State of California's Uniform Building Code (UBC) and International Building Code (IBC) and would issue the project a building permit ensuring compliance with these codes (BLR 2015b). (See Appendix C for the tribe's submitted CEQA Compliance Form.) This would also minimize the chance of battery fire.

While the project would not expose people or structures to a significant risk of wildland fires, it would provide power generation, even if the local utility grid went offline, to Blue Lake Rancheria critical facilities, including an emergency operations center, American Red Cross emergency shelter, a fueling station, the community water supply, food market/storage/preparation facilities, and a wildland fire department, in the case of a fire or other disaster in the region.

Impacts would be **LESS THAN SIGNIFICANT**.

MITIGATION MEASURES

None

CONCLUSION

The project's Hazards and Hazardous Materials impacts would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The project site at Blue Lake Rancheria is currently undeveloped grassland. The project would require land disturbance of about 1.8 acres within the Mad River hydrologic unit. This region receives approximately 48 inches of precipitation annually (Caltrans 2015c). Soils encountered at the site would be expected to consist of highly weathered floodplain alluvium that is susceptible to erosion and offsite sedimentation. Rain water falling onto the site that does not soak into the ground is expected to drain westward towards the Mad River, which is less than one-quarter mile away.

DISCUSSION

Would the project:

i) Violate any water quality standards or waste discharge requirements?

The project is subject to and would comply with the Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which addresses off-site impacts to water systems. This is required for all construction activities greater than 1 acre, including those located on tribal land. Compliance with this regulation would prevent or minimize off-site run-off.

Also, most of the site, with the exception of the solar array footings and the concrete pads for the battery system and recloser circuit breaker, would be permeable gravel, and would therefore not alter the existing drainage pattern in a way that would result in substantial erosion or siltation off-site or increase the rate or amount of surface run-off. Impermeable surfaces such as paving would be more likely to result in changes to the existing drainage pattern.

The battery system contains a small amount of lithium ion, a hazardous substance that could potentially contaminate run-off from the site if leakage were to occur. However, the battery system would be enclosed in a containment system and would have an additional catchment system. This would provide protection against leaks and would prevent contamination of run-off. Furthermore, as stated in their submitted CEQA Compliance Form, the tribe has adopted the State of California's Uniform Building Code (UBC) and International Building Code (IBC) and would issue the project a building permit ensuring compliance with these codes (BLR 2015b). (See Appendix C for the tribe's submitted CEQA Compliance Form.) This would also minimize the chance of battery leakage.

Impacts would be **LESS THAN SIGNIFICANT**.

j) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-

existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

A watering truck would be used onsite during construction to conduct watering for fugitive dust control on a daily basis, or more often as needed, unless it is raining (GANION 2015a). (See Appendix B.) However, the amount of water used would be negligible given that the site is only 1.8 acres and that the construction period is only 4 months.

There is no planned water use during operation. The project would have no onsite personnel who would require potable water. Also, the project owner stated that rainwater in the area is usually sufficient for washing the PV panels. If panel washing was required at some point, the project owner would fill a 1,500-gallon water truck from existing water sources at the Blue Lake Rancheria (GANION 2015b). (See Appendix D.) Any water used during operation would be minimal.

Impacts would be **LESS THAN SIGNIFICANT**.

- k) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**
- l) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**
- m) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**
- n) Otherwise substantially degrade water quality?**

The project is subject to and would comply with the Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which addresses off-site impacts to water systems. This is required for all construction activities greater than 1 acre, including those located on tribal land. Compliance with this regulation would prevent or minimize off-site run-off.

Also, most of the site, with the exception of the solar array footings and the concrete pads for the battery system and recloser circuit breaker, would be permeable gravel, and would therefore not alter the existing drainage pattern in a way that would result in substantial erosion or siltation off-site or increase the rate or amount of surface run-off. Impermeable surfaces such as paving would be more likely to result in changes to the existing drainage pattern.

The battery system contains a small amount of lithium ion, a hazardous substance that could contaminate run-off from the site if leakage were to occur. However, the battery system would be enclosed in a containment system and would have an additional catchment system. This would provide protection against leaks and would prevent contamination of run-off. Furthermore, as stated in their submitted CEQA Compliance Form, the tribe has adopted the State of California's Uniform Building Code (UBC) and International Building Code (IBC) and would issue the project a building permit ensuring compliance with these codes (BLR 2015b). (See Appendix C for the tribe's submitted CEQA Compliance Form.) This would also minimize the chance of battery leakage.

Impacts would be **LESS THAN SIGNIFICANT**.

- o) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

The project does not include housing and is not located within a 100-year flood hazard area.

NO IMPACT

- p) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

The project is not located within a 100-year flood hazard area. Part of the site is located within a 500-year flood area. The solar arrays would be mounted on posts, allowing water to flow through.

NO IMPACT

- q) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?**

There are no known levees or dams nearby that could cause flooding of the project site, and the project does not include structures that would be occupied by people.

NO IMPACT

- r) Inundation by seiche, tsunami, or mudflow?**

The project is located inland and is not near any body of water, and therefore it would not be subject to a tsunami or seiche. Also, there are no steep slopes in the area that could cause mudflows.

While the project would not be subject to tsunamis, seiches, or mudflows, it would provide power generation, even if the local utility grid went offline, to Blue Lake

Rancheria critical facilities, including an emergency operations center, American Red Cross emergency shelter, a fueling station, the community water supply, food market/storage/preparation facilities, and a wildland fire department, in the case of a tsunami along the coast or another disaster.

NO IMPACT

MITIGATION MEASURES

None

CONCLUSION

The project’s Hydrology and Water Quality impacts would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Noise				
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Temporary Noise Impacts	<input checked="" type="checkbox"/> Permanent or Long-Term Noise Impacts
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The ambient noise level in the project area includes State Route 299, which is located approximately 500 feet to the north of the proposed project and runs in an east-west direction. The project would generate noise during the four-month construction period. Construction noise would be limited to business hours.

The nearest residence outside of the Blue Lake Rancheria property appears from Google Earth to be more than 1,000 feet north of the project site across from SR 299.

DISCUSSION

Would the project result in:

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**
- b) **Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**
- c) **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**
- d) **A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Construction of the proposed project would generate temporary additional noise during business hours during the four-month construction period. The nearest residence outside of the Blue Lake Rancheria property appears to be more than 1,000 feet north of the project site, across from SR 299. The Humboldt County General Plan states that the maximum acceptable exterior noise level for residences is 60 decibels (dB) without any additional insulation being required (HC 2015).

To minimize noise generated during construction, the project owner would ensure that all construction activities are in compliance with all applicable noise regulations. The tribe regularly conducts and tracks decibel readings for activities at the Blue Lake Rancheria, and would continue to do so during construction of the microgrid to ensure that noise levels are measured. Any construction noise generated would likely not be heard at the nearest residence given the proximity of SR 299, a biomass energy system with compressors and dust collection equipment, a 1 MW diesel generator routinely used, and the Rancheria's main loading dock/delivery area that handles many vehicles daily. Furthermore, construction would occur only during business hours and would therefore not generate noise at night (GANION 2015a). (See Appendix B.) Off-site noise generated by the project would be **LESS THAN SIGNIFICANT** during construction.

Operation of the proposed project would reduce noise levels because the solar array and battery bank would supplant the diesel generator that currently provides back-up power for the casino. (The diesel generator would still be onsite and testing and infrequent operations would still occur.) Operation would not generate any permanent or long-term increase in off-site ambient noise levels in the project vicinity, and therefore there would be **NO IMPACT** during operation.

Neither construction or operation of the project would involve activities (such as pile-driving) that would generate excessive off-site groundborne vibration or noise levels. There would be **NO IMPACT**.

MITIGATION MEASURES

None

CONCLUSION

The project's Noise impacts would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Transportation/Traffic				
Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with an applicable congestion management program, including, but not limited to, level of service (LOS) standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves, dangerous intersections, or glint and glare) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project is located in a mostly rural area approximately 500 feet south of State Route 299, which runs in an east-west direction with two lanes in each direction near the project site. Vehicles would access the project site via the Blue Lake Boulevard exit off of SR 299, turning south on Chartin Road for direct access to the Blue Lake Rancheria property. The nearest airports are the Arcata-Eureka Airport, approximately 8 miles northwest of the project site, and Murray Field, approximately 8 miles southwest of the project site. The Blue Lake Rancheria funds and operates a bus transit system that services the city of Blue Lake and provides round trips between Arcata and Blue Lake. It operates approximately 13 hours per day Monday through Friday (BLR 2015c).

Project construction traffic would include an average of 5 construction workers per day over the 4-month construction period, with a peak of 10 construction workers. There would be two of the following vehicles at the project site at any time: ready mix truck, skid steer, mini excavator, grader, and water truck. Because the main site contractors for this project (Kernen Construction) are based less than two miles from the Blue Lake Rancheria site, they would typically drive the equipment to the site as needed instead of driving commuter cars, resulting in just 0-3 daily commuter vehicle roundtrips generated by project construction. Construction would generate approximately 0-3 daily delivery vehicle roundtrips (GANION 2015a). (See Appendix B.)

The completed project would require no new employees for operation.

DISCUSSION

Would the project:

- a) **Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?**

Project construction and operations traffic would be minimal. The worst-case scenario for traffic generated by the project would be during peak construction if all 10 of the construction workers drove to the site individually and if the maximum of 3 daily deliveries occurred. This would result in a maximum of 10 daily vehicle roundtrips and 3 daily delivery roundtrips for a total of 13 daily roundtrips. This would occur only temporarily and would be a negligible increase in traffic that would not impact level of service on nearby roads or State Route 299. During operations, the project would not generate any additional trips.

Impacts would be **LESS THAN SIGNIFICANT**.

- b) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account**

all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Due to the negligible increase in traffic generated by the project and the fact that construction and operation of the project would occur on Blue Lake Rancheria property (not in any right-of-way, etc.), the project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

NO IMPACT

- c) Conflict with an applicable congestion management program, including, but not limited to, level of service (LOS) standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

The project would add a temporary negligible increase in traffic during construction (a maximum of 13 additional roundtrips per day) and no additional traffic during operation. Roadway level of service would not be affected.

NO IMPACT

- d) Substantially increase hazards due to a design feature (e.g., sharp curves, dangerous intersections, or glint and glare) or incompatible uses (e.g., farm equipment)?**

The site is accessed via an access road from State Route 299, with relatively light traffic levels in this area of the highway. There will be no increase in hazards due to a design feature or incompatible uses. PV panels can generate glare that appears similar to bodies of water and reflections from glass, which under certain conditions, can pose hazards to motorists by distracting them or at worst, temporarily causing vision impairment. The proposed PV panels, however, would be turned to the south, away from the highway and motorists, so there would be no impact. Furthermore, the nearest airports are more than 8 miles away from the site, so glare from solar panels would not affect aircraft on departure or landing.

NO IMPACT

- e) Result in inadequate emergency access?**

The proposed project would not physically block any access roads or result in traffic congestion which could compromise timely access to this facility or any other location.

NO IMPACT

- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

The proposed project would not result in any conflict with adopted policies, plans, or programs supporting alternative transportation. Improvements would occur on-site and would not interfere with any mode of alternative transportation.

NO IMPACT

- g) result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

The project would not generate additional air traffic and would not encroach on airport land, as the nearest airports are more than 8 miles away. PV panels are low in height and would not interfere with aircraft flights or air traffic patterns, or require review by the Federal Aviation Administration under Title 14, Part 77 of the Code of Federal Regulations.

NO IMPACT

MITIGATION MEASURES

None

CONCLUSION

The project's Transportation and Traffic impacts would be less than significant.

REFERENCES

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- GANION 2015b – Ganion, Jana, “BLR Microgrid and CEQA”, E-Mail Message to Eli Harland, California Energy Commission, April 24, 2015.
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**APPENDIX A:
BLUE LAKE RANCHERIA ENVIRONMENTAL ASSESSMENT**

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Blue Lake Rancheria Environmental Assessment

The purpose of this report is to comply with the Blue Lake Rancheria Environmental Policy Ordinance (02-2000), ensuring that the Tribe gives proper and meaningful consideration of environmental, cultural, historical, and ecological factors when making decisions which may significantly affect the environment of the Blue Lake Rancheria. An Environmental Assessment should be completed for projects where there is thought to be no significant impact or there is uncertainty about whether or not a full Environmental Impact Statement (EIS) is needed. When the Environmental Assessment is reviewed there will be a decision issued as either a Finding of No Significant Impact (FONSI) or that the project will require an EIS.

Please fill out each section of the report *completely* and turn in to the Tribal Environmental Programs Director. Where background studies or information may be useful, please provide enough citation information so that the document can be located and used in the consideration of the proposed project.

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Section I: Project Summary

Please provide a detailed summary of the proposed project including purpose and need.

This project consists of installing a microgrid control system within the Blue Lake Rancheria Tribe's existing energy infrastructure, adding new electrical equipment to take over a small portion of the on-Rancheria Pacific Gas and Electric utility infrastructure (electric only), and adding construction of a ~1.8 acre ground mounted solar array (~500kW), a stationery battery storage bank (~800kWh), and related trenching and site work.

The purpose is to build a renewable and self-sustaining microgrid for the Blue Lake Rancheria (BLR). The system will provide cost savings for BLR and reduce stress on the larger California electric grid through peak shaving, demand response, and load shedding to reduce costs and power fluctuations. This project will also provide for public health and safety during emergencies. BLR is a nationally recognized American Red Cross critical support facility. This is crucial as the North Coast of California is an area especially susceptible to natural disasters, including earthquakes, tsunamis, floods, and wildfire. This microgrid system will ensure a long-term place of safety with continuing electric power in the event of an emergency. It will significantly increase import of local renewable energy to the state's electric grid, through both a new 500 kW PV array and the 175 kW biomass gasifier/fuel cell power system. Adding significant renewable power to the grid reduces greenhouse gas emissions and makes electric power at BLR even more secure. (For these types of GHG reduction efforts, in 2014 the Blue Lake Rancheria was recognized by the White House and the Department of Energy as a "Climate Action Champion.") And, this project implements regional renewable energy resources as recommended in Humboldt County's "RePower Humboldt" strategic renewable energy plan. Components of the project include:

- ~1.8 acre site for a ~500kW ground mounted solar array (see diagram below) directly north of the wastewater treatment plant
- Site grading for solar array ~1.8 acre footprint
- Paving for solar array footings; estimated 20 footings at 3 square feet each
- Concrete pad, containment and enclosure for 800kWh battery system (currently sited on biomass bioenergy site; addressed in prior EA); estimated at 625 square foot concrete pad
- Underground conduit utility and power connections between solar and battery two systems and existing power infrastructure onsite; estimated at 800 linear feet
- Ground-mounted new recloser and associated equipment; estimated 100 square foot concrete pad
- New and modified electrical equipment within existing structures at casino, hotel, and tribal government office.
- Purchase and transitioning control of certain Pacific Gas and Electric (PG&E) electrical infrastructure from main transformer at Chartin Road to casino, hotel, and tribal office buildings.
- Potential expansion of the solar array and/or battery storage banks to achieve ~1MW in solar energy and ~1600kWh in battery energy storage.

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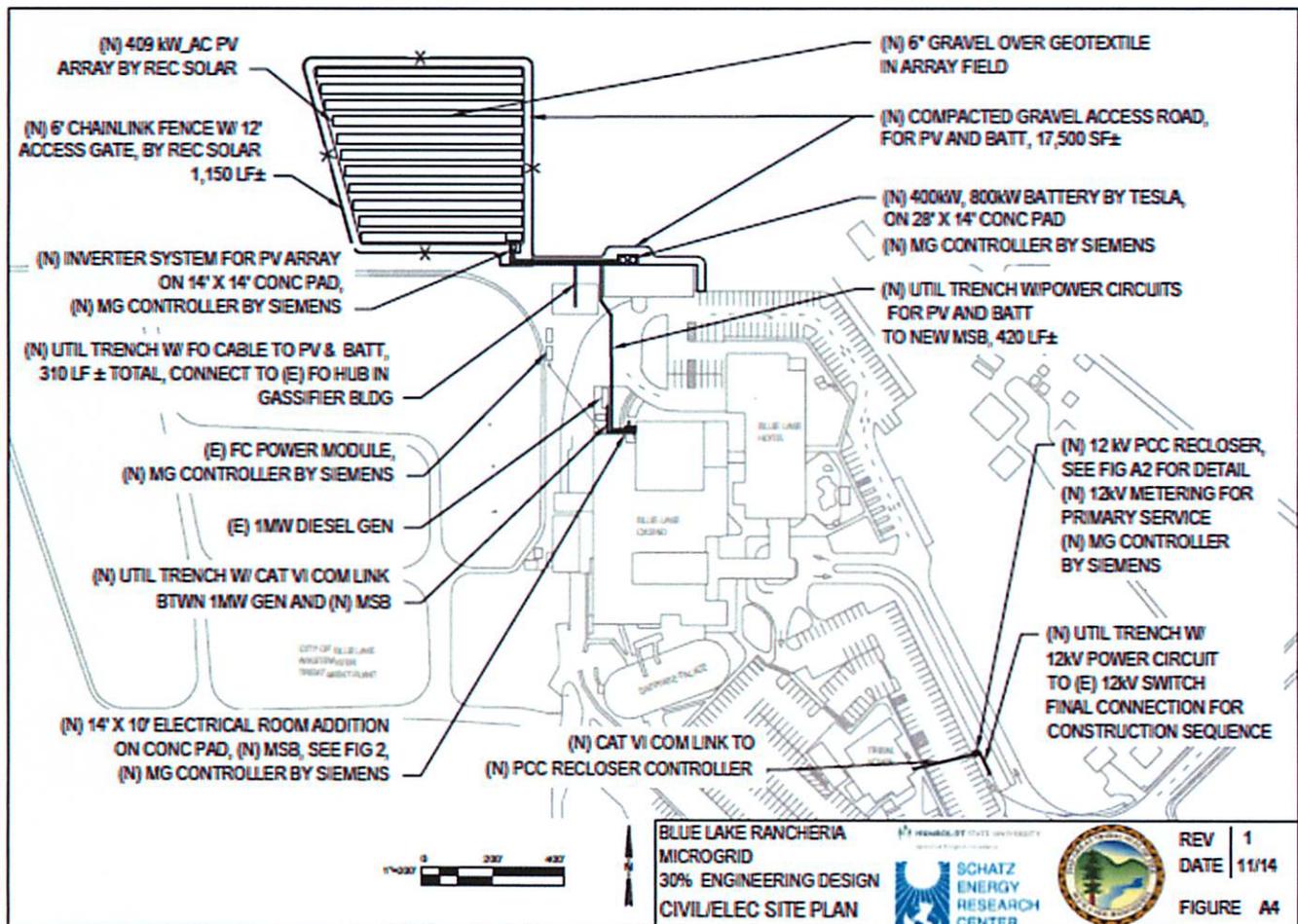
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The following image is an overview of the project and location.

(NOTE: Please see also Microgrid grant application documents).



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Section II: Checklist

Blue Lake Rancheria Environmental Assessment Checklist

Environmental Issue:	No effect	Less than significant	Significant Effect
Aesthetics		X	
Agricultural Resources		X	
Air Quality		X	
Biological Impacts (including wetlands and special status species)		X	
Cultural/Historical Resources	X		
Geology and Soils		X	
Hazardous/Toxic Materials		X	
Hydrology/Water Quality		X	
Land Use Planning		X	
Mineral Resources	X		
Noise	X		
Population Growth and Housing	X		
Public Health/Hazards		X	
Public Services/Utilities		X	
Recreation	X		
Transportation/Traffic		X	

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Section III: Affected Environment

Identify presence or absence of the following within the area potentially affected by the proposed action:

(a) Floodplains?

There are floodplains in the project area where the solar array is sited. The Blue Lake Rancheria Tribe commissioned a survey of the elevations of the specific project area in 2014 within a FEMA flood recertification effort, and a portion of the area designated for the solar array is below the Zone B, 500-year flood plain. The other components of this project (battery banks, new recloser) are not located in a floodplain.

(b) Wetlands?

There are no wetlands in the project area. It is undeveloped grassland.

(c) Threatened, endangered, or candidate species and/or their critical habitat?

There are threatened, endangered, or candidate species, primarily birds, listed for this area, but no critical habitat for these species within the project area.

(d) Areas of recreational, ecological, scenic, or aesthetic importance?

There are no areas of recreational, ecological, scenic, or aesthetic importance within the project area.

(e) Natural resources (timber, fish, wildlife, waterbodies or aquifers)?

There are no natural resources (timber, fish, wildlife, waterbodies or aquifers) within or immediately adjacent to or underneath the project area.

(f) Property of historic, archaeological, or architectural significance?

There is no property of historic, archaeological, or architectural significance within the project area. The Blue Lake Rancheria Tribe's Historic Preservation Officer has previously surveyed the project area and there are no areas of significance.

(g) Minority and low-income populations?

There are no minority and low-income populations within the project area. The area is adjacent to the City of Blue Lake's wastewater treatment ponds, and undeveloped.

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Section IV: Environmental Effects

Identify the potential effects, including cumulative effects, to the affected environments identified in the checklist in Section II and Section III. Short-term and long-term effects should be described, as well as both beneficial and adverse impacts on the environment and public health and safety.

Background

Several prior environmental reviews have been conducted for this project site. The Blue Lake Rancheria commissioned two previous Environmental Assessments (EAs) in 2001 (conducted by Environmental Science Associates, and the lead agency was the National Indian Gaming Commission) and 2013 (conducted by BLR Environmental Programs). In 2011, pursuant to the land into trust process, a Phase 1 Environmental Site Review was conducted for the site (by Oscar Larson & Associates). In 2014 a FEMA flood certification study was completed (by Points West Surveying Co.). There are also soils and other reports relative to the site area.

SECTION II Topics

Aesthetics

Potential effects: The solar array will be the primary visible and noticeable new component of this project. It will be visible from California Highway 299 and from the Blue Lake Hotel.

Adverse short-term effects/impacts: During installation, the construction site will be visible, and the grading could create some dust. However, the site has already been managed for fire safety, so the grading needed will be relatively minimal.

Beneficial short-term effects/impacts: In economically-challenged Humboldt County, new construction creates interest and excitement around economic development.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: Solar arrays are generally viewed as progressive, intelligent development. The hope is that the solar array, because it will be visible from California Highway 299, will contribute to the excitement and overall momentum and adoption of renewable energy for community-scale applications.

Cumulative effects: Positive improvement to site aesthetics.

Agricultural Resources

Potential effects: Installing a solar array will prevent certain agricultural uses of the land due to shading by the solar panels.

Adverse short-term effects/impacts: None. There are no current agricultural resources present or impacted.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

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Beneficial long-term effects/impacts: Solar energy could be used to power onsite agricultural development (e.g. greenhouses). Further, the ground under the solar array could be used for agriculture, certain groundcover plants such as herbs could be grown as an alternative for weedmat/gravel.

Cumulative effects: Positive, due to the potential for renewable energy for agricultural production and harvestable groundcover under the arrays.

Air Quality

Potential effects: Dust particulates in the air during grading (<1 week) during weekday business hours only.

Adverse short-term effects/impacts: Dust particulates in the air during grading (<1 week) during weekday business hours only.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: Renewable solar energy will reduce and/or replace the need for fossil fuels and fossil fuel power plant-related emissions.

Cumulative effects: None.

Biological Impacts (including wetlands and special status species)

Potential effects: None. There are no wetlands or special status species present at the project site.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

Cumulative effects: None.

Cultural/Historical Resources

Potential effects: If cultural resources are discovered during grading or trenching, all appropriate protocols will be followed. Every party will be given the Inadvertent Discovery Protocol prior to construction, and if a discovery is made during construction, all activities will stop, and the BLR Tribal Historic Preservation Officer will be called to the area.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

Cumulative effects: None.

Geology and Soils

Potential effects: Temporary ground disturbance during construction, especially grading and trenching.

No in-fill is anticipated.

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Adverse short-term effects/impacts: Temporary ground disturbance during construction, especially grading and trenching.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: The ground under the solar array will be kept a permeable surface for the lifetime of the array (~40-50 years).
Cumulative effects: None.

Hazardous/Toxic Materials

Potential effects: The battery storage bank has no liquid chemicals, but still contains relatively small amounts of toxic components, such as lithium. The battery storage bank is enclosed in its own containment system, is UL certified, and will have an additional catchment system (likely concrete). The greatest likelihood of negative impact is that of a non-explosive fire. Because the equipment will be sited outdoors and away from current infrastructure, any fire is expected to be self-contained to the battery unit area.
Adverse short-term effects/impacts: Extremely low potential for leaks or fire.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: Extremely low potential for leaks or fire.
Beneficial long-term effects/impacts: None.
Cumulative effects: None.

Hydrology/Water Quality

Potential effects: None.
Adverse short-term effects/impacts: None.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: None.
Cumulative effects: None.

Land Use Planning

Potential effects: The ~1.8 acre solar array will be a permanent structure, and other land use for that area will be limited (see also Agricultural Resources above).
Adverse short-term effects/impacts: None.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: Supports the Tribe's green building/development frameworks.
Cumulative effects: Positive, as this project is consistent with the Tribe's land use planning and economic development strategic plans.

Mineral Resources

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Potential effects: None. There are no mineral resources impacted by this project.
Adverse short-term effects/impacts: None.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: None.
Cumulative effects: None.

Noise

Potential effects: Temporary construction-related noise during weekday business hours only, which is equivalent to or a minimal increase over typical noise in the project area.
Adverse short-term effects/impacts: Temporary construction-related noise, a minimal increase over typical noise in the project area. Hotel guests on floors 2-4 may hear construction-related noise.
Beneficial short-term effects/impacts: Any noise generated by solar array construction may generate positive interest in the project.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: The solar array and battery bank can be used for emergency back up power for the casino, which is currently provided by a noisy 1MW diesel generator. The relatively silent operation of solar + batteries would be a long term benefit in terms of noise reduction.
Cumulative effects: Positive, as it is anticipated the solar/battery/microgrid will reduce operation of diesel generator located close to project site.

Population Growth and Housing

Potential effects: None. The land proposed for this project is located immediately adjacent to a wastewater treatment plant and a light-industrial biomass bioenergy power plant, and not considered a future housing development area.
Adverse short-term effects/impacts: None.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: Solar array creates a buffer between the wastewater treatment plant and potential housing sites further to the west, north, and east. Further, solar energy may be used to power on-Rancheria residences.
Cumulative effects: Positive.

Public Health/Hazards

Potential effects: Improved public health through replacement of fossil fuels with renewable energy and reduced GHG emissions. Improved community resiliency through onsite emergency power. The battery storage bank has toxic chemicals contained within the system, but will be completely surrounded by casing and additional catchment.
Adverse short-term effects/impacts: Extremely low potential for leaks or fire from battery system.

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Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: Extremely low potential for leaks or fire from battery system.
Beneficial long-term effects/impacts: Reduced GHG emissions, improved public health through replacement of fossil fuels with renewable energy, long-term onsite emergency power in emergency situations.
Cumulative effects: Positive.

Public Services/Utilities

Potential effects: Temporary, intermittent use of back-up power (diesel generator) during construction. Increased resiliency created for onsite electric services/utilities. Potential economic savings with microgrid demand response and lowest cost of energy balancing.
Adverse short-term effects/impacts: Temporary use of back-up diesel generators. Unforeseen installation issues that effect electric power supply.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: Increased reliability; energy savings; long-term emergency power onsite.
Cumulative effects: Positive, through overall increased reliability and reduced cost.

Recreation

Potential effects: None. The project area is not designated or envisioned for any type of recreational use.
Adverse short-term effects/impacts: None.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None.
Beneficial long-term effects/impacts: Eco-tourism draw.
Cumulative effects: Positive due to eco-tourism potential.

Transportation/Traffic

Potential effects: Some increase in traffic (<5 vehicles per day) on existing access roads during a ~4 month construction phase, equivalent to or minimal increase over typical traffic in the area.
Adverse short-term effects/impacts: Some increase in traffic (<5 vehicles per day) on existing access roads during a ~4 month construction phase.
Beneficial short-term effects/impacts: None.
Adverse long-term effects/impacts: None. Post construction there will be no increase in traffic to the site.
Beneficial long-term effects/impacts: None.
Cumulative effects: None.

Beneficial and adverse impacts on the environment and public health and safety

The microgrid / solar / battery storage system will benefit the environment and public health and safety by adding a new source of long-term renewable energy, creating significant greenhouse gas reductions, and

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providing emergency power for the Blue Lake Rancheria critical facilities, and increasing demand response capabilities deployable by BLR to help stabilize the larger California energy grid. Long-term, the system will have largely beneficial impacts to the environment. The project is limited to an estimated <2 acres, which includes the solar array and the battery foundation, and one additional electrical equipment pad. The project will create deep reductions in greenhouse gas emissions, because the system will produce ~500kW of electricity, which would otherwise have been produced by burning fossil fuels. And in the long- and short-term, there are no criteria pollutant emissions from the project.

SECTION III Topics

Floodplains

Potential effects: A 500-year flood inundates the solar array. The array will be designed so that a) the sensitive panels are above the floodplain, b) the portions of the anchors and posts in the floodplain elevations are sealed, and c) the entire solar infrastructure is as structurally robust as possible.

Adverse short-term effects/impacts: In a 500-year flood situation, potential damage to the solar array via water intrusion and/or debris.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: If the solar array is not harmed during a flood event, it will be operable to supply emergency power to the region.

Cumulative effects: None.

Wetlands

Potential effects: None. There are no wetlands in the project area. It is undeveloped grassland.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: The permeable surface proposed under the solar array will help the area percolate in perpetuity.

Cumulative effects: None.

Threatened, endangered, or candidate species and/or their critical habitat

Potential effects: None. The listed species for this region are included in the attached list, but this site does not have any habitat for these species.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

Cumulative effects: None.

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Areas of recreational, ecological, scenic, or aesthetic importance

Potential effects: None. There are no areas of recreational, ecological, scenic, or aesthetic importance within the project area. The project area is adjacent to open wastewater treatment ponds.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

Cumulative effects: None.

Natural resources (timber, fish, wildlife, waterbodies or aquifers)

Potential effects: None. There are no natural resources (timber, fish, wildlife, waterbodies or aquifers) within or immediately adjacent to or underneath the project area.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

Cumulative effects: None.

Property of historic, archaeological, or architectural significance

Potential effects: None. There is no property of historic, archaeological, or architectural significance within the project area. The Blue Lake Rancheria Tribe's Historic Preservation Officer has previously surveyed the project area and there are no areas of significance. Every party will be given the Inadvertent Discovery Protocol prior to construction, and if a discovery is made during construction, all activities will stop, and the BLR Tribal Historic Preservation Officer will be called to the area.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

Cumulative effects: None.

Minority and low-income populations

Potential effects: None. There are no minority and low-income populations within the project area. The area is adjacent to the City of Blue Lake's wastewater treatment ponds, and undeveloped. There are <3 tribally-owned residences to the northeast of the site, with intermittent rental occupants.

Adverse short-term effects/impacts: None.

Beneficial short-term effects/impacts: None.

Adverse long-term effects/impacts: None.

Beneficial long-term effects/impacts: None.

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Cumulative effects: None.

Additional Information

The project area is bordered on the south side by the City of Blue Lake wastewater treatment plant, and on the east side by light industrial bioenergy power plant, a biomass fuel storage building. The other borders are undeveloped grasslands without waterways. The site is ~500 yards from economic enterprises – including a casino loading dock area, 4-story hotel – and any related noise / dust issues will be mitigated to the greatest extent to prevent business interruption. There are <3 tribally-owned houses within ¼ mile of the site.

Long-term effects on aesthetics, noise, population growth and housing, and recreation are minor due to the relatively small size of the system and the location of the project adjacent to existing wastewater treatment ponds, commercial loading dock, 1 MW backup generator, bioenergy system and other light industrial use areas.

Once in operation, the solar array, the battery storage banks (which may be partially or completely enclosed), and additional electrical equipment will not emit any significant additional noise levels.

The project and project area will only have short-term impact on geology and soils due to grading that will occur during installation of the solar array and relatively shallow trenching to run conduit piping under the array and to the battery storage bank concrete pad. The battery storage bank concrete pad will be 100 square feet and either a) a repurpose of existing concrete pad in the area, or b) a new concrete pad adjacent to existing buildings.

The recloser, and other new electrical equipment are sited on existing developed areas, which have already been subject to environmental review. The majority of all associated trenching and minimal grading for electrical equipment will occur in areas that are already paved and graded pursuant to prior projects.

Under typical construction and operating conditions, the project will have no hazardous/toxic materials exposed to the environment. The battery storage system proposed is a lithium ion technology, and as such contains some chemicals. If there is a failure of the casings, a chemical leak could occur. This will be mitigated by a 5-year service contract with the manufacturer to provide all the safety checks and maintenance by certified technicians, and the entire battery bank equipment will be surrounded by concrete catchment and other catchment/safety precautions according to manufacturer installation requirements.

There will be minor / no significant effect on transportation/traffic, as the project area is located adjacent to the main truck route for all the economic enterprises. The power system will only increase traffic by <5 vehicles a day during construction, and no increase in traffic post-construction.

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Section V: Scoping/Public Comment

Describe and document public meetings, notices, etc. held to discuss proposed project with the community, and address comments that came up during this process.

There have been 3 public meetings on the microgrid project and one future planned meeting.

- November 4, 2014 – Tribal Council meeting open to the public. Notice posted at least 7 days in advance, per the Constitution of the Blue Lake Rancheria. Presentation to the Tribal Council on the project, EPIC grant application and matching funding. Initiative approved. There were no comments or questions.
- November 19th, 2014 – City of Blue Lake Town Hall Public Meeting attended by over 60 local residents (City of Blue Lake is directly adjacent to Blue Lake Rancheria). Notice posted November 4, 2014. Presentation to City of Blue Lake residents on microgrid, solar, battery project and potential benefits in terms of emergency evacuation center/shelter with long-term emergency power for the greater community. There was one verbal question: How long would the solar/battery/microgrid system operate in emergency mode? The verbal answer provided: The system was being designed to operate at a life/safety level for as long as needed. There were no other questions. All verbal comments were positive.
- December 4, 2014 – Public meeting attended by over 400 community members. Notice posted 30 days in advance. The microgrid project was presented in detail. There were no questions. All comments were positive and included thanks for developing emergency power resources.
- April 28, 2015 – City of Blue Lake City Council public meeting. Typical attendance ~30 people. Second presentation to City of Blue Lake City Council and residents on microgrid, solar, battery project and potential benefits in terms of emergency evacuation center/shelter with long-term emergency power for the greater community.

Blue Lake Rancheria ENVIROMENTAL PROGRAMS

P.O. Box 428
Blue Lake, CA

Office: (707) 668-5101
Fax: (707) 668-4272

[www.bluelakerancheria-nsn.gov/
govLawEnviroPro.html](http://www.bluelakerancheria-nsn.gov/govLawEnviroPro.html)



Section VI: Mitigation

Describe in detail any plans for mitigation of potential environmental impacts for the proposed project.

Below, and as noted in detail above, are planned mitigations of potential environmental impacts:

- The physical footprint of the project – the largest component of which is the solar array - is designed to be as compact as possible (current estimate is <2 acres) to preserve highest, best use of property. The project solar array will create a buffer between the wastewater treatment plant and any future plans for currently undeveloped lands to the northwest, north, and northeast of the project site. If in the phase between preliminary and final design (est. April – September 2015) the solar footprint and or battery size expands, a supplemental application will be submitted to Environmental Programs.
- The majority of construction will occur during weekday business hours, and the construction timeline will be condensed to a 4-month period. Noise, dust, debris, and other construction-related impacts will be strictly controlled and minimized, due to the project's location near the Tribe's economic enterprises, including a 102-room hotel and 50,0000 square foot casino.
- The battery bank will be carefully installed to manufacturer specifications and designed with redundant catchment systems.
- All system components will be constructed and operated according to manufacturer specifications and all Blue Lake Rancheria tribal ordinances and all applicable regulation, including health and safety requirements.
- Overall this project has beneficial environmental impacts by reducing the Tribe's use of fossil fuels, reducing greenhouse gas emissions, and providing emergency power for health and safety of regional residents.

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Section VII: Signatures and Approvals

Once the report is completely filled out, sign and date and turn in to the Tribal Environmental Director. The Environmental Director will review, sign, and date it, adding comments if necessary, and turn it in to the Tribal Administrator with the decision indicated below. The Tribal Administrator will review the Environmental Assessment and Environmental Director's decision and comments and sign and date the document indicating whether the decision reached is the same as that of the Environmental Director. When the report is complete it should be copied so that one copy can be filed with the Environmental Programs Office and the other with the project plans.

Person or persons who prepared this report:

Jana Ganion, Energy Director, Blue Lake Rancheria

Tribal Environmental Director:

Michelle Fuller 3/31/2015

Decision:

FONSI

EIS needed

Tribal Administrator:

Aula Ramsey 3/31/2015

Decision:

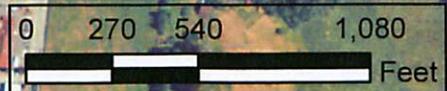
FONSI

EIS needed



Legend

-  Tribal Trust Land Boundary
-  Solar Array Footprint



Trust Resources List

An online Endangered Species Act species list IS available below for your project area, represented b listed:

Arcata Fish and Wildlife
1655 HEINDON
ARCATA,
(707)

The Endangered Species Act species list below is for planning purposes only -- it is not an official species list.

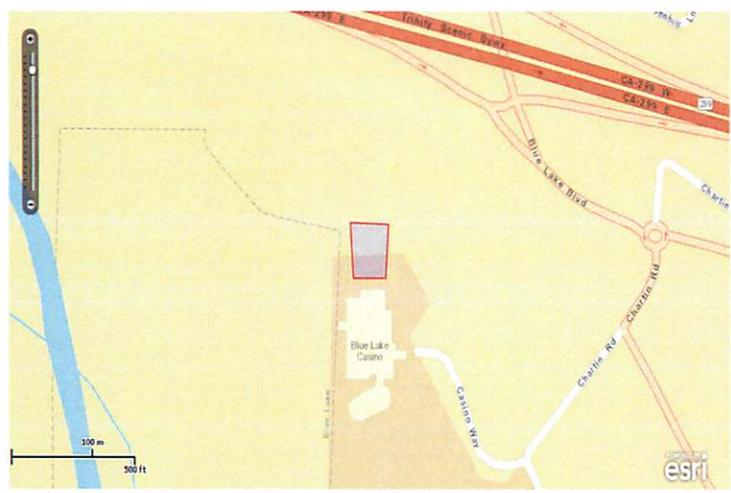
To save or print all Trust Resources lists on this page, click here:



To request an official species list, click here:



Project Location Map:



Note: The map selected re
map layers selected page.
Step 1 Location on this
what appears on this
to the Location page
the map

Project Counties:
Humboldt, CA

Project type: Department of Energy Operations

Endangered Species Act Species List ([USFWS Endangered Species Program](#)).

There are a total of 5 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Birds	Status		Has Critical Habitat	Contact
Northern Spotted owl (<i>Strix occidentalis caurina</i>) Population: Entire	Threatened 	species info	Final designated critical habitat	Arcata Fish A
western snowy plover (<i>Charadrius nivosus ssp. nivosus</i>) Population: Pacific coastal pop.	Threatened 	species info	Final designated critical habitat	Arcata Fish A
Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>) Population: Western U.S. DPS	Threatened 	species info	Proposed critical habitat	Arcata Fish A
Flowering Plants				
Western lily (<i>Lilium occidentale</i>)	Endangered 	species info		Arcata Fish A
Mammals				
fisher (<i>Martes pennanti</i>) Population: West coast DPS	Proposed Threatened 	species info		Arcata Fish A

[Don't see a species you expect to see?](#)

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#)).

There are no National Wildlife Refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#)).

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without

additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html>.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: <http://www.fws.gov/migratorybirds/CCMB2.htm>.

For information about conservation measures that help avoid or minimize impacts to birds, please visit: <http://www.fws.gov/migratorybirds/CCMB2.htm>.

Migratory birds of concern that may be affected by your project:

There are 20 birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to [the ECOS Help Desk](#).

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
Allen's Hummingbird (<i>Selasphorus sasin</i>)	Yes	species info	Breeding
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	species info	Year-round
Black Oystercatcher (<i>Haematopus bachmani</i>)	Yes	species info	Year-round
Burrowing Owl (<i>Athene cunicularia</i>)	Yes	species info	Year-round
Cassin's Finch (<i>Carpodacus cassinii</i>)	Yes	species info	Year-round
Fox Sparrow (<i>Passerella iliaca</i>)	Yes	species info	Wintering
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Yes	species info	Wintering
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Yes	species info	Wintering
Long-Billed curlew (<i>Numenius americanus</i>)	Yes	species info	Wintering
Marbled Godwit (<i>Limosa fedoa</i>)	Yes	species info	Wintering

Olive-Sided flycatcher (<i>Contopus cooperi</i>)	Yes	species info	Breeding
Peregrine Falcon (<i>Falco peregrinus</i>)	Yes	species info	Year-round
Purple Finch (<i>Carpodacus purpureus</i>)	Yes	species info	Year-round
Red Knot (<i>Calidris canutus ssp. roselaari</i>)	Yes	species info	Wintering
Short-billed Dowitcher (<i>Limnodromus griseus</i>)	Yes	species info	Wintering
Short-eared Owl (<i>Asio flammeus</i>)	Yes	species info	Wintering
Western grebe (<i>aechmophorus occidentalis</i>)	Yes	species info	Wintering
Whimbrel (<i>Numenius phaeopus</i>)	Yes	species info	Wintering
Willow Flycatcher (<i>Empidonax traillii</i>)	Yes	species info	Breeding
Yellow warbler (<i>dendroica petechia ssp. brewsteri</i>)	Yes	species info	Breeding

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

Data Limitations, Exclusions and Precautions

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC is unable to display wetland information at this time.

**APPENDIX B:
APRIL 21ST E-MAIL BETWEEN JANA GANION AND ELI HARLAND**

From: [Jana Ganion](#)
To: [Harland, Eli@Energy](mailto:Harland_Eli@Energy)
Cc: David.Carter@humboldt.edu
Subject: Re: BLR Microgrid and CEQA
Date: Tuesday, April 21, 2015 2:00:28 PM
Attachments: [BLR Noise Ordinance.pdf](#)

Hello Eli,

Please see below for answers to the questions from the Environmental Office. Please let me know if there are any questions.

Regarding circulation of the draft environmental review, we will forward you a local distribution list, and I am reaching out to regional governments to see if they have a list as well. Hope to have that compiled and to you by the end of this week, but please do let me know if you need it earlier.

Air Quality

1. What types and numbers of equipment would be used during construction activities?

[Ready mix truck \(for battery storage system foundation - 1–2 days total\)](#)

[Skid steer](#)

[Mini excavator](#)

[Grader](#)

[Water truck](#)

2. Would Best Management Practices (BMPs) be implemented to reduce effects to air quality (e.g., dust) during construction activities?

[Yes, a watering truck would be onsite and conduct watering daily \(or more often as needed, unless it is raining\).](#)

Aesthetics

[<!--\[if !supportLists\]-->1. <!--\[endif\]-->Would the PV panels be placed in a fixed position?](#)

[Yes. The design is that the solar panels are in a fixed position on the ground, and the panels themselves are fixed on their bases \(i.e. they don't move to track the sun\).](#)

Soil and Water (and Biology)

[<!--\[if !supportLists\]-->1. <!--\[endif\]-->Would BMPs for erosion control be implemented during grading to protect nearby streams and rivers?](#)

[Best management practices for erosion control have been thoroughly discussed with the construction contractor, Kern Construction and will be applied according to site conditions at time of construction. Kern will implement straw wattles, place straw over any graded areas, and/or construct silt fences. There will be relatively low risk of erosion in the summer months, but BMPs will be applied conservatively to](#)

ensure zero erosion.

Traffic

1. What is the peak number of construction workers and the average number of construction workers?

Average number of construction workers: 5

Peak number of construction workers: 10

2. For the 5 daily vehicles anticipated during construction, please provide a breakdown of the types of vehicles (including regular commuter vehicles for construction workers, delivery vehicles, construction vehicles, etc.).

Construction Vehicles:

Two (2) of the following vehicles at any given time:

Ready mix truck

Skid steer

Mini excavator

Grader

Water truck

Regular Commuter Vehicles:

0-3 per day

Notes: Because the main site contractors proposed for this project, Kern Construction is <2 miles from the Rancheria site, their construction workers typically drive the actual equipment to the site (as applicable), and therefore have few if any commuter cars. The majority of the work will be done in sequence, that is it is anticipated that typically one vendor will be working onsite at a time. The existing casino/hotel parking lots, and the existing main loading dock/delivery area (for the entire Rancheria) are immediately adjacent to the project site and currently utilized by 2,000 vehicles a day . Any additional vehicles would be instructed to use these non-project areas to access the site and park.

Delivery Vehicles:

0-3 per day – and these would use the existing main loading dock/delivery area immediately adjacent to the project site and utilized by 2,000 vehicles a day.

Noise

1. What BMPs would be used to ensure “that noise will be strictly controlled and minimized” (Section VI: Mitigation)?

The Blue Lake Rancheria has a Nuisance / Noise Ordinance that applies to all activities. All equipment will be in compliance with all applicable noise regulations, and construction noise, any loud exhaust systems, and back-up indicators will be measured using decibel readers. The Tribe regularly conducts and tracks decibel readings for activities on the Rancheria to ensure noise control, and noise export off the Rancheria. It

should also be noted that the site is adjacent to an existing biomass energy system with compressors and dust collection equipment, a 1MW diesel generator that is in routine use, and the main loading dock/delivery area that handles 2,000 vehicles (including large delivery trucks) daily (source: *Blue Lake Rancheria Transportation Plan*, 9/30/2011). On the north side of the project is California Highway 299, which handles 1,100 vehicles per hour (source: <http://traffic-counts.dot.ca.gov/2013all/Route280-405.html>). The additional noise anticipated from this project will be negligible, on both a standalone and cumulative basis.

Many thanks,

Jana

Jana Ganion
Energy Director
Blue Lake Rancheria
jganion@bluelakerancheria-nsn.gov
707.668.5101 x1044

www.bluelakerancheria-nsn.gov

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**APPENDIX C:
ATTACHMENT 8 – CALIFORNIA ENVIRONMENTAL QUALITY ACT
(CEQA) COMPLIANCE FORM**

ATTACHMENT 8

California Environmental Quality Act (CEQA) Compliance Form

All applicants must complete and sign this form, regardless of whether the proposed activity is considered a “project” as defined below.

The California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000 et seq.) requires public agencies to identify the significant environmental impacts of their actions and to avoid or mitigate them, if feasible.¹ Under CEQA, an activity that may cause either a direct or reasonably foreseeable indirect physical change in the environment is called a “project.”² Approval of a contract, grant, or loan may be a “project” under CEQA if the activity being funded may cause a direct or reasonably foreseeable indirect physical change in the environment. Agencies must comply with CEQA before they approve a “project.” This may require preparing one or more of the following documents:

- A Notice of Exemption (if the project is exempt from CEQA);³
- An Initial Study (if the project may have a significant effect on the environment);⁴
- A Negative Declaration (if the Initial Study shows that the project will not have a significant effect on the environment) or a Mitigated Negative Declaration (if any significant effects identified by the Initial Study can be avoided or mitigated to a level of insignificance);⁵ or
- An Environmental Impact Report (if there is substantial evidence that the project will have significant effects).⁶

The **Lead Agency** is the public agency that has the greatest responsibility for preparing environmental documents under CEQA, and for carrying out, supervising, or approving a project. Where the award recipient is a public agency, the Lead Agency is typically the recipient. Where the award recipient is a private entity, the Lead Agency is the public agency that has greatest responsibility for supervising or approving the project as a whole.⁷ When issuing contracts, grants, or loans, the Energy Commission is typically a “**Responsible Agency**” under CEQA, which means that it must make its own CEQA findings based on review of the Lead Agency’s environmental documents. If the Energy Commission is the only public agency with responsibility for approving the project, then the Energy Commission must act as the Lead Agency and prepare its own environmental documents before approving the project.

This form will help the Energy Commission determine what type of CEQA review, if any, is necessary before it can approve the award, and which agency will perform that review as Lead Agency. It may also help to the applicant determine the CEQA process necessary for the proposed project. Please answer all questions as completely as possible. The Energy Commission may request additional information in order to clarify responses provided on this form.

¹ For a brief summary of the CEQA process, visit <http://ceres.ca.gov/ceqa/summary.html>.

² California Public Resources Code § 21065.

³ 14 California Code of Regulations (CCR) §§ 15061 and 15062.

⁴ 14 CCR § 15063.

⁵ 14 CCR §§ 15070 et seq.

⁶ 14 CCR §§ 15080 et seq.

⁷ 14 CCR §§ 15050 and 15051. The Lead Agency typically has general governmental powers (such as a city or county), rather than a single or limited purpose (such as an air pollution control district).

**ATTACHMENT 8
California Environmental Quality Act (CEQA) Compliance Form**

1. What are the physical aspects of the project proposed activities? (Check all that apply and provide a brief description of work, including the size or dimensions of the project).

Type of Project	Yes	No	Project Description
Construction (including grading, paving, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Grading of est. 2 acres of dirt/scrub land for ground-mounted solar array footings. Paving for solar array footings est. 3 square ft x 20 footings. Paving for foundation for battery storage building, est. 625 sq. ft. pad. Paving for ground-mounted recloser est. 100 sq. ft. pad.
Trenching	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Trench and conduit for est. 800 linear feet of cables from solar array and battery to existing electrical infrastructure.
New or replaced pipelines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Modification or conversion of a facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
New or modified operation of a facility or equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	New and modified electrical equipment to connect and enable microgrid controller technology at casino, hotel, and tribal government facilities.
On-road demonstration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Paper study (including analyses on economics, feedstock availability, workforce availability, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Solar feasibility study.
Laboratory research	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Temporary or mobile structures (skid-mounted)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Design/Planning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Solar system vendor designs. Battery system vendor designs. Finalize site plan layout, conduct civil and electrical engineering, generation of plans and specifications.
Other (describe and add pages as necessary)	<input type="checkbox"/>	<input type="checkbox"/>	

2. Where are the project proposed activities located or where will they be located? (Attach additional sheets as necessary.)

Street Address	City/ County	Type of Work to Be Completed at Site
Blue Lake Rancheria 428 Chartin Road	Blue Lake/Humboldt	Installation of 500kW ground-mounted solar array; installation of ground-mounted 800kWh battery system; underground conduit utility and power connections between these two systems and existing power infrastructure onsite; ground-mounted recloser and associated equipment.

**ATTACHMENT 8
California Environmental Quality Act (CEQA) Compliance Form**

3. Will the ~~project~~ proposed activities potentially have environmental impacts that trigger CEQA review? (Check a box and explain for each question.)

Question	Yes	No	Unsure	Explanation
Is the project site environmentally sensitive?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the project site on agricultural land?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There are no agricultural operations on this land.
Is this project part of a larger project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If this project is implemented, the Tribe is considering expanding the microgrid to encompass all of its trust lands, including residences, a community well, fueling station and other facilities.
Is there public controversy about the proposed project or larger project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The region is in support of this project because it provides critical infrastructure operability in emergency situations.
Will historic resources or historic buildings be impacted by the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There are no historic resources or buildings on this land. The Tribal Historic Preservation Office will conduct a review pursuant to the Environmental Assessment (described below).
Is the project located on a site the Department of Toxic Substances Control and the Secretary of the Environmental Protection have identified as being affected by hazardous wastes or cleanup problems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Will the project generate noise or odors in excess of permitted levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Will the project increase traffic at the site, and by what amount?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temporary, intermittent trucks for construction purposes will be traveling to/from the site. 2-5 trucks per week.

4. Will the ~~project~~ proposed activities require discretionary permits or determinations, as listed below?

Type of Permit	No.	Modified	New	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Date of Issuance
Air Quality Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**ATTACHMENT 8
California Environmental Quality Act (CEQA) Compliance Form**

Type of Permit	No.	Modified	New	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Date of Issuance
Water Quality Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Conditional Use Permit or Variance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Building Expansion Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Hazardous Waste Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Rezoning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Authority to Construct	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Tribal Building Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Blue Lake Rancheria, California	Reason for permit: the Tribe must authorize building projects on the Rancheria. Process: Tribe has adopted the current UBC and IBC as modified by the State of California. Permit request is presented to the Tribal Council and accomplished with Tribal Resolution. All development must comply with the Tribe's adopted building codes and Tribal ordinances. Anticipated date of issuance is 2/1/15.

5. Of the agencies listed in #4, have you identified and contacted the agency that will be the lead CEQA agency on the project?

Yes. Provide the name of and contact information for the lead agency.

Michelle Fuller, Director, Environmental Programs Division, Blue Lake Rancheria, California
PO Box 428, Blue Lake, CA 95525. Telephone 707.668.5101 x1036.

No. Explain why no contact has been made, and/or a proposed process for making contact with the lead agency.

**ATTACHMENT 8
California Environmental Quality Act (CEQA) Compliance Form**

6. Has the any agency listed in #4 prepared environmental documents (e.g., Notice of Exemption, Initial Study/Negative Declaration/Mitigated Negative Declaration, Environmental Impact Report, Notice of Determination) under CEQA for the proposed project, or (if the documents have not been prepared) indicated that it will prepare such documents?

Yes. Provide the name of and contact information for the agency.

Please complete the following and attach the CEQA document to this worksheet. (For "Not a project," the title of the document may be an e-mail, resolution, or letter.)

Type of Environmental Review	Title of Environmental Document	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to approval of award)
"Not a project"		N/A		N/A
Exempt (Resolution of public agency or Agenda Item approving Exemption)		N/A		N/A
Exempt (Notice of Exemption)		N/A		
Initial Study				
Negative Declaration				
Mitigated Negative Declaration				
Notice of Preparation				
Environmental Impact Report				
Master Environmental Impact Report				
Notice of Determination				
NEPA Document (Environmental Assessment, Finding of No Significant Impact, and/or				

**ATTACHMENT 8
California Environmental Quality Act (CEQA) Compliance Form**

Type of Environmental Review	Title of Environmental Document	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to approval of award)
Environmental Impact Statement) ⁸				

No. If any of the agencies identified in #4 have indicated that they will prepare CEQA documents, Explain why no document has been prepared. Propose a process for obtaining lead agency approval and the estimated date for that approval (must occur before the Energy Commission will approve the award).

This project will occur entirely on trust lands of the Blue Lake Rancheria, California, a federally recognized Native American tribal government. The Tribe is the lead agency with the authority to issue approval for major tribal actions. Process: the Tribe has initiated a new Environmental Assessment (EA) for this project, which is being conducted by Blue Lake Rancheria Environmental Programs Department, in compliance with the Tribe's Environmental Policy Ordinance 02-2000, and all other applicable law. Estimated date of approval of the EA is 2/1/15.

Certification: I certify to the best of my knowledge that the information contained in this form is true and complete. I further certify that I am authorized to complete and sign this form on behalf of the proposing organization.

Name: Jana Ganion

Title: Energy Director

Signature: 

Phone Number: 707.668.5101 x1044

Email: jganion@bluelakerancheria-nsn.gov

Date: 11/4/14

⁸ For additional information about NEPA (the National Environmental Policy Act, 42 U.S.C. 4321 et seq.), see: <http://www.epa.gov/compliance/basics/nepa.html>.

**APPENDIX D:
APRIL 24TH E-MAIL BETWEEN JANA GANION AND ELI HARLAND**

From: [Jana Ganion](#)
To: [Harland, Eli@Energy](mailto:Harland_Eli@Energy)
Cc: [David J. Carter](#)
Subject: Re: BLR Microgrid and CEQA
Date: Friday, April 24, 2015 10:36:00 AM

Hi Eli,

Thanks for this clarification.

There is no planned water use during operation. We are not planning on installing a water line to array field for panel washing. In our climate we get enough rain so that panel washing is not typically required. The Tribe has an existing 1,500 gallon water truck that we could use if panel washing becomes necessary, and the water to fill the truck will come from existing water sources on the Rancheria.

Thank you,

Jana

Jana Ganion
Energy Director
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From: <Harland>, "Harland, Eli@Energy" <Eli.Harland@energy.ca.gov>
Date: Friday, April 24, 2015 at 9:51 AM
To: Jana Ganion <jana.ganion@bluelakerancheria-nsn.gov>
Cc: Dave Carter <David.Carter@humboldt.edu>
Subject: RE: BLR Microgrid and CEQA

Thanks Jana. I assume there wouldn't be, but there are some PV facilities that use water to suppress dust during operation (mostly in the desert) and we have new rules for using water while operating gas fired power plants. I think our staff is being cautious about water use, which is why they asked the questions. Thanks

-Eli

From: Jana Ganion [<mailto:jana.ganion@bluelakerancheria-nsn.gov>]

Sent: Thursday, April 23, 2015 12:19 PM
To: Harland, Eli@Energy
Cc: David J. Carter
Subject: Re: BLR Microgrid and CEQA

Hi Eli,

Let me review this and get back with you asap.

My initial thinking is that there is no water used during operation, but I will double check.

Best,

Jana

Jana Ganion
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From: <Harland>, "Harland, Eli@Energy" <Eli.Harland@energy.ca.gov>
Date: Thursday, April 23, 2015 at 11:17 AM
To: Jana Ganion <jana.ganion@bluelakerancheria-nsn.gov>
Cc: Dave Carter <David.Carter@humboldt.edu>
Subject: RE: BLR Microgrid and CEQA

Hi Jana, the team working on the environmental review has an additional water question:

We are assuming that no water will be used during operation; however given recent court cases, we should confirm that this is true. If water is being used during operation, we'll need to know the source and the approximate amount.

Thanks
-Eli

From: Jana Ganion
Sent: 4/21/15, 4:21 PM

To: Harland, Eli@Energy
Cc: David J. Carter
Subject: Re: BLR Microgrid and CEQA
Hi Eli,

Thank you. I would like to offer to join in on the call in the morning if that is acceptable to you both, as I can help gather posting sites, etc.

For example, the Blue Lake Rancheria has 3 established posting sites and we can certainly post in additional sites in/around the project area here. The City of Blue Lake also has 3 public posting sites that they typically use.

Please let me know – I can participate tomorrow anytime before noon.

All the best,

Jana

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From: <Harland>, "Eli@Energy" <Eli.Harland@energy.ca.gov>
Date: Tuesday, April 21, 2015 at 4:09 PM
To: Jana Ganion <jana.ganion@bluelakerancheria-nsn.gov>
Cc: Dave Carter <David.Carter@humboldt.edu>
Subject: RE: BLR Microgrid and CEQA

Thank you Jana and David. I sent the responses to the team that is working on the environmental analysis and if they have any questions I will let you know as soon as they send them to me.

The next step following the preparation of the analysis is likely a public review period. I don't think it's totally clear yet what type of determination the analysis will lead us to, though I am getting the sense that it is a Negative Declaration. I was hoping for something different, but I'm doubtful that it is going to be something less than a Neg Dec.

CEQA is pretty specific about the processes that we will follow to fulfill public review requirements for a Neg Dec. I have those steps outlined. The local distribution list will be very helpful, so thank you for working on that. For the other public review requirements there are a few actions that we might need local help with, like posting the Notice of Intent in and around the project area.

David, are you available tomorrow morning to discuss the public review and steps, including the role of the applicant (in this case SERC) and the lead agency (in this case the CEC)?

We are getting much closer to pulling all of this together and I appreciate your persistence and attention.

-Eli

From: Jana Ganion [<mailto:jana.ganion@bluelakerancheria-nsn.gov>]
Sent: Tuesday, April 21, 2015 2:00 PM
To: Harland, Eli@Energy
Cc: David.Carter@humboldt.edu
Subject: Re: BLR Microgrid and CEQA

Hello Eli,

Please see below for answers to the questions from the Environmental Office. Please let me know if there are any questions.

Regarding circulation of the draft environmental review, we will forward you a local distribution list, and I am reaching out to regional governments to see if they have a list as well. Hope to have that compiled and to you by the end of this week, but please do let me know if you need it earlier.

Air Quality

1. What types and numbers of equipment would be used during construction activities?

[Ready mix truck \(for battery storage system foundation - 1–2 days total\)](#)

[Skid steer](#)

[Mini excavator](#)

[Grader](#)

[Water truck](#)

2. Would Best Management Practices (BMPs) be implemented to reduce effects to air quality (e.g., dust) during construction activities?

[Yes, a watering truck would be onsite and conduct watering daily \(or more often as needed, unless it is raining\).](#)

Aesthetics

1. Would the PV panels be placed in a fixed position?

Yes. The design is that the solar panels are in a fixed position on the ground, and the panels themselves are fixed on their bases (i.e. they don't move to track the sun).

Soil and Water (and Biology)

1. Would BMPs for erosion control be implemented during grading to protect nearby streams and rivers?

Best management practices for erosion control have been thoroughly discussed with the construction contractor, Kernen Construction and will be applied according to site conditions at time of construction. Kernen will implement straw wattles, place straw over any graded areas, and/or construct silt fences. There will be relatively low risk of erosion in the summer months, but BMPs will be applied conservatively to ensure zero erosion.

Traffic

1. What is the peak number of construction workers and the average number of construction workers?

Average number of construction workers: 5

Peak number of construction workers: 10

2. For the 5 daily vehicles anticipated during construction, please provide a breakdown of the types of vehicles (including regular commuter vehicles for construction workers, delivery vehicles, construction vehicles, etc.).

Construction Vehicles:

Two (2) of the following vehicles at any given time:

Ready mix truck

Skid steer

Mini excavator

Grader

Water truck

Regular Commuter Vehicles:

0-3 per day

Notes: Because the main site contractors proposed for this project, Kernen Construction is <2 miles from the Rancheria site, their construction workers typically drive the actual equipment to the site (as applicable), and therefore have few if any commuter cars. The majority of the work will be done in sequence, that is it is anticipated that typically one vendor will be working onsite at a time. The existing casino/hotel parking lots, and the existing main loading dock/delivery area (for the entire Rancheria) are immediately adjacent to the project site and currently utilized by 2,000 vehicles a day . Any additional vehicles would be instructed to use these non-project areas to access the site and park.

Delivery Vehicles:

0-3 per day – and these would use the existing main loading dock/delivery area immediately adjacent to the project site and utilized by 2,000 vehicles a day.

Noise

1. What BMPs would be used to ensure “that noise will be strictly controlled and minimized” (Section VI: Mitigation)?

The Blue Lake Rancheria has a Nuisance / Noise Ordinance that applies to all activities. All equipment will be in compliance with all applicable noise regulations, and construction noise, any loud exhaust systems, and back-up indicators will be measured using decibel readers. The Tribe regularly conducts and tracks decibel readings for activities on the Rancheria to ensure noise control, and noise export off the Rancheria. It should also be noted that the site is adjacent to an existing biomass energy system with compressors and dust collection equipment, a 1MW diesel generator that is in routine use, and the main loading dock/delivery area that handles 2,000 vehicles (including large delivery trucks) daily (source: *Blue Lake Rancheria Transportation Plan, 9/30/2011*). On the north side of the project is California Highway 299, which handles 1,100 vehicles per hour (source: <http://traffic-counts.dot.ca.gov/2013all/Route280-405.html>). The additional noise anticipated from this project will be negligible, on both a standalone and cumulative basis.

Many thanks,

Jana

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