STATE OF CALIFORNIA

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 12/2019) CALIFORNIA ENERGY COMMISSION

A) New Agreement # 700-22-002 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
700/STEP – Siting, Transmission and Environmental Protection Division	Jim Bartridge	16	916-926-8093

C) Contractor's Legal Name	Federal ID #
Humboldt State University Sponsored Programs Foundation	94-6050071

D) Title of Project
Northern California & Southern Oregon Mission Compatibility and Transmission Infrastructure Assessment Project

E) Term and Amount

Start Date	End Date	Amount
08 / 01 /2022	07 / 31 / 2023	$ 644,999

F) Business Meeting Information

☐ Operational agreement (see CAM Manual for list) to be approved by Executive Director

☐ ARFVTP agreements $75K and under delegated to Executive Director

Proposed Business Meeting Date 07 /13/ 2022 ☐ Consent ☒ Discussion

Business Meeting Presenter Jim Bartridge Time Needed:

Please select one list serve. 1. RFPS solicitations, contracts, funding announcements

2. Integrated Energy Policy Report 3. Joint-Agency Report-SB100, 4. Offshore Renewable Energy

Agenda Item Subject and Description:

Humboldt State University Sponsored Programs Foundation. Proposed resolution approving Agreement 700-22-002 with Humboldt State University Sponsored Program Foundation for a $644,999 contract to analyze transmission infrastructure limitations and opportunities, map existing transmission infrastructure, and provide technical data and assistance to further assess wind energy resources off the coast in Northern California and Southern Oregon and adopting staff's determination that this project is exempt from CEQA. (Federal Funding) Contact: Jim Bartridge

G) 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.

   ☐ Statutory Exemption. List PRC and/or CCR section number:

   ☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit 14, § 15306, and exempt under Cal. Code Regs., tit 14, § 15262 Cal.

   Code Regs., tit. 14 Section 15306 provides that projects which consist of basic data collection, research, experimental management, and resource evaluation activities, and which do not result in a serious or major disturbance to an environmental resource are categorically exempt from the provisions of the California Environmental Quality Act. This project consists of data collection, research, and resource evaluation activities in existing offices and possibly site visits. For these reasons, the proposed work will not have any significant effect on the environment and is exempt under Cal. Code Regs., tit 14, Section 15306,

   In addition, this contract involves only feasibility or planning studies for possible future actions that appropriate agencies boards, or commissions have not approved, adopted, or funded. Environmental factors of this research have been considered. Therefore, the project is exempt from Cal. Code Regs., tit 14, Section 15262.

   The project will not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; does not involve any cumulative impacts of successive projects of the same type in the same place that might be considered significant; does not involve unusual circumstances that might have a significant effect on the environment; will not result in damage to scenic resources within a highway officially designated as a state scenic highway; the project sites (offices) are not included on any list compiled pursuant to Government Code section 65962.5; and the project will not cause a substantial adverse change in the significance of a historical resource. Therefore, none of the exceptions to categorical exemptions listed in CEQA Guidelines section 15300.2 apply to this project, and this project will not have a significant effect on the environment.

   ☐ 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

   ☐ Negative Declaration

   ☐ Mitigated Negative Declaration

☐ Environmental Impact Report
☐ Statement of Overriding Considerations

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

Legal Company Name:	**Budget**
Conaway Geomatics	$ 19,971
Mott MacDonald Group, Inc.	$ 19,999
Delaware Quanta Technology, LLC	$ 285,084
U.S. Department of Energy, National Renewable Energy Laboratory	$ 84,924
Triple HS, Inc. dba H. T. Harvey & Associates	$ 29,957

I) List all key partners: (attach additional sheets as necessary)

Legal Company Name:
Oregon Department of Energy
U.S. Department of Energy, Pacific Northwest National Laboratory

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
Department of Defense - Office of Local Defense Community Cooperation (CU1345-21-01)	FY 21/22	901.001	$644,999

R&D Program Area: Select Program Area TOTAL: $644,999

Explanation for “Other” selection

Reimbursement Contract #: Federal Agreement #: CU1345-21-01

K) Contractor’s Contact Information

1. **Contractor’s Administrator/Officer**

   Name: Jocelyne Takatsuno

   Address: 1 Haprst Street

   City, State, Zip: Arcata, CA 95521

   Phone: 707-826-4175

   E-Mail: jt366@humboldt.edu

2. **Contractor’s Project Manager**

   Name: Dr. Arne Jacobson/Jim Zoellick- Cal Poly Humboldt

   Address: 1 Harpst Street

   City, State, Zip: Arcata, CA 95521Phone:

   E-Mail:

L) Selection Process Used

STATE OF CALIFORNIA

CONTRACT REQUEST FORM (CRF)

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☒ Solicitation RFP Solicitation #: RFP-21-701 # of Bids: 1 Low Bid ☒ No ☐ Yes

☐ Non Competitive Bid *(Attach DGS-GSPD-09-007 https://www.dgs.ca.gov/PD/Forms)*

☐ Exempt Select Exemption (see instructions)

M) Contractor Entity Type

☐ Private Company *(including non-profits)*

☒ CA State Agency *(including UC and CSU)*

☐ Government Entity *(i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)*

N) Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE?

If yes, check appropriate box(es): ☐ SB ☐ MB ☐ DVBE

O)Civil Service Considerations

☐ Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)

☐ Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)

☒ The Services Contracted:

- ☐ are not available within civil service
- ☐ cannot be performed satisfactorily by civil service employees
- ☒ are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system.

☐ The Services are of such an:

- ☐ urgent
- ☐ temporary, or
- ☐ occasional nature

that the delay to implement under civil service would frustrate their very purpose.

Justification:

P) Payment Method

1. ☒ Reimbursement in arrears based on:
   ☐ Itemized Monthly ☒ Itemized Quarterly ☐ Flat Rate ☐ One-time
2. ☐ Advanced Payment
3. ☐ Other, explain:

Q) Retention

Is Agreement subject to retention? ☐ No ☒ Yes

If Yes, Will retention be released prior to Agreement termination? ☐ No ☐ Yes

R) Justification of Rates

S) Disabled Veteran Business Enterprise Program (DVBE)

1. ☐ Exempt (Interagency/Other Government Entity)
2. ☒ Meets DVBE Requirements DVBE Amount: $ 19,971 DVBE %:3

a. ☐ Contractor is Certified DVBE
3. ☒ Contractor is Subcontracting with a DVBE: Conaway Geomatics
4. ☐ Contractor selected through CMAS or MSA with no DVBE participation
5. ☐ Requesting DVBE Exemption (attach CEC 95)

T) Miscellaneous Agreement Information

1. Will there be Work Authorizations? ☒ No ☐ Yes
2. Is the Contractor providing confidential information? ☒ No ☐ Yes
3. Is the contractor going to purchase equipment? ☒ No ☐ Yes
4. Check frequency of progress reports
   ☒ Monthly ☐ Quarterly ☐ Other...
6. Will a final report be required? ☐ No ☒ Yes
7. Is the Agreement, with amendments, longer than three years? If yes, why? ☐ No ☒ Yes

U) The following items should be attached to this CRF (as applicable)

1.	Exhibit A, Scope of Work	☐ N/A	☒ Attached
2.	Exhibit B, Budget Detail	☐ N/A	☒ Attached
3.	DGS-GSPD-09-007, NCB Request	☒ N/A	☐ Attached
4.	CEC 95, DVBE Exemption Request	☒ N/A	☐ Attached
5.	CEQA Documentation	☐ N/A	☒ Attached
6.	Resumes	☐ N/A	☒ Attached
7.	CEC 105, Questionnaire for Identifying Conflicts		☒ Attached

Jim Bartridge — **Agreement Manager** — 6/28/2022 — **Date**

Elizabeth Huber — **Office Manager** — 6/30/2022 — **Date**

Shawn Pittard — **Deputy Director** — 6/28/2022 — **Date**

Exhibit A
SCOPE OF WORK

TASK LIST

Task #	Task Name
1	Agreement Management
1.1	Kick-off Meeting
1.2	Invoices
1.3	Manage Subcontractors
1.4	Progress Reports
1.5	Draft Final Report Final Report
2	**Stakeholder and Public Outreach Plan Schedule for TFG Meetings Presentation Materials for Outreach Meetings Stakeholder and Public Outreach Meetings TFG Outreach Meetings**
3	**Data and Information Selection, Spatial Footprint, and Current Capabilities/Expandability**
3.1	Data Acquisition • A draft list of data and information necessary to document the existing condition of the study area. • A final list of data and information necessary to document the existing condition of the study area.
3.2	Document Spatial Footprint • Maps of the study area that include all of the features identified in Task 3.1 • All geospatial data and information gathered in either the Esri File Geodatabase format (*.gdb) or Esri Shapefile format (*.shp)
3.3	Current Capabilities/Expandability • A technical memo documenting the capabilities of current infrastructure in the study area to integrate offshore wind energy resources off the coast of Northern California and Oregon.
4	**Offshore Wind Resource Assumptions and Scenario Development** • A technical memo that documents the scaled scenarios, clean energy goals, and other important information.
5	**Offshore and Onshore Infrastructure Options and Constraints**
5.1	Infrastructure Options • Maps of infrastructure options for each scenario developed in Task 4. • A technical memo that documents conceptual infrastructure expansion options for each scenario developed in Task 4.
5.2	Infrastructure Constraints • A technical memo documenting the constraints associated with the infrastructure expansion options identified in Task 5.1.
6	**Estimated Distribution of costs and Benefits** • A technical memo documenting the costs and benefits of the scenario options evaluated.
7	**Findings and Recommendations** • A technical memo documenting the findings and recommendations.

ACRONYMS/GLOSSARY

Specific acronyms and terms used throughout this scope of work are defined as follows:

Acronym	Definition
BOEM	Bureau of Ocean Energy Management
CAISO	California Independent System Operator
CAM	Commission Agreement Manager
CEC	California Energy Commission
CSG	Core Steering Group
CPUC	California Public Utilities Commission
DoD	Department of Defense
ODOE	Oregon Department of Energy
OLDCC	DOD Office of Local Defense Community Cooperation
ORESA	Oregon Renewable Energy Siting Assessment
OSD	Office of the Secretary of Defense Clearinghouse
OSW	Offshore Wind
SB 100	Senate Bill 100 – The 100 Percent Clean Energy Act of 2018
TFG	Technical Focus Group
TPP	CAISO Transmission Planning Process

BACKGROUND

California's passage of the 100 Percent Clean Energy Act of 2018, referred to as Senate Bill 100 or SB 100 (SB 100, De León, Chapter 312, Statutes of 2018), requires eligible renewable energy resources and zero-carbon resources to supply 100 percent of total retail sales of electricity to end use customers and 100 percent of electricity procured to serve all state agencies by 2045. In March 2016, the passage of Oregon Senate Bill 1547 increased Oregon's Renewable Portfolio Standard requirement to 50% renewables by 2040. Offshore wind has been identified as an abundant, domestic source of clean energy production for the United States, and wind energy developed in federal ocean waters off California's and Oregon's coastline is poised to play an important role in diversifying the portfolio of resources that will help achieve these goals.

This Request for Proposals is intended to assist California, Oregon and local governments to address and prevent the encroachment of incompatible renewable energy projects from adversely impacting Department of Defense (DoD) readiness and defense capabilities in Northern California and Southern Oregon, while supporting continued community economic development, enhancing civilian and military communication, collaboration, and partnership.

Existing transmission infrastructure resides proximate to, and within, key DoD operational areas of the Northwest Training Range Complex offshore along the Oregon and Washington coast, China Lake Testing Range Complex in the Mohave Desert, the El Centro Range Complex in southern California, and the offshore ranges in southern and central California. Commercial development of energy projects has the potential to affect unique DoD activities and military readiness. As such, additional and refined

transmission planning in areas with less congested DoD operations, and with greater likelihood of mission compatibility, is necessary.

The purpose of this initiative is to provide a clear understanding of existing electricity infrastructure within the defined area of interest and to deliver key characteristics to enable decision makers to plan and manage U.S. energy grid scenarios supporting the transition from a fossil-fueled central generation model to a more diversified power generation portfolio compatible with the DoD mission. Because decision makers for the planning and management of the Oregon power grid are broad and diffuse, broad stakeholder identification and thorough stakeholder involvement will be critical to the success of this project.

The project area is defined by a network of DoD operational areas utilized by military installations in California and Oregon for testing and training requirements from Cape Mendocino, California to Coos Bay, Oregon, including both onshore and offshore military operational areas. The project will be broken into two parts.
Part 1 of the project will map and attribute existing energy infrastructure to provide accurate picture of energy landscape and, at minimum, detail the following:

1. Spatial Footprint - Perform data acquisition, remote sensing, surveying, and mapping to capture and illustrate current power infrastructure. This should document features such as:
    a. Energy generation facilities by type, configuration, and output capability.
    b. Easements.
    c. Transmission and distribution systems; and
    d. Energy storage facilities.
2. Capable Capacity as technically rated for transmission and energy storage.
3. Available Capacity as measured through power flow, and where feasible, the contractually reserved capacity for transmission and energy storage. Contingent on publicly available data and data sharing from transmission owners and operators.
4. Expandability – Document potential to expand and/or upgrade current infrastructure and present maximum capability within existing rights-of-way and project footprints. Describing necessary infrastructure and cost and potential retrofit engineering and design.
5. Energy Generation Types (including standalone energy storage) and Sources

Part 2 of the project will involve infrastructure scenarios to accommodate a range of scales of power generation. Scenarios will provide conceptual and quantitative frameworks to describe and assess how different geographic assumptions for developing offshore energy resources contribute to electricity supply for California, Oregon, and the broader Western region. Each scenario should quantify materials and manufacturing requirements, human and financial resource needs, placement recommendations and constraints, and environmental impacts that come with expanding infrastructure necessary to deliver offshore electricity generation. These scenarios shall use qualitative analysis, quantitative assumptions, and computational models of the energy, economic, and/or electricity systems and attempt to integrate the environmental, technologic, economic, and deployment-related elements into an internally consistent analytical framework.

Failure to understand transmission infrastructure limitations and capacity in Northern California and Southern Oregon will continue to place incompatible renewable energy projects within key DoD operational areas that can result in adverse operational impacts to DoD's readiness posture, to include, but not limited to, impacts to communications and frequency interference, vertical obstruction of airspace in low-level military training routes, and radar interference that degrades the accuracy and reliability of aircraft surveillance radars (ASRs) and western defense systems.

GOALS and OBJECTIVES OF THE AGREEMENT

The primary goal of this project is to provide data, mapping and technical analysis to support continued partnership with, and promote early consultation with, the DoD and OSD Clearinghouse to prevent incompatible renewable energy projects within critical DOD operational areas that have the potential to adversely impact DoD's testing, training and military operations. Consistent with the DoD Office of Local Defense Community Cooperation's (OLDCC) goals for the Military Installation Sustainability Program, the project will develop a detailed technical analysis for transmission infrastructure limitations and opportunities, map existing transmission infrastructure and provide technical data & assistance documents to allow State governments and renewable energy developers information to identify areas that are best suited for proposed development.

In addition to the compatibility and transmission assessment goals of this project, the activities surrounding this project will promote a greater public understanding of military missions and foster enhanced communication between civilian and military leaders. The project shall assess compatible energy siting by accurately detailing existing electric infrastructure, to include generation, transmission, and distribution systems, within an area of interest bounded north of Coos Bay, Oregon to Mendocino, California. The infrastructure will be mapped and evaluated for generation type and source, available capacity, and capable transmission capacity to serve the present and future needs to meet renewable portfolio and clean energy standards, and future demand growth expectations. The study will also provide detailed scenarios for different levels of potential offshore wind development based on geographic extent and the ability to deliver energy to California, Oregon, and the broader Western grid that could scale within the area of interest. The scenarios will provide assumptions, methodologies, options, and recommendations to include type, configuration, route, load distribution, and estimated cost.

This transmission infrastructure analysis will allow for early identification of potential conflicts with military testing and training and the siting of renewable energy projects. The project looks to build upon existing efforts currently underway in California and Oregon for mission compatibility.

The project will occur in two parts. Part 1 will create a baseline characterization of existing infrastructure and information, including a geodatabase. Part 2 will develop infrastructure scenarios to accommodate a range of floating offshore wind energy development in federal waters off California and Oregon. Part 1 and Part 2 will be

layered so that the baseline information developed in Part 1 informs the analyses in Part 2.

Both Part 1 and Part 2 of the project will result in new technical information, analyses, and cost estimates to deliver energy from offshore wind to California, Oregon, and the greater Western grid. Currently, there is limited transmission capability in both Northern California and Oregon to deliver significant scales of offshore wind. California and Oregon are currently involved in processes to assess offshore wind resources and this grant will provide critical information to better understand how the offshore wind resources that both states are assessing could deliver renewable energy to the electric grid. With California's overarching goal of protecting the military mission in California and attaining state and DoD's energy goals and energy security, the project will develop necessary information and establish potential options for developing offshore wind energy from Northern California and Oregon to advance the stated goals of sustaining and enhancing the military mission while achieving long-term energy goals. The project also aligns with many goals of the Oregon Department of Energy (ODOE), such as: collecting data and information on offshore wind and transmission infrastructure, sharing of data and the involvement of stakeholders from ODOE's Oregon Renewable Energy Siting Assessment (ORESA) study, supporting the Bureau of Ocean Energy Management (BOEM) process for identifying offshore wind call areas, and providing technical support on Oregon energy issues.

A project goal is to build upon existing coordination with stakeholders, including but not limited to the BOEM-California task force and the BOEM-Oregon task force. The Contractor will assist CEC and ODOE in working collaboratively to ensure public and stakeholder outreach in both California and Oregon as a part of the work effort, especially for the analyses developed in Part 2.

FORMAT/REPORTING REQUIREMENTS

Deliverables/Reports

When creating reports, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Agreement Manager (CAM), the latest version of the Consultant Reports Style Manual published on the Energy Commission's web site:

http://www.energy.ca.gov/contracts/consultant_reports/index.html

Each final deliverable shall be delivered as one original, reproducible, 8 ½" by 11", camera-ready master in black ink. Illustrations and graphs shall be sized to fit an 8 ½" by 11" page and readable if printed in black and white.

Electronic File Format

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CAM) of the full text in a compatible version of Microsoft Word (.doc).

The following describes the accepted formats of electronic data and documents provided to the Energy Commission as contract deliverables and establishes the computer platforms, operating systems and software versions that will be required to review and approve all software deliverables.

- Data sets shall be in Microsoft (MS) Access or MS Excel file format.
- PC-based text documents shall be in MS Word file format.
- Documents intended for public distribution shall be in PDF file format, with the native file format provided as well.
- Project management documents shall be in MS Project file format.

Software Application Development
If this scope of work includes any software application development, including but not limited to databases, websites, models, or modeling tools, contractor shall utilize the following standard Application Architecture components in compatible versions:

- 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 Software Application Development requirements above must be approved in writing by the Energy Commission Information Technology Services Branch.

TASK 1- AGREEMENT MANAGEMENT

Task 1.1 Kick-off Meeting
The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

The Contractor shall:
- Attend a "kick-off" meeting with the CAM, the Contracts Officer, and a representative of the Accounting Office The meeting will be held via MS TEAMS or ZOOM or teleconference. [OR] The meeting will be held in Sacramento, CA and the CAM will designate the specific location.] The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the CAM in this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting.

- If necessary, prepare an updated Schedule of Deliverables based on the decisions made in the kick-off meeting.

The CAM shall:
- Arrange the meeting including scheduling the date and time.
- Provide an agenda to all potential meeting participants prior to the kick-off meeting.

Deliverables:
- An Updated Schedule of Deliverables (if applicable)

Task 1.2 Invoices

The Contractor shall:

- Prepare invoices for all reimbursable expenses incurred performing work under this Agreement in compliance with the Exhibit B of the Terms and Conditions of the Agreement. Invoices shall be submitted with the same frequency as progress reports (task 1.4). Invoices must be submitted to the Energy Commission's Accounting Office.

Deliverables:

- Invoices

Task 1.3 Manage Subcontractors

The goal of this task is to ensure quality products, to enforce subcontractor Agreement provisions, and in the event of failure of the subcontractor to satisfactorily perform services, recommend solution to resolve the problem.

The Contractor shall:

- Manage and coordinate subcontractor activities. The Contractor is responsible for the quality of all subcontractor work and the Energy Commission will assign all work to the Contractor. If the Contractor decides to add new subcontractors, they shall 1) comply with the Terms and Conditions of the Agreement, and 2) notify the CAM who will follow the Energy Commission's process for adding or replacing subcontractors.

Task 1.4 Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement.

The Contractor shall:

- Prepare progress reports which summarize all Agreement activities conducted by the Contractor for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due within 15 calendar days after the end of the reporting period. The CAM will provide the format for the progress reports.

Deliverables:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of this task is to prepare a comprehensive written Final Report that describes the original purpose, approach, results and conclusions of the work completed under this Agreement. The Final Report shall be prepared in language easily understood by the public or layperson with a limited technical background.

The Final Report must be completed before the termination date of the Agreement in accordance with the Schedule of Deliverables.

The Final Report shall be a public document. If the Contractor has obtained confidential status from the Energy Commission and will be preparing both a public and a confidential version of the Final Report, the Contractor shall perform the following subtasks for both the public and confidential versions of the Final Report.

In addition to any other applicable requirements, Final Reports must comply with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 et seq.), which prohibits

discrimination on the basis of disability; all applicable regulations and guidelines issued pursuant to the ADA; Cal. Gov. Code sects. 7405 and 11135; and Web Content Accessibility Guidelines 2.0, or a subsequent version, as published by the Web Accessibility Initiative of the World Wide Web Consortium at a minimum Level AA success criteria.

Task 1.5 Final Report

The Contractor shall:
- Prepare the draft Final Report for this Agreement

- Submit the draft Final Report for review and comment. The CAM will provide written comments to the Contractor. The Contractor shall review the comments and discuss any issues with the recommended changes with the CAM.

- Prepare and submit the Final Report, incorporating CAM comments.

Deliverables:
- Draft Final Report
- Final Report

TECHNICAL TASKS

Task 2 Stakeholder and Public Outreach

The goal of this task is to facilitate public and stakeholder outreach. In partnership with the CSG, the Contractor will carry out public and stakeholder outreach throughout the term of the project. The Contractor will consult with the CSG to develop a stakeholder and public outreach plan. Outreach would include engagement with the TFG and other key stakeholders and public participants in California and Oregon, including the BOEM task force in California and Oregon.

The Contractor shall:
- Consult with the CSG to develop a *Stakeholder and Public Outreach Plan* for the term of the project.
- Schedule stakeholder and public outreach meetings for the term of the project.
- Schedule outreach meetings with members of the TFG.
- Conduct stakeholder and public outreach meetings, including as necessary with the TFG. Prepare presentation materials for such meetings.

Deliverables:
- A Stakeholder and Public Outreach Plan, including schedule (draft and final).
- Schedule for TFG Outreach Meetings (draft and final).
- Presentation materials required for stakeholder and public outreach meetings (draft and final).

Task 3 Data and Information Selection, Spatial Footprint, and Current Capabilities/Expandability

Task 3.1 Data acquisition

The goal of this task is to acquire data and information necessary to document the existing condition of the study area, including current and approved and/or in interconnection queues but not yet constructed infrastructure within the study area. This will include data and information to document features, including but not limited to:

- Energy generation facilities by type, configuration, and output capability;
- Easements and rights-of-way,
- Substation, transmission and distribution systems;
- Energy storage facilities, and;
- Other data and information deemed necessary by the CSG to document current and anticipated conditions of the study area.

The Contractor shall:

- Consult with the CSG to determine the data and information needed to document the existing and anticipated future condition of the study area.
- Consult with the CSG to determine the necessary level of detail for infrastructure information related to the study area.
- Acquire data and information for the study area as noted above, and other data that may be needed to accurately represent the existing and anticipated future conditions of the study area.

Deliverables:

- A draft list of data and information necessary to document the existing condition of the study area, including current and approved transmission and distribution projects and/or those in interconnection queues but not yet constructed projects within the study area.
- A final list of data and information necessary to document the existing condition of the study area, including current and approved transmission and distribution projects and/or those in interconnection queues but not yet constructed projects within the study area.

Task 3.2 Document spatial footprint

The goal of this task is to document the spatial footprint data in map format using GIS data and information gathered in Task 3.1 and generate maps of the study area.

The Contractor shall:

- Document and map the spatial footprint in map format using GIS data and information gathered in Task 3.1
- Submit all geospatial data used and developed for this project to the Energy Commission and the OLDCC in either the Esri File Geodatabase format (*.gdb) or Esri Shapefile format (*.shp). Regardless of the geospatial data format, all geospatial data will include metadata in either the ISO 19139 Metadata Implementation Specification style or the SDSFIE-M style. Metadata records for each dataset will include the minimum required information per metadata style written within the organization's preferred metadata editor software; e.g., Esri's

ArcCatalog. For reference purposes only, see SDSFIE Online (https://www.sdsfieonline.org/) for more information on geospatial data structures and metadata requirements.

Deliverables:

- Maps of the study area that include all the features identified in Task 3.1
- All geospatial data and information gathered in Task 3.1 in either the Esri File Geodatabase format (*.gdb) or Esri Shapefile format (*.shp)

Task 3.3 Current Capabilities/Expandability

The goal of this task is to document the capabilities of the current infrastructure in the study area to integrate new floating offshore wind energy resources off the coast of Northern California and Oregon. The Contractor will rely on existing studies investigating the capability of existing infrastructure and synthesize those studies into an analysis that assess and documents existing information into a single report. With direction from the CSG, the contractor will also identify and synthesize existing information describing previously identified infrastructure expandability options to integrate renewable energy resources off the coast of Northern California and Oregon.

The Contractor shall:

- Document the capabilities of current infrastructure in the study area to integrate new renewable energy resources off the coast of Northern California and Oregon.
- Identify and synthesize existing studies and information describing previously identified infrastructure expandability options to integrate offshore wind energy resources off the coast of Northern California and Oregon.
- Synthesize those studies into an analysis that assesses and documents the existing information.

Deliverables:

- A technical memo documenting the capabilities of current infrastructure in the study area to integrate offshore wind energy resources off the coast of Northern California and Oregon.

Task 4 Offshore Wind Resource Assumptions and Scenario Development

The goal of this task is to develop a range of assumptions for offshore wind energy development that are scaled according to different geographic scenarios and that consider the different clean energy goals and priorities of different states as noted below. Scenarios to encompass:

- California and Oregon (low-end of the range)- this scenario would assume that offshore wind in the study area is developed at a scale to contribute to the clean energy goals of California and Oregon.

- California and states in the Pacific Northwest (middle of the range)- this scenario would assume that offshore wind in the study area is developed at a scale that contributes to the clean energy goals of California, Oregon, and other states in the Pacific Northwest, such as Washington and Idaho.
- California and states in the WECC (high-end of the range)- this scenario would assume that offshore wind in the study area is developed at a scale that contributes to the clean energy goals of California and states in the WECC.

The Contractor shall:
- Develop a range of assumptions for offshore wind energy development that are scaled according to different geographic scenarios.
- Develop a range of low, medium, and high scenarios as noted above in a, b, and c.
- Identify the clean energy goals and priorities of different states throughout the Pacific Northwest and Western Interconnection (WECC).
- Document the scenarios, clean energy goals, and other important information into a technical memo.

Deliverables:
- A technical memo that documents the scaled scenarios, clean energy goals, and other important information.

Task 5 Offshore and Onshore Infrastructure Options and Constraints

Task 5.1 Infrastructure Options

The goal of this task is to use the assumptions developed in Task 4 to create conceptual infrastructure expansion options, offshore and onshore and including subsea transmission options, to integrate the resources for each of the scenarios described, building from the existing conditions developed in Task 3. The contractor will describe these options in a map format and technical memo.

The Contractor shall:
- Use the assumptions developed in Task 4 to create conceptual infrastructure expansion options, offshore and onshore and including subsea transmission options, to integrate the resources for each of the scenarios building from the existing conditions developed in Task 3.

Deliverables:
- Maps of infrastructure options for each scenario.
- A technical memo that documents conceptual infrastructure expansion options for each scenario.

Task 5.2 Infrastructure constraints

The goal of this task is to evaluate and document the constraints for developing the infrastructure options. The anticipated constraints that the contractor will evaluate include ocean and land use, environmental conditions, regulatory challenges, existing

market systems, and other constraints to developing the conceptual infrastructure options as directed by the CSG.

The Contractor shall:

- Evaluate and document constraints associated with the infrastructure options.

Deliverables:

- A technical memo documenting the constraints associated with the infrastructure options.

Task 6 Estimated Distribution of Costs and Benefits

The goal of this task is to develop an analytical framework for determining how costs and benefits of the scenarios are distributed within the study area and compute the costs and benefits of the scenario options for the study area. This will include using quantitative and qualitative methods, including capacity expansion and production cost models and power flow analyses. The analytical framework may be used to inform and support additional OSW transmission planning studies and other related activities in the future, including but not limited to studies by the CAISO, utilities, and balancing authorities within the study area.

The Contractor shall:

- With direction from the CSG, the contractor will develop an analytical framework for determining how costs and benefits of the scenarios are distributed within the study area.
- Compute the costs and benefits of the scenario options for the study area using quantitative and qualitative methods, including capacity expansion and production cost models and power flow analyses.
- Document the findings in the Final Report.

Deliverables:

- A technical memo documenting the costs and benefits of the scenario options evaluated.

Task 7 Findings and Recommendations

The goal of this task is to synthesize and establish a framework of findings and recommendations for CEC and ODOE consideration based on the data collected, derived, and analyzed. Recommendations will provide the basis for implementation and identify additional areas that may require subsequent assessment to support future implementation measures.

The Contractor shall:

- Synthesize and establish a framework of findings and recommendations for CEC and ODOE consideration based on the data collected, derived, and analyzed.

Deliverables:

- A technical memo documenting the findings and recommendations.

SCHEDULE OF DELIVERABLES AND DUE DATES

The project schedule and due dates for contract deliverables listed below are subject to change. If the dates change, an addendum will be released.

Task Number	Deliverable	Due Date
1	**Agreement Management**	
1.1	Kick-off Meeting	No later than 2 weeks after executed award
1.2	Invoices	Monthly
1.3	Manage Subcontractors	Ongoing
1.4	Progress Reports	Monthly
1.5	Draft Final Report Final Report	Draft Jan 2023 Final February 2023
2	**Stakeholder and Public Outreach Plan** **Schedule for TFG Meetings** **Presentation Materials for Outreach Meetings** **Stakeholder and Public Outreach Meetings** **TFG Outreach Meetings**	August 2022 August 2022 August/September 2022 Monthly Monthly
3	**Data and Information Selection, Spatial Footprint, and Current Capabilities/Expandability**	
3.1	Data Acquisition • A draft list of data and information necessary to document the existing condition of the study area. • A final list of data and information necessary to document the existing condition of the study area.	August 2022
Task Number	**Deliverable**	**Due Date**
3.2	Document Spatial Footprint • Maps of the study area that include all of the features identified in Task 3.1 • All geospatial data and information gathered in either the Esri File Geodatabase format (*.gdb) or Esri Shapefile format (*.shp)	September 2022
3.3	Current Capabilities/Expandability • A technical memo documenting the capabilities of current infrastructure in the study area to integrate offshore wind energy resources off the coast of Northern California and Oregon.	September/October 2022
4	**Offshore Wind Resource Assumptions and Scenario Development** • A technical memo that documents the scaled scenarios, clean energy goals, and other important information.	September/October 2022

5	**Offshore and Onshore Infrastructure Options and Constraints**	
5.1	Infrastructure Options • Maps of infrastructure options for each scenario developed in Task 4. • A technical memo that documents conceptual infrastructure expansion options for each scenario developed in Task 4.	October/November 2022
5.2	Infrastructure Constraints • A technical memo documenting the constraints associated with the infrastructure expansion options identified in Task 5.1.	October/November 2022
6	**Estimated Distribution of costs and Benefits** • A technical memo documenting the costs and benefits of the scenario options evaluated.	November/December 2022
Task Number	**Deliverable**	**Due Date**
7	**Findings and Recommendations** • A technical memo documenting the findings and recommendations.	January 2023

RESOLUTION NO: 22-0713-08

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: Humboldt State University Sponsored Program Foundation.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement 700-22-002 with Humboldt State University Sponsored Program Foundation for a $644,999 contract to analyze transmission infrastructure limitations and opportunities, map existing transmission infrastructure, and provide technical data and assistance to further assess wind energy resources off the coast in Northern California and Southern Oregon; and

FURTHER BE IT RESOLVED, that the Executive Director or their designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC 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 CEC held on July 13, 2022.

AYE:

NAY:

ABSENT:

ABSTAIN:

_____
Liza Lopez
Secretariat