





California Energy Commission October 08, 2025 Business Meeting Backup Materials for with Humboldt Bay Harbor, Recreation, and Conservation District

The following backup materials for the above-referenced agenda item are available in this PDF packet as listed below:

- 1. Proposed Resolution
- 2. Grant Request Form
- 3. Scope of Work

RESOLUTION NO: 25-1008-XX

STATE OF CALIFORNIA

STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: Humboldt Bay Harbor, Recreation, and Conservation District

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 OSW-25-005 with the Humboldt Bay Harbor, Recreation, and Conservation District for a \$18,250,000 grant. This project will advance the design of the Humboldt Bay Offshore Wind Heavy Lift Terminal. The funding will also enable planning, engineering, environmental approvals, and community engagement activities for the terminal; 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 October 08, 2025.

AYE: NAY: ABSENT: ABSTAIN:		
	Dated:	
	Kim Todd Secretariat	



STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION

GRANT REQUEST FORM (GRF)

A. New Agreement Number

IMPORTANT: New Agreement # to be completed by Contracts, Grants, and Loans Office.

New Agreement Number: OSW-25-005

B. Division Information

1. Division Name: Siting, Transmission, and Environmental Division

2. Agreement Manager: Reid Boggiano

3. MS-:Not Applicable

4. Phone Number: 279-226-1139

C. Recipient's Information

1. Recipient's Legal Name: Humboldt Bay Harbor, Recreation and Conservation District

2. Federal ID Number: 94-2262845

D. Title of Project

Title of project: Humboldt Bay Offshore Wind Heavy Lift Marine Terminal - Advanced Design and Public Engagement Project

E. Term and Amount

Start Date: 10/09/2025
 End Date: 03/31/2030
 Amount: \$18,250,000

F. Business Meeting Information

- 1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
- 2. The Proposed Business Meeting Date: 10-08-2025
- 3. Consent or Discussion? Discussion
- 4. Business Meeting Presenter Name: Reid Boggiano
- 5. Time Needed for Business Meeting: 5 minutes
- 6. The email subscription topic is: Offshore Wind Renewable Energy

Agenda Item Subject and Description:

HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT. Proposed resolution approving agreement OSW-25-005 with the Humboldt Bay Harbor, Recreation, and Conservation District for a \$18,250,000 grant, and adopting staff's recommendation that this action is exempt from CEQA. This project will advance the design of the Humboldt Bay Offshore Wind Heavy Lift Terminal. The funding will also enable planning, engineering, environmental approvals, and community engagement activities for the terminal. (Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Fund) Contact: Reid Boggiano

1. Is Agreement considered a "Project" under CEQA?

Yes

If yes, skip to question 2.

If no, complete the following (PRC 21065 and 14 CCR 15378) and 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 answer the following questions.

a) Agreement IS exempt?

Yes

Statutory Exemption?

No

If yes, list PRC and/or CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

PRC section number: None CCR section number: None

Categorical Exemption?

Yes

If yes, list CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

CCR section number: 15262, 15306

Common Sense Exemption? 14 CCR 15061 (b) (3)

No

If yes, explain reason why Agreement is exempt under the above section. If no, enter "Not applicable" and go to the next section.

14 CCR § 15306 provides that activities of basic data collection, research, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource are categorically exempt from CEQA. The proposed project will primarily involve planning activities such as information gathering, analysis, writing feasibility studies, and site assessments including a limited number geotech marine borings. Other grant activities include capacity building and engagement with local communities, tribal communities and other stakeholders. The grant will also fund advanced engineering and design studies and mitigation planning at Woodley Island Fisherman's Work dock and other off-site locations. The studies are leading to an action that has not yet been approved, adopted or funded. Because the project consists of information gathering, evaluation and planning, it falls within §15306, and is categorically exempt from CEQA.

14 CCR § 15262 provides that a project involving feasibility or planning studies for possible future actions which the agency, board, or commission has not approved, adopted, or funded does not require the preparation of an EIR or Negative Declaration but does require consideration of environmental factors. Here, the proposed project involves feasibility and planning studies to support the future design and development of the Terminal Project at the Humboldt Harbor District. The agreement will also fund stakeholder engagement and planning, advanced engineering and design studies and environmental studies for mitigation planning. Thus, the project is exempt from CEQA under 14 CCR § 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 site is 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 Guidelines section 15300.2 apply to this project, and this project will not have a significant effect on the environment.

b) .Agreement **IS NOT** exempt.

IMPORTANT: consult with the legal office to determine next steps.

No

If yes, answer yes or no to all that applies. If no, list all as "no" and "None" as "yes".

Additional Documents	Applies
Initial Study	No
Negative Declaration	No
Mitigated Negative Declaration	No
Environmental Impact Report	No
Statement of Overriding Considerations	No
None	Yes

G. Is this project considered "Infrastructure"? No

H. Subcontractors

List all Subcontractors listed in the Budget (s) (major and minor). Insert additional rows if needed. If no subcontractors to report, enter "No subcontractors to report" and "0" to funds. **Delete** any unused rows from the table

Subcontractor Legal Company Name	CEC Funds	Match Funds
Moffatt & Nichol	\$ 16,328,410	\$ 0
To Be Determined	\$ 550,000	\$ 0
Northern California Indian Development Council, Inc.	\$ 810,000	\$ 0
Points West Surveying Company	\$321,740	\$ 0
Crawford & Associates, Incorporated	\$343,475	\$ 0
Roscoe & Associates LLC	\$113,045	\$ 0

I. Vendors and Sellers for Equipment and Materials/Miscellaneous



List all Vendors and Sellers listed in Budget(s) for Equipment and Materials/Miscellaneous. Insert additional rows if needed. If no vendors or sellers to report, enter "No vendors or sellers to report" and "0" to funds. **Delete** any unused rows from the table.

Vendor/Seller Legal Company Name	CEC Funds	Match Funds
Triple HS Inc DBA H. T. Harvey & Associates	\$857,900	\$ 0
GHD Inc.	\$4,310,533	\$0
The Anything Group LLC	\$200,000	\$ 0
Kelly-O'Hern and Associates	\$150,000	\$ 0
Common Street Consulting, LLC	\$100,000	\$ 0
Ernst & Young Infrastructure Advisors, LLC	\$95,000	\$0
To Be Determined	\$2,318,270	\$0

J. Key Partners

List all key partner(s). Insert additional rows if needed. If no key partners to report, enter "No key partners to report." **Delete** any unused rows from the table.

Key Partner Legal Company Name	
No key partners to report	

K. Budget Information

Include all budget information. Insert additional rows if needed. If no budget information to report, enter "N/A" for "Not Applicable" and "0" to Amount. **Delete** any unused rows from the table.

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
6093 (Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Fund)	2025	701.693	\$18,250,000

TOTAL Amount: \$18,250,000

R&D Program Area: Enter R&D Program Area. Example: EDMFO: EDMF

Explanation for "Other" selection Enter explanation for "Other"

Reimbursement Contract #: Enter Reimbursement Contract Number

Federal Agreement #: Enter Federal Agreement Number

L. Recipient's Contact Information



1. Recipient's Administrator/Officer

Name: Rob Holmlund

Address: 601 Startare Drive

City, State, Zip: Eureka, CA 95501

Phone: 707-443-0801

E-Mail: rholmlund@humboldtbay.org

2. Recipient's Project Manager

Name: Rob Holmlund

Address: 601 Startare Drive

City, State, Zip: Eureka, CA 95501

Phone: 707-443-0801

E-Mail: rholmlund@humboldtbay.org

M. Selection Process Used

There are three types of selection process. List the one used for this GRF.

Selection Process	Additional Information
Competitive Solicitation #	GFO-24-701
First Come First Served Solicitation #	N/A
Other	N/A

N. Attached Items

1. List all items that should be attached to this GRF by entering "Yes" or "No".

Item Number	Item Name	Attached
1	Exhibit A, Scope of Work/Schedule	Yes
2	Exhibit B, Budget Detail	Yes
3	CEC 105, Questionnaire for Identifying Conflicts	Yes
4	Recipient Resolution	No
5	Awardee CEQA Documentation	Yes



STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION

Grant Request Form CEC-270 (Revised 01/2024)

Individuals who approve this form must enter their full name and approval date in the MS Word version.

Agreement Manager: Reid Boggiano

Approval Date: 3/26/2025

Office Manager: Sean Simon

Approval Date: 4/3/2025

Deputy Director: Elizabeth Huber

Approval Date: 4/3/2025

Humboldt Bay Harbor, Recreation and Conservation District

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	Task Name
1	General Project Tasks
2	Engagement
3	Tribal Participation
4	Community Participation
5	Studies and Planning
6	Design and Mitigation Planning

B. Acronym/Term List

Acronym/Term	Meaning
BOEM	Bureau of Ocean Energy Management
BOD	Basis of Design
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
FMB	Full Mission Bridge
OEM	Original Equipment Manufacturer
OSW	Offshore Wind
TAC	Technical Advisory Committee
GW	Gigawatt
MF	Manufacturing and Fabrication
MW	Megawatts
OSW	Offshore Wind
O&M	Operations and Maintenance
TAC	Technical Advisory Committee
SOV	Service Operation Vessel
WEA	Wind Energy Areas

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

C. Purpose of Agreement

The purpose of the Agreement is to fund planning activities in support of the offshore wind energy infrastructure improvements at the Heavy Lift Marine Terminal project site that advance the capabilities of California waterfront facilities to support the development and operation of floating offshore wind projects.

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D. Problem/Solution Statement

Problem

On August 1, 2022, the CEC established a goal of developing 2 to 5 gigawatts (GW) of OSW by 2030 and 25 GW by 2045. To meet this goal, it is anticipated that turbines will be installed off California's coast with a capacity of at least 15 megawatts (MW). Components for a 15 MW turbine are so large that the only feasible way to transport them is by waterborne transit; road and rail transit are not feasible. Therefore, port infrastructure is an essential part of achieving the OSW goals. In December 2022, the Bureau of Ocean Energy Management (BOEM) completed an OSW lease sale for three wind energy areas (WEA) offshore of Morro Bay, CA and two WEAs offshore of Humboldt Bay, CA. Humboldt Bay has attributes that make it an ideal port location to support OSW development, including for staging and integration. Specifically, Humboldt Bay (1) is near existing and planned WEA leases; (2) has deep navigation channels; (3) does not have air draft restrictions that would restrict OSW turbine movement: and (4) has existing infrastructure that can be improved to support OSW development. Based on these attributes, the Port of Humboldt Bay can provide a critical role for OSW development in central California, northern California, and Oregon. Hence, substantial state and federal investment has been made to advance design, environmental documentation and permitting of the Terminal Project. The Terminal Project will provide a critical role for achievement of state renewable energy goals. Additional design, environmental assessment and community engagement will be required to design and permit the site for the intended turbine vertical integration and foundation assembly uses.

Solution

The Humboldt Bay Harbor, Recreation and Conservation District (Harbor District is developing the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal Project ("Terminal Project") to support west coast offshore wind energy development. Most project components are currently at a 15% design level and there is existing federal funding that will advance these components to 30% design. Through extensive agency, tribe, community and stakeholder engagement, the need for specific additional environmental studies has been identified. The Agreement will support preparation of necessary studies, advance the project's design, and conduct further community engagement.

The future improvements made possible by grant funding will transition a nearly vacant industrial site at the Harbor District into a modern heavy lift terminal that will serve as a primary west coast facility for the manufacturing, import, staging, preassembly, and vertical integration of large offshore wind energy components. The Terminal Project will be a waterfront facility site that directly supports offshore wind infrastructure improvements. The Agreement will support the immediate planning and design needs for development of the Terminal Project's two staging and integration sites and foundation assembly site.

Through substantial engagement with Tribes, agencies and stakeholders, the Harbor District has identified project components and special studies that are necessary to complete permitting and California Environmental Quality Act documentation for the Terminal Project. Some of these Project components are necessary to mitigate for community impacts (e.g., impacts to vessel navigation) and environmental impacts (e.g., impacts to sensitive species) of Terminal Project construction. Hence, in addition to advanced design of Project components, the Agreement will further stakeholder engagement and studies that will ensure the equitable development of the envisioned Terminal Project while providing for the greatest beneficial use of Humboldt Bay and

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protecting its natural resources, recreational opportunities, ongoing commercial activities and tribal uses.

E. Goals and Objectives of the Agreement

Agreement Goals

The goal of this Agreement is to fund the advance design of the Terminal Project, which will serve as a key staging integration site for offshore wind development.

Agreement Objectives

The objectives of this Agreement are to:

- Conduct community engagement to maximize the Terminal Project's community benefits and avoid or minimize impacts.
- Conduct special studies that have been recommended by agencies, stakeholders and tribes and are required for environmental review, mitigation and permitting of the Terminal Project.
- Advance Terminal Project design towards final design and engineering to support the future development of the Terminal Project.

III. TASK 1 GENERAL PROJECT TASKS

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 by the dates listed in the **Project Schedule (Part V)**. All products submitted which will be viewed by the public, must comply with the accessibility requirements of Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. Sec. 794d), and regulations implementing that act as set forth in Part 1194 of Title 36 of the Federal Code of Regulations. All technical tasks should include product(s). 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, including the Final Report Outline and Final Report

- 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.
- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product.
- Submit the revised product and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

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For products that require a final version only

 Submit the product to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

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 CEC'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.

The following describes the accepted formats for electronic data and documents provided to the CEC 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.
- Project management documents will be in Microsoft Project file format, version 2007 or later.

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 Lavers.
- 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 CEC's Information Technology Services Branch to determine whether the exceptions are allowable.

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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, and other CEC staff relevant to the
Agreement. The Recipient's Project Manager and any other individuals deemed
necessary by the CAM or the Project Manager shall participate in 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.,
Teams, Zoom), with approval of the CAM.

The Kick-off meeting will include discussion of the following:

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
- An updated Project Schedule;
- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- Travel;
- Equipment purchases;
- Administrative and Technical products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Monthly Calls (subtask 1.5)
- Quarterly Progress reports (subtask 1.6)
- Final Report (subtask 1.7)
- Match funds (subtask 1.8);
- Permit documentation (subtask 1.9);
- Subawards(subtask 1.10);
- Technical Advisory Committee meetings (subtasks 1.11 and 1.12);
- Agreement changes;
- o Performance Evaluations; and
- Any other relevant topics.
- Provide *Kick-off Meeting Presentation* to include but not limited to:
 - Project overview (i.e. project description, goals and objectives, technical tasks, expected benefits, etc.)
 - Project schedule that identifies milestones
 - List of potential risk factors and hurdles, and mitigation strategy
- Provide an *Updated Project Schedule, Match Funds Status Letter*, and *Permit Status Letter*, 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:

Kick-off Meeting Presentation

Humboldt Bay Harbor, Recreation and Conservation District

- Updated Project Schedule (if applicable)
- Match Funds Status Letter (subtask 1.7) (if applicable)
- Permit Status Letter (subtask 1.8) (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 CEC 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 CEC 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 CEC.

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 may 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 CEC, but they may take place at another location, or may be conducted via electronic conferencing (e.g., Microsoft Teams, Zoom, and WebEx) as determined by the CAM.

The Recipient shall:

- Prepare and submit 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.
- 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 with a list of expected CPR participants in advance of the CPR meeting. If applicable, the agenda may 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. A
 determination of unsatisfactory progress This may result in project delays, including a
 potential Stop Work Order, while the CEC determines whether the project should
 continue.
- 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.

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Recipient Products:

CPR Report(s)

CAM Products:

- CPR Agenda(s)
- 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 CEC 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.
- o The administrative portion of the meeting will involve a discussion with the CAM of the following Agreement closeout items:
 - Disposition of any procured equipment.
 - The CEC'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 copies of All Final Products organized by the tasks in the Agreement.

Products:

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

Subtask 1.5 Monthly Calls

The goal of this task is to have calls at least monthly between the CAM and Recipient to verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

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The objectives of this task are to verbally summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, to verify match funds are being proportionally spent concurrently or in advance of CEC funds or are being spent in accordance with an approved Match Funding Spending Plan, to form the basis for determining whether invoices are consistent with work performed, and to answer any other questions from the CAM. Monthly calls might not be held on those months when a quarterly progress report is submitted or the CAM determines that a monthly call is unnecessary.

The CAM shall:

- Schedule monthly calls.
- Provide questions to the Recipient prior to the monthly call.
- Provide call summary notes to Recipient of items discussed during call.

The Recipient shall:

- Review the questions provided by CAM prior to the monthly call
- Provide verbal answers to the CAM during the call.

Product:

Email to CAM concurring with call summary notes.

Subtask 1.6 Quarterly 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 Quarterly Progress Report to the CAM. Each progress report must:
 - Summarize progress made on all Agreement activities as specified in the scope of work for the reporting period, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Progress reports are due to the CAM the 10th day of each January, April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at: https://www.energy.ca.gov/media/4691
- Submit a monthly or quarterly *Invoice* on the invoice template(s) provided by the CAM.

Recipient Products:

- Quarterly Progress Reports
- Invoices

CAM Product:

Invoice template

Subtask 1.7 Final Report

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.

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When creating the Final Report Outline and the Final Report, the Recipient must use the CEC Style Manual provided by the CAM.

1.7.1 Final Report Outline

The Recipient shall:

• Prepare a *Final Report Outline* in accordance with the *Energy Commission Style Manual* provided by the CAM.

Recipient Products:

Final Report Outline (draft and final)

CAM Products:

- Energy Commission Style Manual
- Comments on Draft Final Report Outline
- Acceptance of Final Report Outline

1.7.2 Final Report

The Recipient shall:

- Prepare a Final Report for this Agreement in accordance with the approved Final Report
 Outline, Energy Commission Style Manual, and Final Report Template provided by the
 CAM with the following considerations:
 - Ensure that the report includes the following items, in the following order:
 - Cover page (required)
 - Credits page on the reverse side of cover with legal disclaimer (required)
 - Acknowledgements page (optional)
 - Preface (required)
 - Abstract, keywords, and citation page (required)
 - Table of Contents (required, followed by List of Figures and List of Tables, if needed)
 - Executive summary (required)
 - Body of the report (required)
 - References (if applicable)
 - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
 - Bibliography (if applicable)
 - Appendices (if applicable) (Create a separate volume if very large.)
 - Attachments (if applicable)
- Submit a draft of the Executive Summary to the TAC for review and comment.
- Develop and submit a Summary of TAC Comments on Draft Final Report received on the Executive Summary. For each comment received, the Recipient will identify in the summary the following:
 - Comments the Recipient proposes to incorporate.
 - o Comments the Recipient does propose to incorporate and an explanation for why.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt.

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- Incorporate all CAM comments into the *Final Report*. If the Recipient disagrees with any comment, provide a *Written Responses to Comments* explaining why the comments were not incorporated into the final product.
- Submit the revised Final Report electronically with any Written Responses to Comments
 within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the
 CAM specifies a longer time period or approves a request for additional time.

Products:

- Summary of TAC Comments on Draft Final Report
- Draft Final Report
- Written Responses to Comments (if applicable)
- Final Report

CAM Product:

Written Comments on the Draft Final Report

Subtask 1.8 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 this Agreement term, either concurrently or prior to the use of CEC funds for each task during the term of this Agreement. 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:

 Prepare a Match Funds Status Letter that documents the match funds committed to this Agreement. If no match funds were part of the application that led to the CEC 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 application that led to the CEC 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.
 - If different from the solicitation application, provide a letter of commitment from an authorized representative of each source of match funding that the

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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 1.9 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 <u>no permits</u> 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.
 - o The schedule the Recipient will follow in applying for and obtaining the permits.

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)

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• Copy of Each Approved Permit (if applicable)

Subtask 1.10 Obtain and Execute Subawards and Agreements with Site Hosts

The goal of this task is to ensure quality products and to execute subrecipients and site host agreements, as applicable, required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement and contracting policies and procedures.

The Recipient shall:

- Execute and manage subawards and coordinate subrecipient activities.
- Execute and manage site host agreement and ensure the right to use the project site throughout the term of the Agreement, as applicable. A site host agreement is not required if the Recipient is the site host.
- Notify the CEC in writing immediately, but no later than five calendar days, if there is a reasonable likelihood the project site cannot be acquired or can no longer be used for the project.
- Submit a letter to the CAM describing the subawards and any site host agreement needed or stating that no subawards or site host agreements are required.
- If requested by the CAM, submit a draft of each subaward and any site host agreement required to conduct the work under this Agreement to the CAM for review.
- If requested by the CAM, submit a final copy of each executed subaward and any site host agreement.
- If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM.

Products:

- Letter describing the subawards needed, or stating that no subawards are required
- Draft subaward (if requested)
- Final subaward (if requested)
- Draft site host agreement (if requested)
- Final site host agreement (if requested)

Subtask 1.11 Technical Advisory Committee (TAC)

A TAC exists for the Terminal Project. The goal of this subtask is to further engage with the TAC. The TAC is composed of diverse professionals and the composition may be modified based on input from the CAM. 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:

- 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.

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- 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.
- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in its effort to build partnerships, governmental support, and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.

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 and project developers relevant to the project;
- U.S. Department of Energy, U.S. Department of Transportation, U.S. Army Corps. of Engineers, California Coastal Commission, California State Lands Commission, California Department of Fish and Wildlife, research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Public interest environmental justice organizations;
- Tribal governments an/or their representatives;
- 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 or
 organizations, physical and electronic addresses, and phone numbers of potential
 members. The list will be discussed at the Kick-off meeting at which time the CAM will
 provide input on the TAC member list, 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 1.12.
- 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.

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Products:

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

Subtask 1.12 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.

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.

The TAC shall:

- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.
- Review and provide comments to proposed project performance metrics.

Products:

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

Subtask 1.13 Project Performance Metrics

The goal of this subtask is to finalize key performance targets for the project based on feedback from the TAC and report on final results in achieving those targets. The performance targets should be a combination of scientific, engineering, techno-economic, and/or programmatic

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metrics that provide the most significant indicator of the research or technology's potential success.

The Recipient shall:

- Complete and submit the project performance metrics section of the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task, to the CAM.
- Present the draft project performance metrics at the first TAC meeting to solicit input and comments from the TAC members.
- Develop and submit a TAC Performance Metrics Summary that summarizes comments received from the TAC members on the proposed project performance metrics. The TAC Performance Metrics Summary will identify:
 - TAC comments the Recipient proposes to incorporate into the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
 - TAC comments the Recipient does not propose to incorporate with and explanation why.
- Develop and submit a Project Performance Metrics Results document describing the
 extent to which the Recipient met each of the performance metrics in the Final Project
 Benefits Questionnaire, developed in the Evaluation of Project Benefits task.
- Discuss the *Project Performance Metrics Results* at the Final Meeting.

Products:

- TAC Performance Metrics Summary
- Project Performance Metrics Results

Subtask 1.14 Project Management

The goal of this task is to manage the overall project including coordination among the project team, the multiple consulting firms that will be involved, the Humboldt Bay Harbor District and the California Energy Commission. Specific activities include scope, schedule and budget management.

The Recipient shall:

- Develop and maintain a *Project Schedule Tracking Sheet* to track the Project's schedule and progress.
- Develop and maintain a *Project Budget Tracking Sheet* to track the Project's budgets and progress.
- Prepare *Invoices* and *Progress Reports* each month summarizing budget expensed and progress made.
- Submit Project Management Meeting Notes to summarize project status updates.

Products:

- Project Schedule Tracking Sheet
- Project Budget Tracking Sheet
- Invoices
- Progress Reports
- Project Management Meeting Notes

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Subtask 1.15 Evaluation of Project Benefits

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

The Recipient shall:

- Complete the Initial Project Benefits Questionnaire. The Initial Project Benefits Questionnaire shall be initially completed by the Recipient with 'Kick-off' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Complete the *Annual Survey* by January 31st of each year. The Annual Survey includes but is not limited to the following information:
 - Project progress
 - New media and publications
 - o Follow-on funding and awards received
- Complete the *Final Project Benefits Questionnaire*. The Final Project Benefits Questionnaire shall be completed by the Recipient with 'Final' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Respond to CAM questions regarding the questionnaire drafts.

Products:

- Initial Project Benefits Questionnaire
- Annual Survey(s)
- Final Project Benefits Questionnaire

IV. TASK 2 ENGAGEMENT

Subtask 2.1 Community Engagement Strategy

The Harbor District has adopted a community engagement strategy which will be modified based on feedback from Tribes, various community groups, and the CAM. The goal of this subtask is to further develop and implement the community engagement strategy.

The Recipient shall:

- Prepare and distribute Community Meeting Presentation Materials and Community Meeting Agendas.
 - Engage the community regarding Project components, benefits, impacts and strategies for avoiding, minimizing and mitigating impacts.
 - Distribute Community Meeting Notes following the meeting.
- Provide pre-planning, post-planning and end-of-project *Consultation and Engagement Reports* for CAM re.

Products:

- Community Meeting Presentation Materials
- Community Meeting Agendas
- Community Meeting Notes
- Pre-Planning, Post-Planning and End-Of-Project Consultation and Engagement Reports

Subtask 2.2 Tribal Government Consultation and Engagement Strategy

The Harbor District is currently consulting on a regular basis with several interested Tribes. The goal of this subtask is to further develop and implement the tribal government consultation engagement strategy, that may be modified based on CAM input.

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The Recipient shall:

- Continue the ongoing consultation and engagement with nine interested tribes.
- Provide pre-planning, post-planning and end-of-project Consultation and Engagement Reports for CAM review..

Products:

Pre-Planning, Post-Planning and End-of-Project Consultation and Engagement Reports

Subtask 2.3 Stakeholder Engagement Strategy

The Harbor District has invested significant time into coordinating with a wide range of stakeholders, including neighborhood associations, environmental advocacy NGOs, social justice NGOs, fishermen, aquaculture businesses, marine recreational associations, business advocacy organizations, unions, other local governments, regulatory agencies, utility districts, commercial shipping companies, educational institutions, construction/building associations, and others. The Harbor District is seeking to formalize and enhance the work to date. The goal of this subtask is to develop and implement a stakeholder engagement strategy that includes, but is not limited to, labor and workforce organizations, floating offshore wind equipment manufacturers, offshore wind developers, environmental organizations, port and harbor users and tenants, and recreational and commercial fishing organizations. This subtask will build on stakeholder engagement that is already underway.

The Recipient shall:

- Develop a draft and final *Stakeholder Engagement Strategy* that builds on and enhances stakeholder engagement that is already underway.
- Implement the Stakeholder Engagement Strategy.
 - o Submit Stakeholder Engagement Meeting Notes.
- Develop Stakeholder Engagement Report describing the number of meetings and summarizing stakeholder concerns and agreements made.

Products:

- Stakeholder Engagement Strategy (draft and final)
- Stakeholder Engagement Meeting Notes
- Stakeholder Engagement Report

Subtask 2.4 Agency Engagement Strategy

The Harbor District has formed four sub-committees consisting of staff from various federal and state regulatory agencies to assist with project development. The Harbor District is seeking to formalize and enhance the work to date. The goal of this subtask is to develop and implement an agency engagement strategy that includes applicable federal, state and local agencies. This subtask will build upon agency engagement that has already occurred.

The Recipient shall:

- Complement the existing agency engagement program by developing and implementing a more formal *Agency Engagement Strategy*.
 - o Submit Meeting Agendas and Notes for Agency Meetings.
- Provide pre-planning, post-planning and end-of-project *Agency Engagement Reports*

Products:

- Agency Engagement Strategy
- Meeting Agendas and Notes for Agency Meetings

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Pre-Planning, Post-Planning and End-of-Project Agency Engagement Reports

Subtask 2.5 Audio Visual Community Engagement Materials

The goal of this task is to develop audio and visual materials regarding the Terminal Project that will allow for more effective public, stakeholder and tribal outreach.

The Recipient shall:

 Develop Informational Videos and Social Media Posts regarding the Terminal Project to inform the local communities and tribes, and all other stakeholders, of the Project's progress.

Products:

- Links to Informational Videos
- Links to Social Media Posts

V. TASK 3 TRIBAL PARTICIPATION

Subtask 3.1 California Tribal Organization Participation

The goal of this subtask is for the selected organization, to participate in and engage tribes in the Terminal Project planning and design. This work is also described under Subtask 2.2 (Tribal Government Consultation and Engagement Strategy). CEC funding may also be used to provide stipends to interested Tribes to participate in the project, upon approval by the CAM as described below

The Recipient shall:

- Retain organization to participate in and engage tribes in the Terminal Project planning and design.
- Develop and implement a *Tribal Participation Plan* to ensure equitable and transparent engagement. The plan will outline the approach and criteria for distributing funding or stipends to participants. The plan must be submitted to the CAM for review and approval before CEC funds can be disbursed to participants.
- Implement Tribal Participation Plan.
- Develop *Tribal Participation Plan Report* describing the process and outcomes of the tribal participation meetings.

Products:

- Tribal Participation Plan (draft and final)
- Tribal Participation Plan Report

VI. TASK 4 COMMUNITY PARTICIPATION

Subtask 4.1 Community Based Organization Participation

The goal of this task is for the selected partner to participate in and engage the community in the Terminal Project planning and design and to facilitate funding towards community benefits. The work is also described under Subtask 2.1 (Community Engagement Strategy).

The Recipient shall:

 Retain a partner participate in and engage the community in the Terminal Project planning and design.

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- Develop and implement a *Community Participation Plan* to ensure equitable and transparent engagement. The plan will outline the approach and criteria for distributing funding or stipends to participants. The plan must be submitted to the CAM for review and approval before CEC funds can be allocated to participants.
- Implement Community Participation Plan.
- Develop Community Participation Report describing the process and outcomes of the community participation meetings.
- Prepare *Technical Memo Describing Competitive Process for Dispersing Community Benefits Funds* and description of funded community benefits projects.

Products:

- Community Participation Plan (draft and final)
- Technical Memo Describing Process for Dispersing Community Benefits Funds

VII. TASK 5 STUDIES AND PLANNING

Subtask 5.1 Emissions Reduction Strategy

The goal of this subtask is to develop an emissions reduction strategy that describes how emissions will be managed during future construction and operations of the Terminal Project.

The Recipient shall:

 Develop an Emissions Reduction Strategy that describes how emissions will be managed during the future construction and operations of the Terminal Project.

Products:

Emission Reduction Strategy

Subtask 5.2 Workforce Development Strategy

The goal of this subtask is to develop a strategy for how the Terminal Project will support and create good jobs, workforce development pathways, and economic development opportunities, including for underserved communities.

The Recipient shall:

- Develop a Workforce Development Strategy that describes how the Terminal Project will support and create good jobs, workforce development pathways, and economic development opportunities, including for underserved communities.
- Consult with local labor unions, tribes and government agencies regarding workforce development related to the Terminal Project.

Products:

Workforce Development Strategy

Subtask 5.3 Assembly Bill 3 Contribution Analysis

The goal of this task is to ensure and describe how the Terminal Project will contribute to the requirements of Assembly Bill 3, the California Offshore Wind Advancement Act.

The Recipient shall:

• Develop Assembly Bill 3 Report on how the Terminal Project will contribute to the requirements of Assembly Bill 3, the California Offshore Wind Advancement Act.

Products:

Assembly Bill 3 Report

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Subtask 5.4 Geotechnical Marine Borings

The goal of this task is to conduct a geotechnical marine boring investigation that will inform final Project design. A limited number of geotechnical borings (6) are already funded but the additional borings will allow for advancement of the Terminal Project design towards final design.

The Recipient shall:

- Obtain approximately 11 marine borings at the Terminal Project site to a depth of up to 200' and additional shallower vibracore samples, as needed, and log the samples in the *Geotechnical Investigation Data*.
- Conduct analyses of the geotechnical data to inform final Terminal Project design.
- Summarize all data, analyses, and recommendations in a Technical Memo.

Products:

- Geotechnical Investigation Data
- Technical Memo

Subtask 5.5 Full Mission Bridge Navigation and Tow-Out Simulations

The goal of this subtask is to conduct Full Mission Bridge (FMB) navigation and tow-out simulations of the wind turbine generators (WTGs) that will inform final design of the Terminal Project. Desktop simulations are already funded, but the FMB tow-out simulations are required to verify assumptions regarding vessel movement at and near the Terminal Project site.

The Recipient shall:

- Prepare a *Simulation Plan* to outline the approach, inputs and assumptions for the navigation and tow-out simulation production runs.
- Perform FMB simulations over a five day period at the MITAGS simulation center.
- Prepare a Navigation and Tow-Out Simulation Report that will include all applicable
 vessel control parameters (engine, rudder, tugs), vessel clearance, swept path and
 observation on the design by the conning pilot. The report will include recommendations
 for final design of the Terminal Project and particularly any necessary channel
 modifications.

Products:

- Simulation Plan
- Navigation and Tow-Out Simulation Report

Subtask 5.6 Visual Simulations

The goal of this subtask is to further develop visual simulations of the Terminal Project site. A limited number of simulations have been developed, but more simulation vantage points have been requested by local stakeholders and agencies and therefore will be important for completion of environmental documentation and permitting.

The Recipient shall:

- Conduct a Viewshed Analysis.
 - Prepare Viewshed Analysis Maps which geographically show where the Terminal Project can be viewed from.
 - Summarize results in the Viewshed Analysis Memo.
- Develop *Photo-Simulations* of the Terminal Project from key vantage points for nighttime and daytime conditions.

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- Conduct a Shading Analysis.
 - Develop Shading Analysis Maps of the Terminal Project's shading impacts to nearby properties.
 - Summarize results in the Shading Analysis Memo.
- Develop a 3D Rendering of the Terminal Project that will support public outreach, environmental documentation and permitting efforts.

Products:

- Viewshed Analysis Memo
- Photo-Simulations
- Shading Analysis Memo
- 3D Rendering

Subtask 5.7 Noise Technical Studies

The goal of this subtask is to expand on existing work that is assessing the Terminal Project's noise impacts to the adjacent residential community of Samoa and develop design solutions to reduce noise impacts by engaging with the nearby community of Samoa residents to refine recommendations made by the design team.

The Recipient shall:

- Coordinate with the Town of Samoa residents and Terminal Project designers regarding concerns and solutions to minimize the Terminal Project's noise impacts.
- Develop Noise Reduction Recommendations Memo to provide recommendations for reducing noise impacts to the community that will be incorporated into the Terminal Project's design, construction and operational considerations, as based on coordination with Samoa residents.

Products:

Noise Reduction Recommendations Memo

Subtask 5.8 Green Terminal Standards

The goal of this subtask is to expand on the existing work that is conceptually assessing green terminal construction and operation opportunities by providing a comprehensive review of existing green technologies and how they may be applied to the Terminal Project and to develop a comprehensive Green Port Plan that will be reviewed by stakeholders and agencies and incorporated into the Project design as well as construction and operations considerations.

The Recipient shall:

- Develop Micro-grid Design for the project site to optimize cost, performance, reliability, and integration of renewable energy sources.
- Develop Draft Green Port Plan.
 - Develop Green Port Plan goals.
 - Develop greenhouse gas calculations with consideration towards different technology types.
 - Develop an emissions reduction strategy, including management of emissions during construction and a feasibility analysis of achieving net zero emissions
 - Develop an illustrative site plan that identifies green terminal features into easyto-understand project visuals and an infographic.
 - o Conduct initial order-of-magnitude costing for *Green Port Plan* scenarios.
 - Submit Draft Green Port Plan for review and comment.

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• Incorporate review comments and submit Final Green Port Plan.

Products:

Draft and Final Green Port Plan

Subtask 5.9 Bay Water Intake and Piping Relocation Design

The goal of this subtask is to evaluate requirements and constraints and develop advanced engineering design plans and technical specifications for the replacement of the bay water intake and conveyance system within the project site that will provide bay water for off-site aquaculture and other uses. The dock that the current bay water intake system is mounted to along with segments of the associated transmission piping are planned to be demolished to facilitate the construction of a new wharf necessary for meeting the project goals. Hence the intake system and segments of piping will be replaced.

The Recipient shall:

- Develop Basis of Design Technical Memo describing the evaluation and selection of the preferred size, location, routing, and configuration of the preferred approach to the bay water intake system and associated piping.
- Develop Advanced Engineering Designs for the Bay Water Intake and Piping.
- Develop *Opinion of Probable Construction Cost* for the relocation of the bay water intake and piping.

Products:

- Basis of Design Technical Memo
- Advanced Engineering Designs for the Bay Water Intake and Piping
- Opinion of Probable Construction Cost

Subtask 5.10 Analysis of Modifying (widening and or deepening) the Federal Navigation Channel

The goals of this subtask are to (a) inform development of proposed changes to the navigation channel (via an alternatives analysis) and (b) evaluate potential changes in hydrodynamics, waves, and sediment transport resulting from this widening.

The Recipient shall:

- Develop up to three options for modifying the federal navigation channel using desktop engineering assessment and analysis.
- Evaluate potential changes in hydrodynamics, sediment transport, nearshore wave energy, and passing vessel ship wakes resulting from modifying the channel using numerical simulation of hydrodynamics and sediment transport. This evaluation can inform identification of potential adverse impacts on USACE Civil Works projects and address potential stakeholder concerns.
- Conduct an alternatives analysis to select a preferred option for modifying the federal navigation channel and document the conclusions in the Federal Navigation Channel Modification Alternatives Analysis Report.
- Summarize the findings of the analysis/evaluation in the *Channel Modification Preliminary Design Report*, including an appendix on the numerical modelling, and present to US Army Corps of Engineers and US Coast Guard representatives.

Products:

Federal Navigation Channel Modification Analysis Report

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Channel Modification Preliminary Design Report

Subtask 5.11 Biosecurity Policy Paper

The goal of this subtask is to build on existing efforts describing the Project's potential effects on biosecurity (e.g., through introduction of non-native species and shellfish diseases) to assess how local, state and federal policies/regulations will have a role in minimizing biosecurity threats posed by the Project. This work will be coordinated with the State's Shellfish Disease Committee.

The Recipient shall:

- Work with stakeholders and subject matter experts to develop a *Draft and Final Biosecurity Policy White Paper* describing the Project's potential effects on biosecurity (e.g., through introduction of non-native species and shellfish diseases).
- Conduct as needed special studies (e.g., contamination testing of shellfish tissue) to inform the *Biosecurity Policy White Paper*.

Products:

Draft and Final Biosecurity Policy White Paper

Subtask 5.12 Port Design Optimization Modelling

The goal of this subtask is to develop a 3D simulation model for the Project site that will allow for optimization of the final Project design. The model will be developed using FlexTerm which is a powerful 3D simulation software that provides the ability to visualize how changes in parameters affect an OSW port facility and overall project capacity, operations, efficiency, and profitability. By changing the model inputs and variables, the system will simulate proposed operations at the port and compare performances of various scenarios. By establishing logistical and spatial efficiencies through an iterative process, the system will finalize the port layout towards optimization, prior to expenditure of capital funds.

The Recipient shall:

- Create a *Simulation Basis Document* that will list all necessary model inputs and the source of each input. The document will list the simulation objectives, assumptions, input values, and outputs to be produced from the model.
- Develop the 3D Visual Model Rendering of the Port. The model will include the following activities:
 - Vessel delivery of wind turbine generator (WTG) and floating foundation components
 - Unloading of these components into the port
 - Transport of components from delivery guay to staging yard
 - Assembly of foundations in port uplands
 - Movement of foundations from uplands to quayside
 - Launch of foundations from quay to semi-submersible barge
 - Transit of loaded semi-submersible barge from launch quay to sinking basin
 - Float off of floating foundation
 - Transit of floating foundation to foundation wet storage area
 - Transit of WTG components from staging yard to guayside preassembly area
 - Transit of floating foundation from wet storage to staging & integration berth
 - Integration of WTG components onto floating foundation at S&I quayside
 - Transit of fully integrated turbine to wet storage

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- Tow of fully integrated unit from wet storage to installation site
 The model will analyze the following key performance indicators.
 - Berth utilizations
 - Upland yard inventory (WTG and foundation components)
 - Foundation launch rate
 - o WTG integration rate
 - Foundation wet storage count
 - Integrated turbine unit count
 - Project schedule
- Run the simulation model scenarios through multiple replications to determine the
 effects and relationships between input values and outputs. The multiple replications will
 produce a range of results that reveal the diversity of outputs due to the variation in the
 dynamic simulation model. Each scenario will have 16 replications, producing
 statistically significant results. Through this process, Port design details will be
 optimized.
- Summarize approach and results in the *Port Design Optimization Modelling Report* which will inform final Terminal Project design.

Products:

- Simulation Basis Document
- 3D Visual Model Rendering
- Port Design Optimization Modelling Report

Subtask 5.13 Marine Mammal and Bird Monitoring

The goal of this subtask is to collect information regarding marine mammal and bird use of the Project site and surrounding area to inform the environmental documentation and permitting process, as previously requested by regulatory agencies.

The Recipient shall:

- Use high-resolution aerial imagery gathered with separate funding in 2024-2025 to map
 the distribution of marine mammals throughout Humboldt Bay into the *Marine Mammal*and Bird Distribution Database.
- Conduct shorebird surveys at the Project site and at a reference site.
- Conduct marine mammal surveys at the Project site and at a reference site.
- Develop the Biological Technical Memo describing the spatial and temporal distribution of marine mammals and birds at the Project and reference sites, including maps.

Products:

- Marine Mammal and Bird Distribution Database
- Biological Technical Memo

Subtask 5.14 Marine Biology Analysis

The goal of this subtask is to further analyze the effects of the Project on marine resources as required to inform the Project's permitting and environmental documentation processes as based on previous input from regulatory agencies.

The Recipient shall:

• Develop a Comprehensive Database of Special Status Species Distribution in Humboldt Bay and at the Project site, with maps, through a review of existing literature and outreach to academic and other researchers.

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 Based on the database, assess the effects of the Project on special status species within the context of bay-wide species distribution and summarize into *Marine Biology Analysis Report*.

Products:

- Database of Special Status Species Distribution in Humboldt Bay
- Marine Biology Analysis Report

VIII. TASK 6 DESIGN AND MITIGATION PLANNING

Subtask 6.1 Woodley Island Fishermen's Work Dock Design

Per feedback from fishing-based stakeholders, offshore wind development in general and the port terminal project specifically, are expected to have some impacts to the local fishing community. In addition, the current site is used as a storage site for multiple fishermen. That storage will need to be relocated and impacts to fishermen will need to be mitigated. The goal of this subtask is to develop advanced designs for expansion of a commercial fishing work dock on Woodley Island in Humboldt Bay. The work dock expansion will offset the impact of displacing commercial fishing infrastructure that will occur as part of the Terminal Project.

The Recipient shall:

- Conduct outreach to commercial fishing interests to refine the site layout and concepts.
- Conduct as needed special studies at the Work Dock Site, potentially including:
 - Geotechnical investigation Summarize results into Geotechnical Investigation Report.
 - Topographic and bathymetric survey Prepare Topographic and Bathymetric Survey Maps.
 - o Biological surveys Summarize results into *Biological Surveys Report*.
 - Wetland evaluations Summarize results into Wetland Evaluations Summary Report.
 - Cultural resources survey Summarize results into Cultural Resources Survey Report.
 - Review of existing hazardous materials evaluations Summarize results into Hazardous Materials Assessment Report.
 - Agency coordination and meetings.
 - Permitting consultations with the California Coastal Commission, Humboldt Bay Harbor District, Army Corps of Engineers, NOAA Fisheries, and California Department of Fish and Wildlife.
- Develop *Design Development Package* which will include CAD drawings and technical specifications for the preferred approach.
- Develop Permit Applications:
 - Coastal Development Permit Amendment Application
 - Harbor District Permit Application
 - Army Corps 401/404 Permit Applications
 - o California Department of Fish and Wildlife 1600 Permit Application
 - o California Environmental Quality Act documentation
- Develop Opinion of Probable Construction Cost for the Woodley Island Fishermen's Work Dock.

Products (as applicable):

Humboldt Bay Harbor, Recreation and Conservation District

- Geotechnical Investigation Results and Report
- Topographic and Bathymetric Survey
- Biological Surveys Results and Report
- Wetlands Evaluations Summary Report.
- Cultural Resources Survey Results and Report
- Hazardous Materials Assessment Report
- Advanced Engineering Design Plans and Technical Specifications
- Opinion of Probable Construction Cost

Subtask 6.2 Mariculture Tenant Relocations

The goal of this subtask is to develop final solutions for relocation of mariculture operators that will be displaced by the Terminal Project.

The Recipient shall:

- Conduct spatial planning, research and field investigations (i.e., eelgrass surveys) to identify appropriate location(s) to relocate mariculture businesses.
- Modify the mariculture operations' existing permits and amend the related California Environmental Quality Act (CEQA) documentation to allow for relocation of the operations to the site.
 - Submit Amended Permits Package to California Coastal Commission, North Coast Regional Water Quality Control Board, US Army Corps of Engineers and Humboldt Bay Harbor District.
 - o Complete required CEQA Documentation.

Products:

CEQA Documentation

Subtask 6.3 Cost Estimate

The goal of this subtask is to refine the existing cost estimate for developing a final project.

The Recipient shall:

• Prepare an updated *Cost Estimate* that can be used as a basis for determining revenue required to recover the project costs, including financing costs, in the *Financial Analysis* and *Strategy*.

Products:

- Cost Estimate
- Financial Analysis and Strategy

Subtask 6.4 Advanced Engineering and Environmental Studies

The goal of this task is to advance structural, civil and coastal engineering and conduct environmental studies to inform advanced design, permitting and environmental studies for the proposed Terminal as well as Project components, including off-site mitigation, that are required to complete the Project. This task includes receiving, evaluating and/or incorporating input from agencies, stakeholders, tribes and the community. These topics have begun using other funding and will be advanced with CEC funds.

The Recipient shall:

Humboldt Bay Harbor, Recreation and Conservation District

- Conduct advanced engineering and environmental studies for the Terminal Project related to the following topics that have been identified as high priorities through ongoing tribal, stakeholder and agency engagement.
 - Solar array
 - Dredging and dredge material management
 - Access road improvements
 - Utility improvements, including PG&E assessment of upgrades to the electric grid to support the Terminal Project
 - Trail improvements
 - Surveying and right of way modifications
 - Wharf design
 - Backlands design
 - Offsite compensatory biological mitigation
 - Assessment of the feasibility of, and potential design and permitting of, a sailing and aquatic center on Woodley Island (Eureka, CA) that will provide community benefits that offset Project impacts.
 - Assessment of the feasibility of, and potential design and permitting of, a recreational, cultural and natural history community center that will provide community benefits that offset Project impacts.
 - Obtain required permits as applicable.
- Develop CAD Drawings for all design advancements.
- Prepare (e.g. Pacific Gas & Electric Company and Humboldt Bay Municipal Water District) studies and analysis related to delivery of power and water for the Project.
- Prepare *Technical Memo(s)* for each advanced engineering topic to summarize the approach and all key design decisions for each topic.

Products:

- CAD Drawings.
- Technical Memo(s) describing results of engineering and environmental study efforts.

IX. PROJECT SCHEDULE

The overall Project is anticipated to take two years after notice to proceed. Please see the Excel spreadsheet in Attachment 5 for details.