

CONTRACT REQUESTS FORM (CRF)

CEC-94 (Revised 5/11)

CALIFORNIA ENERGY COMMISSION


 New Contract **500-12-005** Amendment to Existing Contract: _____ Amendment Number: _____

Division	Contract Manager:	MS-	Phone	CM Training Date
ERDD - Environmental Area	Joe O'Hagan	43	916-327-1368	11/14/2007

Contractor's Legal Name	Federal ID Number
Humboldt State University Foundation	94-6050071

Title of Project
Aerial Line Transect Surveys for Golden Eagles within the Desert Renewable Energy Conservation Plan Area

Term	Start Date	End Date	Amount
New/Original Contract	6/14/2013	3/31/2015	\$ 200,000

Line up the Amendment information as best as possible within the following table.

Amendment #	End Date (mm/dd/yy)	Amount

Business Meeting Information

Proposed Business Meeting Date	4/30/2013	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Joe O'Hagan	Time Needed:	5 minutes

Agenda Item Subject and Description

Possible approval of contract 500-12-005 for \$200,000 with Humboldt State University for 22 months to conduct surveys to estimate the abundance of golden eagles within the DRECP area and southwestern Imperial County, California. Contact: Joe O'Hagan. (5 minutes)

Business Meeting approval is not required for the following types of contracts: *Executive Director's signature is required in all cases.*

- Contracts less than \$10k (*Policy Committee's signature is also required*)
- Amendment for a no-cost time extension. Must be first extension, less than one year and original contract less than \$100k.
- Contracts less than \$25k for Expert Witness in Energy Facility licensing cases and amendments.

Purpose of Contract or Purpose of Amendment, if applicable

This project will involve surveying and estimating the abundance of golden eagles within the DRECP area and southwestern Imperial County, California during the early breeding season and the post-fledging period. The surveys will facilitate an assessment of the size of the golden eagle population within the study area and provide a baseline for detecting trends in the population over time.

California Environmental Quality Act (CEQA) Compliance

- Is Contract considered a "Project" under CEQA?
 - Yes: skip to question 2
 - No: complete the following (PRC 21065 and 14 CCR 15378):

Explain why contract is not considered a "Project":
- If contract is considered a "Project" under CEQA:
 - a) Contract **IS** exempt. (Draft NOE required)
 - Statutory Exemption. List PRC and/or CCR section number: _____
 - Categorical Exemption. List CCR section number: 14 CCR 15306
 - Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why contract is exempt under the above section:
The project involves conducting aerial surveys of birds and compiling data.
 - b) Contract **IS NOT** exempt. The Contract Manager needs to consult with the Energy Commission attorney assigned to their division and the Siting Office regarding a possible Initial Study.

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CALIFORNIA ENERGY COMMISSION



Budgets Information								
Contract Amount Funded		Breakdown by FY			Funding Sources			
Funding Source	Amount	FY	Amount	Approved?	Funding Source	FY	Budget List No.	Amount
ARFVTF	\$	12-13	\$200,000	Yes	PIER-E	11-12	501.027J	\$200,000
ECAA	\$		\$					\$
State- ERPA	\$		\$					\$
Federal	\$		\$					\$
PIER - E	\$200,000		\$					\$
PIER - NG	\$		\$					\$
Reimbursement	\$		\$					\$
Other	\$		\$					\$
TOTAL:	\$200,000	TOTAL:	\$200,000		TOTAL:			\$200,000
Reimbursement Contract #:					Federal Agreement			

Contractor's Administrator/ Officer		Contractor's Project Manager	
Name:	T. Luke George	Name:	T. Luke George
Address:	244 PINE ST.	Address:	244 PINE ST.
City, State, Zip:	FORT COLLINS, CO 80524-2432	City, State, Zip:	FORT COLLINS, CO 80524-2432
Phone/ Fax:	707-499-4053 /	Phone/ Fax:	707-499-4053 /
E-Mail:	Luke.george@humboldt.edu	E-Mail:	Luke.george@humboldt.edu

Contractor Is
<input type="checkbox"/> Private Company (including non-profits) <input checked="" type="checkbox"/> CA State Agency (including UC and CSU) <input type="checkbox"/> Government Entity (i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)

Selection Process Used
<input type="checkbox"/> Solicitation _____ Solicitation #: _____ # of Bids: _____ Low Bid? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Non Competitive Bid (Attach CEC 96) <input checked="" type="checkbox"/> Exempt Interagency

Civil Service Considerations
<input checked="" type="checkbox"/> Not Applicable (Contract is with a CA State Entity or a membership/co-sponsorship) <input type="checkbox"/> Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER) <input type="checkbox"/> The Services Contracted: <input type="checkbox"/> are not available within civil service <input type="checkbox"/> cannot be performed satisfactorily by civil service employees <input type="checkbox"/> are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system. <input type="checkbox"/> The Services are of such an: <input type="checkbox"/> urgent <input type="checkbox"/> temporary, or <input type="checkbox"/> occasional nature that the delay to implement under civil service would frustrate their very purpose. Justification: Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)

Payment Method
<input checked="" type="checkbox"/> A. Reimbursement in arrears based on: <input type="checkbox"/> Itemized Monthly <input checked="" type="checkbox"/> Itemized Quarterly <input type="checkbox"/> Flat Rate <input type="checkbox"/> One-time <input type="checkbox"/> B. Advanced Payment <input type="checkbox"/> C. Other, explain:



Retention

1. Is contract subject to retention? No Yes
 If Yes, Do you plan to release retention prior to contract termination? No Yes

Justification of Rates

Standard consulting and university rates are being charged.

Disabled Veteran Business Enterprise Program (DVBE)

1. Not Applicable
 2. Meets DVBE Requirements DVBE Amount:\$ _____ DVBE %: _____
 Contractor is Certified DVBE
 Contractor is Subcontracting with a DVBE: _____
 3. Requesting DVBE Exemption (attach CEC 95)

Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE? No Yes

If yes, check appropriate box: SB MB DVBE

Is Contractor subcontracting any services? No Yes

If yes, give company name and identify if they are a Small Business (SB), Micro Business (MB) and/or DVBE:

Western EcoSystems Technology, Inc. ("West, Inc.")	<input checked="" type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE
	<input type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE
	<input type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE
	<input type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE
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	<input type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE
	<input type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE

Miscellaneous Contract 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 _____
 5. Will a final report be required? No Yes
 6. Is the contract, with amendments, longer than a year? If yes, why? No Yes

The Department of General Services has agreed to give the Commission blanket authority to execute multi-year contracts to support the Commission's RD&D Programs.

CONTRACT REQUESTS FORM (CRF)



The following items should be attached to this CRF			
1. Scope of Work, Attach as Exhibit A.	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached	
2. Budget Detail, Attach as Exhibit B.	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached	
3. CEC 96, NCB Request	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Attached	
4. CEC 30, Survey of Prior Work	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Attached	
5. CEC 95, DVBE Exemption Request	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Attached	
6. Draft CEQA Notice of Exemption (NOE)	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached	
7. Resumes	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached	
8. CEC 105, Questionnaire for Identifying Conflicts		<input checked="" type="checkbox"/> Attached	

 Contract Manager Date Office Manager Date Deputy Director Date

The following signatures are only required when contract approval is delegated to the Executive Office and not approved at a Business Meeting. See Business Meeting Information Section.

 Presiding Policy Committee Date Associate Policy Committee Date Executive Director Date

**Exhibit A
SCOPE OF WORK**

TECHNICAL TASK LIST

Task #	CPR	Task Name
1	N/A	Administration
2	X	Establish Aerial Line Transect Survey Locations
3		Conduct Early Breeding Season Aerial Surveys
4		Conduct Post-fledging Aerial Surveys
5	X	Estimate Golden Eagle Population Size

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	T. Luke George-- Humboldt State University	Ryan Nielson, Joel Thompson--WEST, Inc	
2		Ryan Nielson--WEST, Inc	
3		Ryan Nielson, Joel Thompson, Troy Rintz-- WEST, Inc	
4		Ryan Nielson, Joel Thompson, Troy Rintz-- WEST, Inc	
5		Ryan Nielson, Joel Thompson--WEST, Inc.	

GLOSSARY

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

Acronym	Definition
CPR	Critical Project Review
DOD	Department of Defense
DRECP	Desert Renewable Energy Conservation Plan
Energy Commission	California Energy Commission
Km	kilometer
PAC	Project Advisory Committee
PIER	Public Interest Energy Research
UCC.1	Uniform Commercial Code (Financing Statement)
USFWS	United States Fish and Wildlife Service
WEST, Inc.	Western EcoSystems Technology, Inc. a consulting firm based in Cheyenne Wyoming that will be a key subcontractor on the project.

Exhibit A SCOPE OF WORK

Problem Statement

The State of California and the U.S. Department of the Interior are actively engaged in creating the Desert Renewable Energy Conservation Plan (DRECP) to facilitate permitting for renewable energy projects in California's desert regions while balancing conservation of endangered species and natural communities. Achieving DRECP goals with respect to Golden Eagles, which are legally protected by the Bald and Golden Eagle Protection Act, requires an understanding of the Golden Eagle population dynamics in the desert and the potential impacts of wind and other energy development on that population. A better understanding of the baseline population size and age structure of the eagle population will allow agencies to identify mitigation strategies that effectively offset estimated impacts from energy development, thus enabling take permits (a permit issued that might result in the harm, kill, and other detrimental impacts to endangered or threatened species) to be issued and clean energy deployment to proceed in California. To date, there has been no region-wide survey of the golden eagle population within the DRECP area.

The primary objective of this survey is to estimate the abundance and age structure of golden eagles within the DRECP area and southwestern Imperial County, California during the early breeding season (January-March) and during the post-fledging period (July-September). The surveys will provide unbiased estimates of the size of the golden eagle population within the study area and provide a baseline for detecting trends in the population over time. The age of each eagle observed along the aerial transects will be classified based on visible plumage characteristics¹ into one of six age classes: 1) adult, 2) unknown adult (ad or older immature), 3) older immature (sub-adult), 4) juvenile, 5) unknown immature (juvenile or older immature), and 6) unknown. Conducting surveys over several years results in the accumulation of data which may be sufficient to develop a model of golden eagle habitat associations in the region.

Key issues in obtaining an accurate estimate of golden eagle populations within a region include conducting unbiased surveys across the region and accounting for the proportion of eagles that are missed during a survey. The first issue can be addressed by conducting aerial surveys using random sampling procedures.

The key subcontractor, Western EcoSystems Technology, Inc. (WEST, Inc.), has established methods used previously for golden eagle surveys across the western United States,² which will be utilized in this survey, such as establishing line transects in the DRECP area and estimating the detectability of golden eagles from fixed-wing aircraft. However, obtaining sufficient observations within the study region for accurate estimates of detectability will be a challenge. To address this issue, WEST, Inc. will

¹ Good, R. E., R. M. Nielson, H. H. Sawyer, and L. L. McDonald (2004). Population level survey of golden eagles (*Aquila chrysaetos*) in the western United States. U.S. Fish and Wildlife Service, Arlington, Virginia, USA.

² Nielson, R. N., T. R. Rintz, L. McManus, and, L. L. McDonald (2011). A Survey of Golden Eagles (*Aquila chrysaetos*) in the Western US: 2011 Annual Report. Prepared for the U.S. Fish & Wildlife Service by WEST, Inc., Laramie, Wyoming.

Exhibit A

SCOPE OF WORK

estimate detectability using a double-blind observer methodology in combination with distance analysis to estimate the proportion of eagles missed during a survey. The population size for the region will be estimated by adjusting the number of eagles observed on the aerial transects with the estimated detectability and the proportion of the region included within the transects. Use of a Bayesian statistical approach will allow information from previous golden eagle surveys to inform the prior probability distribution of the detectability function for the DRECP analysis.

Goals of the Agreement

The goal of this Agreement is to obtain estimates and associated confidence intervals of the golden eagle population within the DRECP and southwestern Imperial County, California during one early breeding season (January-March) and one post-fledging (July-September) period.

Objectives of the Agreement

The objectives of this Agreement are to:

- Establish unbiased aerial line-transect surveys across a study area of sufficient length to obtain accurate estimates of the golden eagle population
- Estimate the survey effort needed to obtain accurate estimates of the golden eagle population in the study area on future surveys
- Estimate the proportion of golden eagles detected within the 2 kilometer (km) - wide line transects during the early breeding and post-fledging surveys
- Compare the accuracy of estimates using the previously established protocol for golden eagle aerial surveys and a Bayesian approach that uses information from previous surveys and from those conducted in the DRECP area

Please see the instructions for submitting electronic files and developing software in the “Reporting” Section of Task 1, Administration.

Exhibit A
SCOPE OF WORK

TASK 1.0 ADMINISTRATION

MEETINGS

Task 1.1 Attend 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 Commission Contract Manager, the Contracts Officer, and a representative of the Accounting Office. The Contractor shall bring their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the Commission Contract Manager to this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting. Prior to the kick-off meeting, the Commission Contract Manager will provide an agenda to all potential meeting participants.

The administrative portion of the meeting shall include, but not be limited to, the following:

- Terms and conditions of the Agreement
- CPRs (Task 1.2)
- Match fund documentation (Task 1.7)
- Permit documentation (Task 1.8)

The technical portion of the meeting shall include, but not be limited to, the following:

- The Commission Contract Manager’s expectations for accomplishing tasks described in the Scope of Work;
- An updated Schedule of Deliverables
- Progress Reports (Task 1.4)
- Technical Deliverables (Task 1.5)
- Final Report (Task 1.6)

The Commission Contract Manager shall designate the date and location of this meeting.

Contractor Deliverables:

- An Updated Schedule of Deliverables
- An Updated List of Match Funds
- An Updated List of Permits

Commission Contract Manager Deliverables:

- Final Report Instructions

Task 1.2 CPR Meetings

Exhibit A

SCOPE OF WORK

The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and if so, whether any modifications need to be made to the tasks, deliverables, schedule, or budget.

CPRs provide the opportunity for frank discussions between the Energy Commission and the Contractor. CPRs generally take place at key, predetermined points in the Agreement, as determined by the Commission Contract Manager and as shown in the Technical Task List on page 1 of this Exhibit and in the Schedule of Deliverables. However, the Commission Contract Manager may schedule additional CPRs as necessary. Any additional costs will be borne by the Contractor.

Participants include the Commission Contract Manager and the Contractor, and may include the Commission Contracts Officer, the PIER Program Team Lead, other Energy Commission staff and Management, and other individuals selected by the Commission Contract Manager to provide support to the Energy Commission.

The Commission Contract Manager shall:

- Determine the location, date and time of each CPR meeting with the Contractor. These meetings generally take place at the Energy Commission, but they may take place at another location.
- Send the Contractor the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion of both match funding and permits.
- Conduct and make a record of each CPR meeting. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the project, and if so, whether to modify the tasks, schedule, deliverables and budget for the remainder of the Agreement, including not proceeding with one or more tasks.
- Provide the Contractor with a written determination in accordance with the schedule. The written response may include a requirement for the Contractor to revise one or more deliverable(s) that were included in the CPR.

The Contractor shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other deliverables identified in this Scope of Work. Submit these documents to the Commission Contract Manager and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

Contractor Deliverables:

- CPR Report(s)
- CPR deliverables identified in the Scope of Work

Exhibit A

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Commission Contract Manager Deliverables:

- Agenda and a List of Expected Participants
- Schedule for Written Determination
- Written Determination

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Contractor shall:

- Meet with the Energy Commission to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Contractor, the Commission Contracts Officer, and the Commission Contract Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Contract Manager.

The technical portion of the meeting shall present findings, conclusions, and recommended next steps (if any) for the Agreement. The Commission Contract Manager will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the Commission Contract Manager and the Contracts Officer about the following Agreement closeout items:

- Disposition of any state-owned equipment (Options)
- Need to file UCC.1 form re: Energy Commission's interest in patented technology
- Energy Commission's request for specific "generated" data (not already provided in Agreement deliverables)
- Need to document Contractor's disclosure of "subject inventions" developed under the Agreement
- "Surviving" Agreement provisions, such as repayment provisions and confidential deliverables
- Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Deliverables:

- Written documentation of meeting agreements and all pertinent information
- Schedule for completing closeout activities

REPORTING

See Exhibit D, Reports/Deliverables/Records.

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Instructions for Submitting Electronic Files and Developing Software

Electronic File Format

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CCM) of the full text of any Agreement deliverables 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 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, the 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 Electronic File Format requirements above must be approved in writing by the Energy Commission's Information Technology Services Branch.

Task 1.4 Monthly Progress Reports

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

The Contractor shall:

- Prepare progress reports that summarize all Agreement activities conducted by the Contractor for the reporting period, including an assessment of the ability to complete

Exhibit A

SCOPE OF WORK

the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the Commission Contract Manager within 10 working days after the end of the reporting period. Attachment A-2, Progress Report Format, provides the recommended specifications.

Deliverables:

- Monthly Progress Reports

Task 1.5 Test Plans, Technical Reports and Interim Deliverables

The goal of this task is to set forth the general requirements for submitting test plans, technical reports, and other interim deliverables, unless described differently in the Technical Tasks. When creating these deliverables, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Contract Manager, the latest version of the PIER Style Manual published on the Energy Commission's web site:

<http://www.energy.ca.gov/contracts/pier/contractors/>

The Contractor shall:

- Unless otherwise directed in this Scope of Work, submit a draft of each deliverable listed in the Technical Tasks to the Commission Contract Manager for review and comment in accordance with the approved Schedule of Deliverables. The Commission Contract Manager will provide written comments to the Contractor on the draft deliverable within 10 working days of receipt.
- Once agreement has been reached on the draft, submit the final deliverable to the Commission Contract Manager. The Commission Contract Manager shall provide written approval of the final deliverable within 5 working days of receipt. Key elements from this deliverable shall be included in the Final Report for this project.

Task 1.6 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 done under this Agreement. The Commission Contract Manager will review and approve the Final Report. The Final Report must be completed on or before the termination date of the Agreement. When creating these deliverables, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Contract Manager, the latest version of the PIER Style Manual published on the Energy Commission's web site:

<http://www.energy.ca.gov/contracts/pier/contractors/>

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

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Task 1.6.1 Final Report Outline

The Contractor shall:

- Prepare a draft outline of the Final Report.
- Submit the draft outline of Final Report to the Commission Contract Manager for review and approval. The Commission Contract Manager will provide written comments back to the Contractor on the draft outline within 10 working days of receipt.
- Once agreement has been reached on the draft, shall submit the final outline to the Commission Contract Manager. The Commission Contract Manager shall provide written approval of the final outline within 5 working days of receipt.

Deliverables:

- Draft Outline of the Final Report
- Final Outline of the Final Report

Task 1.6.2 Final Report

The Contractor shall:

- Prepare the draft Final Report for this Agreement in accordance with the approved outline.
- Submit the draft Final Report to the Commission Contract Manager for review and comment. The Commission Contract Manager will provide written comments within 10 working days of receipt.

Once agreement on the draft Final Report has been reached, the Commission Contract Manager shall forward the electronic version of this report for Energy Commission internal approval. Once the approval is given, the Commission Contract Manager shall provide written approval to the Contractor within 5 working days.

- Submit one bound copy of the Final Report with the final invoice.

Deliverables:

- Draft Final Report
- Final Report

MATCH FUNDS, PERMITS, AND ELECTRONIC FILE FORMAT

Task 1.7 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. While the PIER budget for this task will be zero dollars, the Contractor may utilize match funds for this task. Match funds shall be spent concurrently or in advance of PIER funds during the term of this Agreement. Match funds must be

Exhibit A

SCOPE OF WORK

identified in writing, and the associated commitments obtained before the Contractor can incur any costs for which the Contractor will request reimbursement.

The Contractor shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Contract Manager at least 2 working days prior to the kick-off meeting:
 1. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter.
 2. If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter:
 - A list of the match funds that identifies the:
 - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
 - Amount of each in-kind contribution, a description, documented market or book value, and its 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 Contractor shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
 - A copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured.
- Discuss match funds and the implications to the Agreement if they are significantly reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Contract Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Contract Manager within 10 working days if during the course of the Agreement existing match funds are reduced. Reduction in match funds may trigger an additional CPR.

Deliverables:

- A letter regarding Match Funds or stating that no Match Funds are provided
- Letter(s) for New Match Funds
- A copy of each Match Fund commitment letter
- Letter that Match Funds were Reduced (if applicable)

Task 1.8 Identify and Obtain Required Permits

The goal of this task 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.

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Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. While the PIER budget for this task will be zero dollars, the Contractor shall show match funds for this task. Permits must be identified in writing and obtained before the Contractor can incur any costs related to the use of the permits for which the Contractor will request reimbursement.

The Contractor shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Contract Manager at least 2 working days prior to the kick-off meeting:
 1. If there are no permits required at the start of this Agreement, then state such in the letter.
 2. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies the:
 - Type of permit
 - Name, address and telephone number of the permitting jurisdictions or lead agencies
 - Schedule the Contractor will follow in applying for and obtaining these permits.
- The list of permits and the schedule for obtaining them will be discussed at the kick-off meeting, and a timetable for submitting the updated list, schedule and the copies of the permits will be developed. The implications to the Agreement 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 the progress reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, then provide the appropriate information on each permit and an updated schedule to the Commission Contract Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Contract Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Contract Manager within 5 working days. Either of these events may trigger an additional CPR.

Deliverables:

- A letter documenting the Permits or stating that no Permits are required
- Updated list of Permits as they change during the Term of the Agreement
- Updated schedule for acquiring Permits as it changes during the Term of the Agreement
- A copy of each approved Permit

PAC (Optional)

Exhibit A

SCOPE OF WORK

Task 1.9 Establish the PAC

The goal of this task is to create an advisory committee for this Agreement.

The PAC should be composed of diverse professionals. The number can vary depending on potential interest and time availability. The exact composition of the PAC may change as the need warrants. PAC members serve at the discretion of the Commission Contract Manager.

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

- Researchers knowledgeable about the project subject matter
- Members of the trades who will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives)
- Public Interest Market Transformation Implementers
- Product Developers relevant to project subject matter
- U.S. Department of Energy Research Manager
- Public Interest Environmental Groups
- Utility Representatives
- Members of the relevant technical society committees

The purpose of the PAC is to:

- Provide guidance in research direction. The guidance may include scope of research; research methodologies; timing; coordination with other research. The guidance may be based on:
 - technical area expertise
 - knowledge of market applications
 - linkages between the agreement work and other past, present or future research (both public and private sectors) they are aware of in a particular area.
- Review deliverables. Provide specific suggestions and recommendations for needed adjustments, refinements, or enhancement of the deliverables.
- Evaluate tangible benefits to California of this research and provide recommendations, as needed, to enhance tangible benefits.
- Provide recommendations regarding information dissemination, market pathways or commercialization strategies relevant to the research products.

Exhibit A

SCOPE OF WORK

The Contractor shall:

- Prepare a draft list of potential PAC members that includes name, company, physical and electronic address, and phone number and submit it to the Commission Contract Manager at least 2 working days prior to the kick-off meeting. This list will be discussed at the kick-off meeting and a schedule for recruiting members and holding the first PAC meeting will be developed.
- Recruit PAC members and ensure that each individual understands the member obligations described above, as well as the meeting schedule outlined in Task 1.11.
- Prepare the final list of PAC members.
- Submit letters of acceptance or other comparable documentation of commitment for each PAC member.

Deliverables:

- Draft List of PAC Members
- Final List of PAC Members
- Letters of acceptance, or other comparable documentation of commitment for each PAC Member

Task 1.10 Conduct PAC Meetings

The goal of this task is for the PAC to provide strategic guidance to this project by participating in regular meetings or teleconferences.

The Contractor shall:

- Discuss the PAC meeting schedule at the kick-off meeting. The number of face-to-face meetings and teleconferences and the location of PAC meetings shall be determined in consultation with the Commission Contract Manager. This draft schedule shall be presented to the PAC members during recruiting and finalized at the first PAC meeting.
- Organize and lead PAC meetings in accordance with the schedule. Changes to the schedule must be pre-approved in writing by the Commission Contract Manager.
- Prepare PAC meeting agenda(s) with back-up materials for agenda items.
- Prepare PAC meeting summaries, including recommended resolution of major PAC issues.

Deliverables:

- Draft PAC Meeting Schedule
- Final PAC Meeting Schedule
- PAC Meeting Agenda(s) with Back-up Materials for Agenda Items
- Written PAC meeting summaries, including recommended resolution of major PAC issues

Exhibit A

SCOPE OF WORK

TECHNICAL TASKS

The Contractor shall prepare all deliverables in accordance with the requirements in Task 1.5. Deliverables not requiring a draft version are indicated by marking “(no draft)” after the deliverable name.

Task 2 Establish Aerial Line Transect Survey Locations

The goal of this task is to identify the locations of aerial line transects within the study area. Line transect locations will be established using a random stratified approach following the methods developed for golden eagle surveys in the western United States. Urban areas, large bodies of water (> 30,000 hectare), and terrain above 3048 meters (10,000 ft) will be excluded. An attempt will be made to obtain permission to fly in Department of Defense (DOD) lands, but if that is not feasible, DOD lands will also be excluded.

The Contractor shall:

- Identify how many km of transect lines are needed to obtain an accurate estimate of golden eagle numbers within the study area.
- Identify the areas within the study area that will be excluded.
- Establish start and end points for aerial transects.
- Prepare a Task 2 Summary Report that summarizes Task 2 activities. The report shall include, but not be limited to: final number of km transect lines needed for estimating golden eagle numbers, excluded portions of the study area, and aerial transect start and end points.

Deliverables:

- Task 2 Summary Report

Task 3 Conduct Post-fledging Aerial Surveys

The goal of this task is to conduct aerial surveys of golden eagles within the study area during the post-fledging period. Eagle observations will be compiled and the dates and locations of the aerial transects flown will be summarized.

The Contractor shall:

- Conduct aerial surveys for golden eagles along the established transect lines using fixed-wing aircraft during the post-fledging period.
- Identify the location and age of every eagle seen within 1 km of the transect.
- Prepare a Task 3 Summary Report that summarizes Task 3 activities. This report shall include, but not be limited to: location of aerial transects and the dates they were flown, and the number and age of golden eagles observed within 1 km of the transect lines.

Deliverables:

Exhibit A
SCOPE OF WORK

- Task 3 Summary Report

Task 4 Conduct Early Breeding Season Aerial Surveys

The goal of this task is to conduct aerial surveys of golden eagles within the study area during the early breeding season. Eagle observations will be compiled and the dates and locations of the aerial transects flown will be summarized.

The Contractor shall:

- Conduct aerial surveys for golden eagles along the established transect lines using fixed-wing aircraft during the early breeding period.
- Identify the location and age of every golden eagle seen within 1 km of the transect.
- Prepare a Task 4 Summary Report that summarizes Task 4 activities. This report shall include, but not be limited to: location of aerial transects and the dates they were flown, and the number and age of golden eagles observed within 1 km of the transect lines.

Deliverables:

- Task 4 Summary Report

Task 5 Estimate Golden Eagle Population Size

Eagle observations will be compiled and used to estimate the density and population size of golden eagles in the study area using standard and Bayesian analyses.

The Contractor shall:

- Compile data from both surveys.
- Estimate density and total population size of the golden eagle population within the study area using standard and Bayesian analyses.
- Prepare a Task 5 Summary Report that summarizes Task 5 activities.

Deliverables:

- Task 5 Summary Report