

CONTRACT REQUESTS FORM (CRF)

CEC-94 (Revised 5/11)

CALIFORNIA ENERGY COMMISSION


 New Contract 500-12-011 Amendment to Existing Contract: _____ Amendment Number: _____

Division	Contract Manager:	MS-	Phone	CM Training Date
ERDD - Energy Technology Systems Integration	Bryan Lee	43	916-327-1414	10/8/2009

Contractor's Legal Name	Federal ID Number
The Regents of the University of California on behalf of the California Institute for Energy	94-3067788

Title of Project
WESTCARB Phase III Support IAA

Term	Start Date	End Date	Amount
New/Original Contract	6/30/2013	03/31/2015	\$ 751,928

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	6/10/2013	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Mike Gravely	Time Needed:	5 minutes

Agenda Item Subject and Description

Possible approval of Interagency Agreement 500-12-011 with The Regents of the University of California on behalf of the California Institute for Energy and Environment (CIEE) for \$751,928 to assist the Energy Commission in the technical assessments, tracking of field activities, and other associated duties for the U.S. Department of Energy funded West Coast Regional Carbon Sequestration Partnership (WESTCARB) grant. This contract is part of the DOE required costs share for the WESTCARB grant. (PIER Electricity Funding) Contact: Mike Gravely

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

The contractor will assist the Energy Commission in the project management and assessment of the agreements for each organization contracted to work on WESTCARB projects and use this information to prepare DOE required monthly, quarterly and grant annual status reports. The contractor will, on behalf of the Energy Commission, consult and coordinate with the NETL Project Manager to ensure that all grant obligations, as laid out in the tasks, deliverables, and milestones, are met on time and within budget.

California Environmental Quality Act (CEQA) Compliance

1. 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":
 Contract will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because the contract is a support contract (contract management).
2. 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: _____
 - Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why contract is exempt under the above section:
 - 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	\$752,000	Yes	PIER-E	11-12	500.008L	\$752,000
ECAA	\$		\$					\$
State- ERPA	\$		\$					\$
Federal	\$		\$					\$
PIER - E	\$752,000		\$					\$
PIER - NG	\$		\$					\$
Reimbursement	\$		\$					\$
Other	\$		\$					\$
TOTAL:	\$752,000	TOTAL:	\$752,000		TOTAL:			\$752,000
Reimbursement Contract #:					Federal Agreement			

Contractor's Administrator/ Officer		Contractor's Project Manager	
Name:	Ken Krich	Name:	Carl Blumstein
Address:	2087 ADDISON ST FL 2	Address:	2087 ADDISON ST FL 2
City, State, Zip:	BERKELEY, CA 94704-1268	City, State, Zip:	BERKELEY, CA 94704-1268
Phone/ Fax:	510-643-5542 / 510-225-2520	Phone/ Fax:	510-643-9321 / 510-643-9324
E-Mail:	ken.krich@uc-ciee.org	E-Mail:	carl.blumstein@uc-ciee.org

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 <u>Select Type</u> 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 checked="" 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)

CONTRACT REQUESTS FORM (CRF)



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?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
If Yes, Do you plan to release retention prior to contract termination?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes

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

Disabled Veteran Business Enterprise Program (DVBE)
1. <input checked="" type="checkbox"/> Not Applicable
2. <input type="checkbox"/> Meets DVBE Requirements DVBE Amount:\$ _____ DVBE %: _____
<input type="checkbox"/> Contractor is Certified DVBE
<input type="checkbox"/> Contractor is Subcontracting with a DVBE: _____
3. <input type="checkbox"/> Requesting DVBE Exemption (attach CEC 95)

Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
If yes, check appropriate box:		<input type="checkbox"/> SB	<input type="checkbox"/> MB <input type="checkbox"/> DVBE

Is Contractor subcontracting any services?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
If yes, give company name and identify if they are a Small Business (SB), Micro Business (MB) and/or 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?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
2. Is the Contractor providing confidential information?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
3. Is the contractor going to purchase equipment?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
4. Check frequency of progress reports			
<input type="checkbox"/> Monthly		<input checked="" type="checkbox"/> Quarterly	<input type="checkbox"/> _____
5. Will a final report be required?		<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
6. Is the contract, with amendments, longer than a year? If yes, why?		<input type="checkbox"/> No	<input checked="" type="checkbox"/> 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 checked="" type="checkbox"/> N/A	<input 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	
9. CEC 106, IT Component Reporting Form		<input 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		Project Management
3		Outreach and Education
4		Technical Support for DOE/NETL Programs
5		Regional Characterization
6		Integrated Studies and Cross-Cutting Issues

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1-6	Niall Mateer, CIEE	N/A	N/A

GLOSSARY

Acronym	Definition
CARB	California Air Resources Board
CCS	Carbon Capture and Sequestration
CIEE	California Institute for Energy and Environment
CO ₂	Carbon Dioxide
CPR	Critical Project Review
DOE	U. S. Department of Energy
Energy Commission	California Energy Commission
GHG	Greenhouse Gas
GIS	Geographic Information System
NATCARB	National Carbon Sequestration Database and Geographic Information System
NETL	National Energy Technology Laboratory
PIER	Public Interest Energy Research
PNNL	Pacific Northwest National Laboratory
RCSP	Regional Carbon Sequestration Partnerships
RD&D	Research, Development, and Demonstration
SOPO	Statement of Project Objectives
WESTCARB	West Coast Regional Carbon Sequestration Partnership

Problem Statement

The California Energy Commission (Energy Commission) is contracted to manage the U.S. Department of Energy's (DOE) West Coast Regional Carbon Sequestration Partnership (WESTCARB), for which the Energy Commission is contracted to deliver numerous research deliverables. The Energy Commission has a number of subcontractors that are responsible for delivering technical reports, quarterly reports, and undertaking significant field activities to fulfill its commitments for WESTCARB.

Background

Under a previous Energy Commission contract, The Regents of the University of California, California Institute for Energy and Environment (CIEE) managed a large portion of the WESTCARB Phase II contract for the Energy Commission's Public Interest Energy Research (PIER).

Goals of the Agreement

The goal of this Agreement is to provide support to the Energy Commission in order to manage the WESTCARB Phase III activities, awarded to the Commission by the U.S. Department of Energy. Primary focus is providing support in the areas of:

- Primary reports to DOE on WESTCARB's performance;
- WESTCARB outreach and education tasks;
- Technical support for DOE programs and databases;
- Regional characterization tasks;
- Integrated studies and cross-cutting issues.

The contractor will provide support by:

- Provide support in preparing reports for delivery to DOE in fulfillment of contractual requirements.
- Assist in the development and design of materials needed for workshops, press conferences, reports, case studies, for distribution to general and technical audiences. Provide word processing, writing, editing, spreadsheet analysis and presentation, database analysis and presentation.
- Assist in technical writing and editing needed for WESTCARB program materials including presentation materials, reports, brochures, fact sheets, and newsletter articles.
- Providing technical expertise for review of WESTCARB projects, and coordination and collaboration across multiple projects.
- Assist in conducting workshops and other outreach activities that seek comments from relevant individuals, industries and organizations to fulfill WESTCARB contract requirements.

Objectives of the Agreement

The objectives of this Agreement are to:

- Make sure the work undertaken by WESTCARB subcontractors is delivered in a timely manner and meets the highest technical standards. Develop and update research plans, “white papers,” and candidate research activity portfolios for Research, Development and Demonstration (RD&D) of new technologies for electric transmission and distribution, including smart grid.
- Provide technical expertise for review and guidance for selected PIER grid projects, and coordination and collaboration across multiple projects.
- Develop methods for, and conduct of, technology transfer and outreach to California Stakeholders and ratepayers for projects.
- Provide coordination and collaboration with other organizations involved in PIER research.
- Identify and cultivate co-funding opportunities for PIER research.
- Identify and document tangible benefits to ratepayers of PIER research.

Work Guarantee

All members of the Contractor team, including employees of the Contractor, are eligible to perform and may be assigned technical work. However, there is no guarantee that work will be required in all areas, or that every person or firm listed in this Agreement will receive work during the Agreement period. Additional people or firms may be added during the course of this Agreement, if necessary, upon approval by the Energy Commission staff.

Contract Manager

To ensure the timeliness and success of all work performed under this Agreement, the Contract Manager will work closely with the Contractor to administer the Agreement. The Energy Commission staff will review all products and deliverables to ensure quality, and consistency.

Work Performance

The Energy Commission cannot accurately predict far into the future when work will be required under this Agreement. The need to conduct support will depend on a number of factors, including what research is currently being conducted at the Energy Commission and elsewhere. Further, once the need for work is initiated, the work may need to proceed at a quick pace to meet the required analytical and procedural deadlines to support standards. Accordingly, the Contractor will need to be able to respond to the Energy Commission’s requests for technical support on a timely basis. The Contractor shall respond to requests for work in accordance with the following pattern:

- The Energy Commission's Contract Manager shall provide reasonable notice that a significant work effort will be required and the Contractor will need to assemble an effective and trained team during that period.
- The Contractor shall return telephone calls and e-mails from the Energy Commission's Contract Manager and provide an initial response within two (2) days if possible provided there are no extenuating circumstances.
- The Contractor shall provide quality assurance on its draft products before delivery to the Energy Commission.

The Contractor will be required to complete a series of specific tasks, including: management and technical functions and provision of technical support services. The Contractor shall perform various activities in carrying out the tasks under this Agreement. These activities are the general types of work the Contractor will perform in order to accomplish the tasks listed in this agreement. These are not stand alone activities, but are the types of work required to perform tasks 1-6 below. All work requested will fall within one or more of the six (6) tasks.

Specific Tasks

The Contractor will be required to perform management and technical functions; to complete a series of specific tasks and to provide technical support services.

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

The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and if it should, are there any modifications that 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 above and in the Schedule of Deliverables. However, the Commission Contract Manager may schedule additional CPRs as necessary, and, if necessary, the budget will be reallocated to cover the additional costs borne by the Contractor, but the overall contract amount will not increase.

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 as well as 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 on 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 continuing, whether or not to modify the tasks, schedule, deliverables and budget for the remainder of the Agreement, including not proceeding with one or more tasks. If the Commission Contract Manager concludes that the project needs a formal amendment or that satisfactory progress is not being made and the project needs to be ended, these conclusions will be referred to the Commission's Research, Development and Demonstration Policy Committee for its concurrence.
- 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

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:

- What to do with 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.

Task 1.4 Quarterly 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 which summarize all Agreement activities conducted by the Contractor for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due 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:

- Quarterly 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/index.html>

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 back to the Contractor on the draft deliverable within 10 working days of receipt. Once agreement has been reached on the draft, the Contractor shall 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/index.html>

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.

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, the Contractor 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 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.

Permit costs and the expenses associated with obtaining permits are reimbursable under this Agreement. Permits must be identified in writing before the Contractor can incur any costs related to the use of the permit(s) 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

Task 1.9 Electronic File Format

The goal of this task is to unify the formats of electronic data and documents provided to the Energy Commission as contract deliverables. Another goal is to establish the computer platforms, operating systems and software that will be required to review and approve all software deliverables.

The Contractor shall:

- Deliver documents to the Commission Contract Manager in the following formats:
 - 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.
- Request exemptions to the electronic file format in writing at least 90 days before the deliverable is submitted.

Deliverables:

- A letter requesting exemption from the Electronic File Format (if applicable)

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. The Energy Commission will not reimburse any expenditures to provide food or drink (e.g., catering costs) at any meeting, including workshops, under this agreement. The contractor can use non-Commission funds for this purpose. This restriction does not prevent the contractor’s personnel working under this agreement from recovering individual meal costs associated with travel as allowed under the contract terms

Task 2. Project Management.

Goals:

Project management and assessment will be performed by the California Energy Commission as defined in the WESTCARB Statement of Project Objective with assistance from the Technical Advisory Team. The Energy Commission, led by the WESTCARB Principal Investigator and assisted by the recipient, will manage the agreements for each organization contracted to work on WESTCARB projects and will consult and coordinate with the NETL Project Manager to ensure that all contractual obligations, as laid out in the tasks, deliverables, and milestones, are met on time and within budget. Contractor activities include but are not limited to the following:

- **Weekly status updates** will be submitted by email each Friday to the National Energy Technology Laboratory (NETL) Project Manager. Weekly updates will include activities and accomplishments from the reporting week and plans for the following week.
- **Quarterly progress reports** will be developed and submitted in accordance with DOE’s reporting requirements to inform the NETL Project Manager of project activities, data/findings, interim conclusions, lessons learned, and quarterly earned value tables and graphs that report best estimates of costs incurred, including cost share, compared to progress by task.
- **Lessons learned reports** will summarize the activities associated with the Northern California Pilot test, and Kimberlina well sites and including as an assessment of the lessons learned and implications of the outcomes for carbon capture and sequestration (CCS) commercialization in the state.
- A **Final Report** will be developed and submitted, in accordance with the DOE report requirements, summarizing project activities and accomplishments, data/findings, conclusions, and lessons learned. prior to finalization and submission by the WESTCARB Principal Investigator.

- The Energy Commission will assemble a **Technical Advisory Team** comprised of representatives from key WESTCARB partners and contractors, which will meet on a regular basis to provide timely responses to Energy Commission requests, to ensure knowledge-sharing within the WESTCARB team, and provide integration of WESTCARB activities.
- A **Senior Level Advisory Review Committee**, distinct from the WESTCARB Technical Advisory Team, will be established to periodically review, make recommendations, and provide advice on matters within areas of their experience and expertise.

The Contractor shall:

- Assist in the preparation, review and transmission of Weekly Reports, Quarterly Progress Reports, and other products as requested, under the direction of the Energy Commission Contract Manager and in consultation with the WESTCARB Technical Director,
- Provide staff assistance for the Technical Advisory Team and the Advisory Review Committee as needed.
- Prepare and provide Quarterly Reports which will include but not be limited to confirmation that Weekly Reports, Quarterly Progress Reports, Lessons Learned, and Final Reports have been completed and submitted to the Commission for transmittal to DOE.
- Prepare and provide Quarterly Reports which will include but not be limited to information on results of Technical Advisory and Advisory Review Committee deliberations.

Deliverables:

- Quarterly Reports confirming that Weekly Reports, Quarterly Progress Reports, Lessons Learned, and Final reports for activities.
- Quarterly Reports on the results of Technical Advisory and Advisory Review Committee deliberations.

Task 3. Outreach and Education

Goals:

WESTCARB shall organize and/or support outreach activities to policy makers, major CO₂-producing industries, legislators, and regulators in the WESTCARB region to improve their understanding of CCS technology and economics. Greenhouse gas (GHG) policy options will be analyzed and assessed for technical and economic issues, and potential regulatory impediments related to CCS will be identified. WESTCARB and the DOE funded studies will be utilized to educate policy makers, legislators, industry executives, and regulators.

The Contractor shall:

- Develop, as requested by the Energy Commission CAM, presentation materials and provide other assistance with informing the internal and external stakeholders on CCS.
- Provide WESTCARB field data and lessons learned to the California Air Resources Board (CARB) for use in their activities with developing CCS protocols by 2015-2016.
- Attend regional and national meetings representing the Energy Commission and the WESTCARB team.
- Monitor and update the WESTCARB website and distribution database for the Energy Commission.
- Prepare and provide Quarterly Reports which will include, but not be limited to, information on the status of the website and distribution database.

Deliverables:

- Presentation materials
- Quarterly Report on the status of the WESTCARB website and distribution database.

Task 4. Technical Support for NETL/DOE Programs and Databases

Goals:

The contractor shall support NETL/DOE carbon sequestration programs by providing data for NATCARB and other databases on CCS, materials for NETL publications, and technical expertise to working groups and programmatic initiatives.

- Assist in the development of regional characterizations and methodologies for DOE's national and international CCS outreach, programs, and partners. This includes working with other Regional Carbon Sequestration Partnerships (RCSP) to integrate technical data and contributing to activities of the Carbon Sequestration Leadership Forum, the United States-Canada Clean Energy Dialogue Knowledge Sharing Agreement, and participating in other initiatives such as representation on the Interstate Oil and Gas Commission.
- Maintain, upgrade, and integrate new GIS-based data from WESTCARB point source analyses and regional characterization studies into the WESTCARB online carbon atlas and coordinate with and serve WESTCARB geographic information system (GIS) data layers to NATCARB. The user interface will be upgraded on the WESTCARB online carbon atlas to enhance user experience. Custom data requests from users will be supported, as allowed by contract resources.
- Develop updated assessments, write-ups, graphics, and images for the WESTCARB section of the NETL *Carbon Sequestration Atlas of the United States and Canada* using data gathered from the progression and results of the work executed in completing WESTCARB Statement of Project

Objectives (SOPO). Provide input or materials for other NETL publications as requested by NETL.

The Contractor shall:

- Assist in the coordination, preparation, review and transmission of materials for NATCARB and the National Sequestration Atlas of the United States and Canada, under the direction of the Energy Commission Contract Manager and in consultation with the WESTCARB Principle Investigator Technical Director.
- Assist in the management of contracts with external entities that are contracted to provide primary delivery of these products.
- Prepare and provide Quarterly Reports which will include but not be limited to information on the status of NATCARB and National Atlas delivery performance.

Deliverable:

- Quarterly Reports on status of NATCARB and National Atlas delivery performance.

Task 5. Regional Characterization

Goals:

Monitor and assess the geologic characterization efforts from the Validation Phase (Phase II). Complete refinements and site-specific studies of previously characterized regions and initial assessments in previously limitedly or unstudied areas. Conduct or refine geologic assessments in Arizona, California, Hawaii, and Nevada, and will continue to work with Alaska, British Columbia, Oregon, and Washington to update geologic and CO₂ emission point source assessments of the entire WESTCARB region to support NATCARB.

- Review CO₂ storage potential of the Basin and Range Provinces of Arizona with a focus on Tertiary Basins and deep Paleozoic formations. Building upon WESTCARB Phase II characterization of saline formations in the Colorado Plateau WESTCARB shall assess targeted geologic formations that are at or below supercritical CO₂ depths. Conduct assessments of the broad-scale screening utilizing existing geologic data, such as cross-sections, stratigraphic relationships, geologic maps and borehole datasets, and obtain information from subsurface geological/geophysical data to determine formation rock types, thickness, and petrophysical properties of potential reservoirs and confining units. Estimates of formation water salinities will be developed, where suitable well log data are available. Review assessments of CO₂ storage potential for Arizona completed by WESTCARB contractors and partners.
- Assist WESTCARB partners to identify the major CO₂ point sources in Hawaii and also evaluate the potential for CO₂ geologic storage in the basalt formations common to the Hawaiian Islands. The methodology used to

determine the geologic storage potential of the basalts will be developed and documented as part of this subtask in consideration of the studies done by the Big Sky RCSP and Pacific Northwest National Laboratory (PNNL) and in consultation with researchers at those and other institutions with expertise in basalt storage.

- Review the assessments completed by WESTCARB partners of CO₂ storage potential within 50 miles of existing fossil-fuel power plants in Nevada. Ensure an assessment of CO₂ storage potential for Nevada is developed. Additionally, based on available data, ensure a WESTCARB partner develops a conceptual model of the sites should be developed.

The Contractor shall:

- Assist the Energy Commission Contract Manager in the management of contracts with WESTCARB partners that are sub-contracted to provide primary delivery of all contract deliverables. Provide support in the review of contractor deliverables to ensure that the work meets contract requirements.
- Prepare and provide Quarterly Reports which will include but not be limited to information on the status of the regional characterization subcontractors and contract deliverables in the Quarterly Report.

Deliverable:

- Quarterly Reports on status of subcontractors.

Task 6. Integrated Studies and Cross-Cutting Issues

Goals:

Geologic factors such as seismic hazards (induced and natural), the socioeconomics of populations or stakeholders groups near a location, and other considerations are included in WESTCARB deliverables. Ensure the following are completed by WESTCARB partners.

- An online portal is developed, incorporating various non-technical and technical elements throughout the WESTCARB region that affect project selection decisions including, but not limited to, access to transportation networks, location of CO₂ sources, known storage sites (CO₂ and natural gas), locations of oil and gas fields, and socioeconomic factors (e.g., 2010 Census datasets).
- Organize workshops to utilize the international scientific expertise of WESTCARB's partners and associates in addition to outside experts in the field of seismic hazards associated with CCS or relevant analogous activities (e.g., enhanced geothermal systems, enhanced oil recovery, waste injection). The workshop will identify gaps in both scientific knowledge and data on the causes and risks of induced seismicity related to the injection and geologic storage of CO₂ and the impacts of natural seismic events on storage site integrity. The

workshop will identify additional studies and tests needed to address these issues.

The Contractor shall:

- Under the direction of the Energy Commission Contract Manager assist in the management of contracts with external entities that are sub-contracted to provide primary delivery of these products.
- Provide support in the review of contractor deliverables to ensure that the work meets the highest technical standards.
- Prepare and provide Quarterly Reports which will include but not be limited to information on the status of the integrated studies and cross-cutting issues subcontractors and contract deliverables.

Deliverable:

- Quarterly Reports on status of integrated studies and cross-cutting issues subcontractors and subcontract deliverables.