

GRANTS/CONTINGENT AWARD REQUEST



To: Grants and Loans Office

Date: 3/1/2013

Project Manager: Rhetta deMesa

Phone Number: 916-327-1312

Office: Energy Generation Research Office

Division: Energy Research and Development

MS- 43

Project Title: Direct Recycling Technology for California's PEV Li-ion Battery Packs

Type of Request: (check one)

Form for New Agreement with fields for Program, Solicitation Name, Recipient Name, Address, Project Officer, and Agreement Dates.

Form for Amendment with checkboxes for Term Extension, Work Statement Revision, Budget Revision, Change of Scope, and Other.

ITEMS TO ATTACH WITH REQUEST:

- List of items to attach: A. Work Statement, B. Budget, C. Recipient Resolution, D. Special Conditions, E. CEQA Compliance Form, F. Other Documents.

California Environmental Quality Act (CEQA)

Form for CEQA compliance with checkboxes for CEC finds, Project exempt, Environmental Document, and CEC finding.

Funding Information:

Form for funding information with fields for Source #1, #2, #3, Amount, Statute, FY, and Budget List #.

If federally funded, specify federal agreement number:

* Source Examples include ERPA, PIER-E, PIER-NG, FED, GRDA, ARFVT, OTHER.

Business Meeting Approval: (refer to Business Meeting Schedule)

Form for Business Meeting Approval with fields for Date, Participant, and Consent/Discussion options.

Agenda Notice Statement: (state purpose in layperson terms)

Possible approval of a Grant / Contingent Award to... Possible approval of Agreement PIR-12-006 with Farasis Energy, Inc. for \$749,710 to develop and demonstrate a recycling technology known as Direct Recycling...

**Exhibit A
SCOPE OF WORK**

TECHNICAL TASK LIST

Task #	CPR	Task Name
1	N/A	Administration
2		Recycling Process Step Development
3	X	Materials Characterization
4		Direct Recycling Life-Cycle Demonstration
5		Data Collection and Analysis
6		Technology Transfer Activities
7		Production Readiness Plan

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Keith Kepler, Farasis Energy, Inc.	Lawrence Berkeley National Laboratory (LBNL)	RSR Technologies
2			
3		LBNL	
4			RSR Technologies
5			
6			
7			

GLOSSARY

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

Term/ Acronym	Definition
CPM	Commission Project Manager
CPR	Critical Project Review
EV	Electric Vehicle
ERDD	Energy Research and Development Division
PEV	Plug-In Electric Vehicle
Li-ion	Lithium-Ion
Li(NiCoMn)O ₂	Lithium Nickel Manganese Cobalt Oxide

Problem Statement:

Despite major technical progress in the development of electric vehicles (EVs), their high cost is a significant barrier to the rapid growth of the EV market. The lack of an established disposal or recycling system for the spent lithium-ion (Li-ion) battery systems that power EVs is also a major barrier that must be addressed as the market

grows and EVs on the road begin reach the end of their designed life. There is no established system for disposing of or recycling Li-ion battery systems because they are large, hazardous, widely dispersed, difficult to collect, and have little value if recycled. Existing methods of recycling Li-ion batteries (most commonly sourced from consumer electronics) rely on the recovery of a small portion of the battery, typically Cobalt metal, which has sufficient value to justify the effort. However, Cobalt is less common in the newer Li-ion systems used for plug-in electric vehicles (PEVs), and the processing methods used (such as smelting or digestion) result in the destruction or burn-off of all of the high value active materials, including lithium. Unless a new recycling approach is developed to handle the large Li-ion battery systems that will be generated as the EV market grows, California and other states will face the choice of either accepting a massive increase in the amount of hazardous material that must be processed by landfills or charging EV purchase or use fees that support a conventional recycling/disposal infrastructure for EV battery packs. Neither option is desirable because both could significantly increase the purchase cost of EVs for the consumer and delay the shift from combustion engines needed to address a range of major environmental and economic concerns.

Goal of the Agreement:

The goal of this Agreement is to develop and demonstrate the technical and cost feasibility of a Direct Recycling technology suitable for handling the large number of PEV Li-ion battery packs that will begin to enter the waste stream in the future. The Recipient will collaborate with the key subcontractor to perform the research, development, and analytical work needed to confirm the technical aspects of the approach. The recipient will also work with RSR Technologies to implement a small-scale demonstration of the integrated process, and will use the results to develop an accurate cost model for implementing a technology to handle PEV battery systems in California.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Develop processes and characterize materials to demonstrate that the Direct Recycling approach can produce Li-ion battery active materials similar in performance to newly synthesized battery materials that are suitable for reuse in new Li-ion batteries for EV applications. This will be achieved by fully characterizing and comparing newly synthesized materials with aged, recovered, and recycled Li-ion materials, in terms of electrochemical properties and physical characteristics. The specific objective will be to show the capability to achieve > 98% of the performance of newly synthesized materials at lab scale.
- Optimize and demonstrate that the recycling process steps have the potential to recover and regenerate active and inactive materials with high yield. This will be achieved by determining the potential yield of each process step. The specific objective will be show the capability to achieve a > 95% yield at lab scale.

- Demonstrate that the approach is suitable for the dominant Li-ion battery waste streams expected for PEV systems in California, and the feasibility of its broad use for a range of Li-ion battery chemistries with further optimization.
- Demonstrate one life cycle of a Li-ion cell at lab scale. This will be achieved by aging EV suitable Li-ion cells, using the Direct Recycling processes developed to recover and regenerate the active materials, and using them to make new Li-ion cells.
- Develop a cost model for recycling large Li-ion battery systems using the Direct Recycling approach by analyzing the cost of scaling the process steps, throughput, and yields for all inactive and active components to be recycled.

TASK 1 ADMINISTRATION

Instructions for Submitting Electronic Files and Developing Software

Electronic File Format

The Recipient will deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the Commission Project Manager (CPM) of the full text of any Agreement products 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 products and establishes the computer platforms, operating systems, and software versions that will be required to review and approve all software deliverables.

- Data sets will be in Microsoft (MS) Access or MS Excel file format.
- PC-based text documents will be in MS Word file format.
- Documents intended for public distribution will be in PDF file format, with the native file format provided as well.
- Project management documents will 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 Recipient will use 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 1.1 Attend Kick-off Meeting

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

The Recipient shall:

- Attend a "Kick-Off" meeting with the CPM, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the CPM to this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting. Prior to the kick-off meeting, the CPM will provide an agenda to all potential meeting participants.

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

- Discussion of the terms and conditions of the Agreement
- Discussion of Critical Project Review (Task 1.2)
- Match fund documentation (Task 1.6) *No work may be performed until this documentation is in place.*
- Permit documentation (Task 1.7)
- Discussion of subcontracts needed to carry out project (Task 1.8)

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

- The CPM's expectations for accomplishing tasks described in the Scope of Work
- An updated Schedule of Products
- Discussion of Progress Reports (Task 1.4)
- Discussion of Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Discussion of the Final Report (Task 1.5)

The CPM shall designate the date and location of this meeting.

- Submit an updated Schedule of Products, List of Match Funds, and List of Permits to the CPM.

Recipient Products:

- Updated Schedule of Products

- Updated List of Match Funds
- Updated List of Permits

Commission Project Manager Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (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 to identify any needed modifications to the tasks, products, schedule, or budget.

CPRs provide the opportunity for frank discussions between the CPM and the Recipient. The CPM may schedule CPRs as necessary, and CPR costs will be borne by the Recipient.

Participants include the CPM and the Recipient, and may include the Commission Grants Officer, the Energy Research and Development Division technical lead, other Energy Commission staff and Management, and any other individuals selected by the CPM to provide support to the Energy Commission.

The Commission Project Manager shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location or may be conducted via electronic conferencing (e.g., WebEx), as determined by the Commission Project Manager.
- Send the Recipient 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 modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. If the CPM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more products that were included in the CPR.

The Recipient 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 on

the project. This report shall be submitted along with any other products identified in this Scope of Work. The Recipient shall submit these documents to the CPM 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.

Commission Project Manager Products:

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to close out this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present the project 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 Recipient, the Commission Grants Office Officer, and the CPM. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the discretion of the CPM.

The technical portion of the meeting shall involve the presentation of an assessment of the degree to which project and task goals and objectives were achieved, in addition to findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CPM will determine the appropriate meeting participants.

The administrative portion of the meeting shall involve a discussion with the CPM and the Grants Officer about the following Agreement closeout items:

- Disposition of any equipment purchased with Energy Commission funds
- Energy Commission's request for specific "generated" data (not already provided in Agreement products)
- Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
- "Surviving" Agreement provisions

- Final invoicing and release of retention
- Prepare written documentation of any agreements made between the Recipient and Commission staff during the meeting.
- Prepare a schedule for completing the closeout activities for this Agreement.

Products:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

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 on time and within budget.

The objectives of this task are to 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, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report that summarizes all Agreement activities conducted by the Recipient 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 CPM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in the Terms and Conditions of this Agreement.
- In each Monthly Progress Report and invoice, document and verify:
 - Energy Commission funds received by California-Based Entities (CBEs);
 - Energy Commission funds spent in California; and Match fund expenditures
 - Provide synopsis of project progress.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving its goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements.

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

The Recipient shall:

- Prepare an Outline of the Final Report.
- Prepare a Final Report following the approved outline and the latest version of the Final Report guidelines which will be provided by the CPM. The CPM shall provide written comments on the Draft Final Report within 15 working days of receipt. The Final Report must be completed at least 90 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

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

Task 1.6 Identify and Obtain Match Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained 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. Although the Energy Commission budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of Energy Commission funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the CPM at least 2 working days prior to the kick-off meeting. 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. If

- 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, 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 Recipient shall identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
- Provide 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. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are 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 a letter including the appropriate information to the CPM if during the course of the Agreement additional match funds are received.
- Provide a letter to the CPM within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR.

Products:

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

Task 1.7 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 not reimbursable under this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the CPM at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. 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
 - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule, and copies of the permits. 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, provide an updated list of permits (including the appropriate information on each permit) and an updated schedule to the CPM.
- As permits are obtained, send a copy of each approved permit to the CPM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CPM within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each approved permit (if applicable)

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontracts required to carry out the tasks under this Agreement consistent with the terms and conditions of this Agreement and the Recipient's own procurement policies and procedures. This task will also provide the Energy Commission an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the Commission Agreement Manager for review.
- Submit a final copy of the executed subcontract.
- If the Recipient decides to add new subcontractors, it shall notify the Commission Agreement Manager.

Products:

- Draft subcontracts
- Final subcontracts

TASK 2 RECYCLING PROCESS STEP DEVELOPMENT

This task will occur in coordination with Task 3. The goal of this task is to collect materials from each step of the Direct Recycling process for the detailed characterizations that will occur in Task 3. The materials will be used to: (1) iteratively develop and improve existing process steps in terms of purity, yield, and performance; and (2) develop and demonstrate innovative new process steps that may lead to a higher-yield, lower cost, fully integrated Direct Recycling system.

The Recipient shall:

- Demonstrate and optimize a process for rough separation of the active materials from Li-ion cells from the inactive components, with a focus on lithium nickel manganese cobalt oxide (Li(NiCoMn)O₂)/Graphite chemistry based on milling and sieving.
- Demonstrate and optimize a process for regenerating recovered graphite anode materials and Li(NiCoMn)O₂ cathode materials-based heat processing and on solid state lithiation.
- Develop, evaluate, and optimize a new process for separation of the active graphite and Li(NiCoMn)O₂ cathode materials based on density separation.
- Develop, evaluate, and optimize a new process for purification of the active graphite and Li(NiCoMn)O₂ cathode materials based on chemical and electrochemical processing.
- Demonstrate and optimize a new process for regeneration of the active graphite and Li(NiCoMn)O₂ cathode materials based on electrochemical processing.
- Develop a Process Test Plan that describes the planned processes that will be used for the separation of the active and inactive materials, regeneration of anode and cathode materials, and purification of materials.
- Prepare a Process Development Report that includes results of the testing described in the Process Test Plan.

Products:

- Draft Process Test Plan
- Final Process Test Plan
- Draft Process Development Report
- Final Process Development Report

TASK 3 MATERIALS CHARACTERIZATION

The goal of this task is to perform detailed characterizations of the Li-ion active materials generated during the development and demonstration of the recycling process steps. These characterizations will provide information for optimizing and verifying process step feasibility, specifically for the Li(NiCoMn)O₂/Graphite Li-ion chemistry.

The Recipient shall:

- Physically and chemically characterize the materials generated in Task 1 using analytical tools, and compare their properties to pristine materials.
- Electrochemically characterize the materials generated in Task 1 in lithium coin cells, full pouch cells, and in flooded 3 electrode cells to determine material capacity, impedance, and cycling performance relative to pristine materials.
- Develop a Materials Test Plan that includes details of the experimental methodology, including testing to be performed, test objectives, technical approach, and a description of data analysis procedures.
- Prepare a Materials Characterization Report that includes results of the testing described in the Materials Test Plan.

Products:

- Draft Materials Test Plan
- Final Materials Test Plan
- Draft Materials Characterization Report
- Final Materials Characterization Report

TASK 4 DIRECT RECYCLING LIFE-CYCLE DEMONSTRATION

The goal of this task is to demonstrate the full life cycle of a Li-ion cell using the Direct Recycling processes developed under Tasks 2 and 3.

The Recipient shall:

- Build and cycle Li-ion cells under conditions that simulate the aging of cells in a commercial PHEV battery.
- Process the aged Li-ion cells using the Direct Recycling process steps developed under the project while tracking the yield of both the active and inactive components.
- Build new Li-ion cells using the recovered and regenerated active materials from the aged Li-ion cells.
- Complete performance testing of the new Li-ion cells for comparison with the originally built Li-ion cells.
- Develop a Cell Test Plan that includes details of the experimental methodology, including testing to be performed, test objectives, technical approach, and a description of data analysis procedures.
- Prepare a Recycled Cell Performance Report that includes test results.

Products:

- Draft Cell Test Plan
- Final Cell Test Plan
- Draft Recycled Cell Performance Report
- Final Recycled Cell Performance Report

TASK 5 DATA COLLECTION AND ANALYSIS

The goals of this task are to collect operational data, analyze the data for economic and environmental impacts, and include the data and analysis in the Final Report.

The Recipient shall:

- Develop a data collection test plan based on input from the CPM. The plan will include but not limited to a discussion of the following:
 - Energy savings and estimated cost savings
 - Greenhouse gas reductions
 - Other non-energy benefits
- Provide data on potential job creation, market potential, economic development, and increased state revenue as a result of expected future expansion.
- Provide an estimate of the project's energy savings and other benefits including potential statewide energy savings once market potential has been realized.
- Compare project performance and expectations provided in the proposal to actual project performance and accomplishments.

TASK 6 TECHNOLOGY TRANSFER ACTIVITIES

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

The Recipient shall:

- Prepare and provide a Technology Transfer Plan that explains how the knowledge gained in this project will be made available to the public. The level of detail expected is least for research-related projects and highest for demonstration projects. Key elements from this report will be included in the Final Report.
- Conduct technology transfer activities in accordance with the Technology Transfer Plan. These activities will be reported in the Quarterly Progress Reports.
- Indicate the intended use(s) for and users of the project results.

Products:

- Draft Technology Transfer Plan
- Final Technology Transfer Plan

TASK 7 PRODUCTION READINESS PLAN

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

The Recipient shall:

- Prepare and provide a Production Readiness Plan. The degree of detail in the plan should be proportional to the complexity of producing or commercializing the proposed product and its state of development. As appropriate, the plan will include but not be limited to a discussion of the following:

- Critical production processes, equipment, facilities, personnel resources, and support systems needed to produce a commercially viable product
- Internal manufacturing facilities, supplier technologies, capacity constraints imposed by the design under consideration, design- critical elements, and the use of hazardous or non-recyclable materials. The product manufacturing effort may include “proof of production processes”
- A projected “should cost” for the product when in production
- The expected investment threshold to launch the commercial product
- An implementation plan to ramp up to full production

Products:

- Draft Production Readiness Plan
- Final Production Readiness Plan



Award Number: PIR-12-006

Date: 3 / 1 / 2013

Note: The Energy Commission Project Managers Manual includes detailed instructions on how to complete this section, with examples of grants that are “Projects” and are not “Projects”. When the Project Manager is completing this section, if questions arise as to the appropriate answers to the questions below, please consult with the Energy Commission attorney assigned to review grants or loans for your division.

1. Is grant/loan considered a “Project” under CEQA? Yes (skip to question #2) No (continue with question #1)

Please complete the following: *[Public Resources Code (PRC) 21065 and 14 California Code of Regulations (CCR) 15378]:*

Explain why the grant/loan is **not** considered a “Project”? The grant/loan will not cause a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because grant/loan involves:

2. If grant/loan is considered a “Project” under CEQA: (choose either **IS** or **IS NOT**)

Grant/loan **IS** exempt:

Statutory Exemption: (List PRC and/or CCR section numbers) _____

Categorical Exemption: (List CCR section number) 14 CCR 15306

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

Explain reason why the grant/loan is exempt under the above section:

The project involves laboratory-scale demonstration activities that will not result in a significant environmental impact.

Please attach draft Notice of Exemption (NOE). Consult with the Energy Commission attorney assigned to your division for instructions on how to complete the NOE.

Grant/loan **IS NOT** exempt. The Project Manager needs to consult with the Energy Commission attorney assigned to your division and the Siting Office regarding a possible initial study.