

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 02/13)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-14-026 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Larry Rillera	27	916-651-6178

Recipient's Legal Name	Federal ID Number
Pacific Ethanol Development, LLC	20-3168349

Title of Project
Pacific Ethanol California In-State Sorghum Program

Term and Amount	Start Date	End Date	Amount
	11 / 12 / 2014	12 / 01 / 2017	\$ 3,000,000

Business Meeting Information
 ARFVTP agreements under \$75K delegated to Executive Director.

Proposed Business Meeting Date	11 / 12 / 2014	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Larry Rillera	Time Needed:	5 minutes

Please select one list serve. **Altfuels (AB118- ARFVTP)****Agenda Item Subject and Description**

Proposed resolution approving Agreement ARV-14-026 with Pacific Ethanol, LLC for a \$3,000,000 grant to develop and use sorghum feedstock that will lead to the production of low carbon transportation fuel.

California Environmental Quality Act (CEQA) Compliance

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

Explain why Agreement is not considered a "Project":
 Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because .
- If Agreement is considered a "Project" under CEQA:
 - a) Agreement **IS** exempt. (Attach draft NOE)
 - Statutory Exemption. List PRC and/or CCR section number:
 - Categorical Exemption. List CCR section number: Sections 15301 "Existing Facilities", 15304 "Minor Alterations to Land"
 - Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section:
 The project will not cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment;
 - b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)

Check all that apply

<input type="checkbox"/> Initial Study	<input type="checkbox"/> Environmental Impact Report
<input type="checkbox"/> Negative Declaration	<input type="checkbox"/> Statement of Overriding Considerations
<input type="checkbox"/> Mitigated Negative Declaration	

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

Legal Company Name:	Budget
Chromatin, Inc.	\$ 99,500
CSU Fresno	\$ 99,500
UC Kearney Agriculture Center	\$ 50,000

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

Legal Company Name:

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Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTF	13/14	601.118E	\$3,000,000
Funding Source			\$
R&D Program Area:	Select Program Area	TOTAL:	\$3,000,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				Recipient's Project Manager			
Name:	Paul Koehler			Name:	Same		
Address:	400 Capital Mall, Ste. 2060			Address:			
City, State, Zip:	Sacramento, CA 95814			City, State, Zip:			
Phone:	916-403-2790	Fax:	916-446-3937	Phone:	- -	Fax:	- -
E-Mail:	paulk@pacificethanol.net			E-Mail:			

Selection Process Used	
<input checked="" type="checkbox"/> Competitive Solicitation	Solicitation #: PON-13-609
<input type="checkbox"/> First Come First Served Solicitation	

The following items should be attached to this GRF	
1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/> Attached
2. Exhibit B, Budget Detail	<input checked="" type="checkbox"/> Attached
3. CEC 105, Questionnaire for Identifying Conflicts	<input checked="" type="checkbox"/> Attached
4. Recipient Resolution	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Attached
5. CEQA Documentation	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Attached

Agreement Manager _____ Date _____ Office Manager _____ Date _____ Deputy Director _____ Date _____

**Exhibit A
SCOPE OF WORK**

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration and Agreement Management
2	X	Install Grain Sorghum Advanced Grinding Technology
3	X	California In-State Sorghum Initiative - Program Development
4	X	Sorghum Feedstock Acquisition Program
5		Data Collection and Analysis

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Paul Koehler (Pacific Ethanol)		
2	Paul Koehler (Pacific Ethanol)	Edeniq	
3	Paul Koehler (Pacific Ethanol)	University of California Kearney Agricultural Research Center, CSU Fresno Center for Technology, Chromatin	JD Heiskell, AL Gilbert, University of California
4	Paul Koehler (Pacific Ethanol)		Team Marketing Alliance, Attebury Inc., National Sorghum Producers, Chromatin, United Sorghum Checkoff Program, JD Heiskell, Penny Newman
5	Tanya Landon, Rob Olander (Pacific Ethanol)		

GLOSSARY

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

Term/ Acronym	Definition
AGT	Advanced Grinding Technology
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
CAM	Commission Agreement Manager
CARB	California Air Resources Board
CI	Carbon Intensity
CISS	California In-State Sorghum
CPR	Critical Project Review
FTD	Fuels and Transportation Division
GHG	Greenhouse gas
LCFS	Low Carbon Fuel Standard
Plan	Grain Sorghum Procurement Plan
Recipient	Pacific Ethanol Development, LLC
SETAG	Sorghum-Ethanol Advisory Group

BACKGROUND

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). The statute authorizes the California Energy Commission (Energy Commission) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024. The ARFVTP has an annual budget of approximately \$100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.

- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

The statute requires the Energy Commission to adopt and update annually an investment plan to determine funding priorities and opportunities and describe how program funding will be used to complement other public and private investments. The Energy Commission adopted its most recent investment plan on May 13, 2014. A link to the 2014-2015 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program (CEC-600-2013-003-CMF) can be found at <http://www.energy.ca.gov/2013-ALT-02/>.

The Energy Commission issued Solicitation PON-13-609 entitled “Pilot-Scale and Commercial-Scale Advanced Biofuels Production Facilities” under the ARFVTP on January 14, 2014. This competitive grant solicitation was an offer to cost share the development and production of new low carbon transportation fuels. To be eligible for funding under PON-13-609, the projects must also be consistent with the Energy Commission’s ARFVTP Investment Plan as updated annually. In response to PON-13-609, the Recipient submitted Application #14 which was proposed for funding in the Energy Commission’s Notice of Proposed Awards on July 18, 2014. PON-13-609 is hereby incorporated by reference into this Agreement in its entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient’s Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient’s Application and the terms of the Energy Commission’s Award, the Energy Commission’s Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient’s Application, the terms of this Agreement shall control.

Problem Statement:

California ethanol producers are a critical component to meeting California’s policies to meet greenhouse gas (GHG) and petroleum displacement objectives. Cumulatively, ethanol comprises more than 95 percent of the state’s biofuel production. However, based on environmental requirements, state regulatory policy and legislative mandates, ethanol producers will need to continue to adapt and change.

Goals of the Agreement:

The goals of this agreement are to:

- Transition away from corn-based ethanol to sorghum, and other non-food cellulosic feedstocks.
- Lower carbon intensity (CI) values significantly below the baseline ethanol.
- Develop sustainable supply chains within California of sorghum and other non-corn feedstocks.
- Invest in new technologies to support lower CI, non-corn feedstocks.

Objectives of the Agreement:

The objectives of this agreement are to:

- Implement the California In-State Sorghum (CISS) program that combines research, market development, and education to support the development of sorghum as a reliable and robust feedstock for the California low carbon ethanol industry.
- Establish a Sorghum-Ethanol Technical Advisory Group (SETAG) with the University of California Kearney Agricultural Research Center to conduct sorghum growth trials and evaluate water use reduction in sorghum.
- Establish outreach, education, and sales program with Chromatin, Inc. to develop sorghum production within California.
- Use the research program at California State University (CSU), Fresno's Center for Irrigation Technology to conduct sorghum growth trials and alternatives to implement water use reduction efforts with California sorghum.
- Acquire and process approximately 91,700 tons of low carbon grain sorghum over 36 months to support production of approximately 8,908,000 gallons of sorghum ethanol.
- Document the volume and carbon intensity of sorghum ethanol produced within California.

ADMINISTRATIVE TASKS

TASK 1 ADMINISTRATION AND AGREEMENT MANAGEMENT

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 CAM shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

The Recipient shall:

- Attend a "Kick-Off" meeting with the Commission Agreement Manager (CAM), 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 CAM to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
 - Agreement Terms and Conditions
 - Critical Project Reviews (Task 1.2)
 - Match fund documentation (Task 1.6); no reimbursable work may be done until this documentation is in place.
 - Permit documentation (Task 1.7)
 - Subcontracts needed to carry out project (Task 1.8)
 - The CAM's expectations for accomplishing tasks described in the Scope of Work

- An updated Schedule of Products and Due Dates
- Monthly Progress Reports (Task 1.4)
- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.5)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

CAM Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for open discussions between the Energy Commission and the Recipient. The goal of this ongoing task is to periodically assess critical progress under this agreement, determine if the project should continue to receive Energy Commission funding, and to identify any necessary modifications to the tasks, products, schedule and/or budget.

The Commission Agreement Manager may schedule CPR meetings as necessary, and meeting costs are borne by the Recipient.

Meeting participants include the CAM and the Recipient and may include the Commission Grants Officer, the Fuels and Transportation Division (FTD) biofuel lead, other Energy Commission staff and Management as well as other individuals selected by the CAM to provide support to the Energy Commission.

The CAM 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.
- Send the Recipient 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. Prepare a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, products, schedule, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (see section 8 of Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.

- 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 product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses progress towards achieving goals and objectives of this Agreement. This report shall include recommendations and conclusions regarding continued work. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM 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.

CAM 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 closeout this Agreement.

The Recipient shall:

- Meet with Energy Commission staff 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 Recipient, the Commission Grants Office Officer, and the Commission Agreement 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 CAM.
The technical portion of the meeting shall present an assessment of the degree to which goals and objectives have been achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CAM will determine the appropriate meeting participants.
The administrative portion of the meeting shall be a discussion with the CAM and the Grants Officer about the following Agreement closeout items:
 - What to do with any equipment purchased with Energy Commission funds (Options)

- 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 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 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 which 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 CAM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving the Agreement's 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 purpose, approach, activities performed, results, and advancements in science and technology of the project; 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 future projects and improvements to the Energy Commission's ARFVTP project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the Energy Commission and will be preparing a confidential version of the Final Report as well, 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 latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

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

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that 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 CAM 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, and then state such in the letter. 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:

- 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 Recipient shall identify its owner and provide a contact name, address and 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 the appropriate information to the CAM, if during the course of the Agreement additional match funds are received.
- Notify the CAM 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 meeting.

Products:

- 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 CAM 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 permits that identifies:
 - Type of permit
 - Name, address and telephone number of the permitting jurisdiction(s) or lead agency
 - Schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss list of permits and schedule for obtaining them at the kick-off meeting and develop a timetable for submitting an updated list, schedule and copies of permits. 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 a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the CAM.
- As permits are obtained, send a copy of each approved permit to the CAM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 working days. Either of these events may trigger an additional CPR.

Products:

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

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors required to carry out the tasks under this Agreement consistent with Terms and Conditions of the Agreement and the Recipient's own procurement policies and procedures. This task also provides the Energy Commission an opportunity to review 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 CAM for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2 INSTALL GRAIN SORGHUM ADVANCED GRINDING TECHNOLOGY

The goal of this task is to procure, install and operate new sorghum advanced grinding technology (AGT) designed to make sorghum processing more efficient. All systems are to be tested and validated before the integration step and again before transport to the project site.

The Recipient shall:

- Assess and confirm site for size, location, infrastructure details, utilities, and logistics.
- Secure building permit approval to construct truck receiving area.
- Prepare site, fabricate equipment, install AGT, and test AGT system.

Products:

- Copy of approvals
- AGT installation, assembly, and testing report
- Before and after photographs of the AGT

[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]

TASK 3 CALIFORNIA IN-STATE SORGHUM INITIATIVE (CISS) – PROGRAM DEVELOPMENT

The goal of this task is to develop and implement a three-year program of research, demonstration, outreach, education and marketing in California’s agricultural and farming community. The CISS will be designed to quickly and dramatically expand the availability of low carbon California-grown grain sorghum for use in the production of ethanol for transportation.

The Recipient shall:

- Establish the California Sorghum-Ethanol Advisory Group (SETAG) and effectuate relationships and activities.
- Regularly meet with the SETAG to evaluate opportunities that would lead to increased sorghum use.
- Work with CSU Fresno Center for Irrigation Technology to converge state-of-the-art agronomic work with new, proven sorghum varieties, combined with precision irrigation and advanced water management practices to produce an economically and environmentally sustainable resource.
- Work with Chromatin Inc. and other strategic partners to promote California sorghum.

Products:

- SETAG Annual Report
- Report on corn and sorghum yields, water usage, nutrient consumption with emphasis on deep percolation of excess nitrogen
- Report on seasonal water consumption
- Economic analysis of farm-level production costs and expected cost-benefit ratio of growing sorghum for ethanol biorefineries
- Sorghum acquisition program description and supporting materials
- Educational and outreach materials

[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]

TASK 4 SORGHUM FEEDSTOCK ACQUISITION PROGRAM

The goal of this task is to acquire sorghum feedstock for production of ethanol to be used as a transportation fuel in California. Recipient will assess the carbon intensity of the sorghum ethanol and ensure it is approximately 65 gC02e/MJ or better and will acquire and process a minimum of 91,700 tons of sorghum over a 36 month period. Recipient will use the sorghum to produce approximately 8,908,000 gallons of ethanol over the three year period.

The Recipient shall:

- Develop a Grain Sorghum Procurement Plan (Plan) for transportation ethanol fuel production.
- Acquire sorghum feedstock.
- Track sorghum processing and incentive payments.
- Report feedstock usage, fuel production, and carbon intensity results.

Products:

- Grain Sorghum Procurement Plan
- Report on quantities and carbon intensities of sorghum procured and ethanol produced
- California Air Resources Board (CARB) verification of CI results

[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]

TASK 5 DATA COLLECTION AND ANALYSIS

The goal of this task is to collect operational data from the project, to analyze that data for economic and environmental impacts, and to include the data and analysis in the Final Report.

The Recipient shall:

- Develop a Data Collection and Analysis Test Plan.
- Troubleshoot any issues identified.
- Collect a minimum of six months of throughput, usage, and operations data from the project including, but not limited to:
 - Maximum capacity of the new fueling system
 - Gallons of gasoline and/or diesel fuel displaced (with associated mileage information)
 - Expected air emissions reduction, for example:
 - Methane
 - Oxides of nitrogen
 - Non-methane hydrocarbons
 - Particulate matter
 - Carbon monoxide
 - Carbon dioxide
 - Formaldehyde
 - Duty cycle of current vehicle fleet and expected duty cycle of future vehicle acquisitions
 - Jobs and economic development resulting from this project
- Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- Provide a quantified estimate of the project's carbon intensity values for life-cycle GHG emissions associated with the full sorghum ethanol production pathway.
- Compare project performance and expectations provided in the grant application with actual project performance and accomplishments.
- Collect data, information, and analysis described above and include in the Final Report.

Products:

- Data Collection and Analysis Test Plan
- Data collection and analysis to be included in the Final Report (see Task 1.5)

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: PACIFIC ETHANOL DEVELOPMENT, LLC.

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

RESOLVED, that the Energy Commission approves Agreement ARV-14-026 with **Pacific Ethanol Development, LLC.** for a **\$3,000,000** grant to develop and use sorghum feedstock that will lead to the production of low carbon transportation fuel; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on November 17, 2014.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Harriet Kallemeyn,
Secretariat