

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 02/13)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-14-034 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Matthew Ong	27	916-653-5285

Recipient's Legal Name	Federal ID Number
UrbanX Renewables Group, Inc.	36-46-0353

Title of Project
Flex-RD Biorefinery Phase 1

Term and Amount	Start Date	End Date	Amount
	3 / 1 / 2015	3 / 1 / 2017	\$ 5,000,000

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

Proposed Business Meeting Date	2 / 11 / 2015	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Matthew Ong	Time Needed: 5 minutes	

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

Proposed resolution approving Agreement ARV-14-034 with UrbanX Renewables Group, Inc. for a \$5,000,000 grant to construct a 10 million gallons per year biorefinery that shall produce at least 7.5 million gallons per year of renewable diesel (NOx-neutral, low carbon intensity, drop-in fuel). The renewable diesel, produced from brown grease and yellow grease feedstocks, shall be proven to be chemically equivalent or superior to petroleum-based diesel fuel by meeting American Society for Testing and Materials (ASTM) D975 specifications. (ARFVTP Funding). Contact: Matthew Ong

California Environmental Quality Act (CEQA) Compliance

1. 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 .
2. 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 15301 section number:
 Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section:
 Project consists of the operation, repair, maintenance, permitting, leasing, licensing, and/or minor alteration of existing private structures, facilities, mechanical equipment, and/or topographical features, involving negligible expansion of use beyond that existing at the time of the lead agency's determination. The biorefinery shall be constructed at an existing petroleum-based asphalt production facility.
- b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
 Check all that apply
 Initial Study Environmental Impact Report
 Negative Declaration Statement of Overriding Considerations
 Mitigated Negative Declaration

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

Legal Company Name:	Budget
(See Attachment)	\$ 0
	\$ 0
	\$ 0

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

Legal Company Name:
(See Attachment)

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Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTF	13/14	601.118F	\$1,843,598
ARFVTF	14/15	601.118G	\$3,156,402
Funding Source			\$
Funding Source			\$
Funding Source			\$
R&D Program Area:	N/A	TOTAL:	\$5,000,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				Recipient's Project Manager			
Name:	Bruce Melgar			Name:	Bruce Melgar		
Address:	1571 W. 15 th Street			Address:	1571 W. 15 th Street		
City, State, Zip:	Long Beach, CA, 90813			City, State, Zip:	Long Beach, CA, 90813		
Phone:	888-755-8974	Fax:	949-281-2170	Phone:	888-755-8974	Fax:	949-281-2170
E-Mail:	Bruce@urbanxgroup.com			E-Mail:	Bruce@urbanxgroup.com		

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 _____

CEC-270 Attachment

List of Subcontractors (Continued):

Legal Company Name:	Budget:
ARA Inc. / Chevron Lummus Global	\$2,500,000
Arena Engineering	\$0
CMAC Construction	\$0
TBD (e.g., Air Products, Matheson Tri-Gas, etc.)	\$0

List of Key Partners (Continued):

Legal Company Name:
Apex Fuels / Chemoil
Baker Commodities
Diamond Oil
Inspectorate America
Lunday-Thagard (a subsidiary of World Oil Corporation)
R.C. Costello & Associates
Sun Engineering Services
West Coast Environmental

**EXHIBIT A
SCOPE OF WORK**

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Pre-Construction
3	X	Plant Modification, Construction and Implementation
4		Facility Operations
5		Data Collection and Analysis

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Bruce Melgar (UrbanX)		
2	Bruce Melgar (UrbanX), Vinay Panwar (UrbanX), Chuck Red (ARA-Chevron), Michael McFadden (CMAC)	ARA-Chevron, CMAC Construction	R.C. Costello & Associates, Sun Engineering Services, World Oil Corporation
3	Bruce Melgar (UrbanX), Chuck Red (ARA-Chevron), Alan Nakakishi (Arena), Michael McFadden (CMAC)	ARA-Chevron, Arena Engineering, CMAC Construction, TBD (e.g., Air Products & Chemicals, Matheson Tri-Gas)	Baker Commodities, Inspectorate America, R.C. Costello & Associates, Sun Engineering Services, West Coast Environmental, World Oil Corporation
4	Bruce Melgar (UrbanX), Vinay Panwar (UrbanX)		Apex Fuels/Chemoil, Diamond Oil, World Oil Corporation
5	Bruce Melgar (UrbanX), Vinay Panwar (UrbanX)		

GLOSSARY

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

Term/ Acronym	Definition
AB	Assembly Bill
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
ASTM	American Society for Testing and Materials
CAM	Commission Agreement Manager
CARB	California Air Resources Board
CDFA	California Department of Food & Agriculture

Term/ Acronym	Definition
CHP	Combined Heat and Power
CI	Carbon Intensity
CO ₂	Carbon Dioxide
CPR	Critical Project Review
Energy Commission	California Energy Commission
FAME	Fatty Acid Methyl Ester
FTD	Fuels and Transportation Division
gCO ₂ e/MJ	Grams of Carbon Dioxide Equivalents per Megajoule
LCFS	Low Carbon Fuel Standard
MGPY	Million Gallons Per Year
P&ID	Piping and Instrumentation Design
PON	Program Opportunity Notice
RD	Renewable Diesel
Recipient	UrbanX Renewables Group, Inc.
UrbanX	UrbanX Renewables Group, Inc.

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 policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024, and specifies that the Energy Commission allocate up to \$20 million per year (or up to 20 percent of each fiscal year’s funds) in funding for hydrogen station development until at least 100 stations are operational. The Energy Commission has an annual program budget of approximately \$100 million and provides financial support for projects that:

- Develop and improve alternative and renewable low-carbon fuels;
- Optimize alternative and renewable fuels for existing and developing engine technologies;
- Produce alternative and renewable low-carbon fuels in California;
- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability;
- Expand fuel infrastructure, fueling stations, and equipment;
- Improve light-, medium-, and heavy-duty vehicle technologies;
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets;
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
- Establish workforce training programs, conduct public education and promotion, and create technology centers.

The Energy Commission issued solicitation PON-13-609 with the availability of up to \$24 million in grant funds for the development of new, or the modification of existing, California-based biofuel production facilities that can sustainably produce low carbon transportation fuels. In order to be eligible for funding under PON-13-609, the projects must produce diesel substitutes, gasoline substitutes, or biomethane, as well as be consistent with the Energy Commission's ARFVTP Investment Plan updated annually. In response to PON-13-609, UrbanX Renewables Group, Inc. (Recipient) submitted application number 24, which was proposed for funding in the Energy Commission's Notice of Proposed Awards on July 18, 2014 and is incorporated by reference to 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.

The Recipient is subject to all federal, state, and local rules and regulations, whether specified or not in this agreement, and must comply with these rules and regulations along with any changes made to them throughout the term of this agreement.

Problem Statement:

California's recent statewide implementation of the California Air Resources Board (CARB) authored regulation, known as the Low Carbon Fuel Standard (LCFS), requires petroleum refineries and distributors to ensure that the mix of transportation fuel they sell in the California market meets a 10% carbon intensity reduction target for greenhouse gas emissions—measured in CO₂-equivalent grams per unit of fuel energy sold for transport purposes—by 2020. This is achieved via CARB-enforced carbon reduction obligations which establish an annual carbon intensity limit on the total volume of fuel produced that year.

One method for petroleum fuel suppliers to meet their obligation is to displace a proportion of their supplies with biomass-based substitutes. UrbanX's proposed renewable diesel is classified as a biomass-based diesel and has a low carbon intensity of 14.2 gCO₂e/MJ, compared to petroleum diesel's 94.71 gCO₂e/MJ, which makes it an LCFS-approved greenhouse-gas-reducing product that will be greatly sought after by obligated LCFS regulated parties including petroleum refineries, terminals, and distributors.

UrbanX's renewable diesel is also expected to be highly competitive in the biomass-based diesel substitutes market, currently predominated by biodiesel produced by transesterification (the process of combining an alcohol and an ester to make another alcohol). All forms of biodiesel do not meet American Society for Testing and Materials (ASTM) petroleum-based diesel fuel quality specifications—ASTM D975—so they are limited to a 5% blend with petroleum-based diesel for the fuel mixture to remain within specifications. In addition, pure biodiesel cannot be distributed using conventional

pipelines in low temperature climates due to inadequate cold flow properties which cause biodiesel to thicken or freeze and thus clog pipes, requires special tanks for storage to avoid corrosive oxidation and microbial contamination, and can create engine start-up and performance problems such as blocked filters and plugged fuel tubes.

In contrast, renewable diesel produced by catalytic hydrocracking is chemically equivalent to petroleum-based diesel and meets or exceeds ASTM D975 standards, meaning it can potentially be blended up to 100% where it completely replaces petroleum-based diesel. Renewable diesel therefore does not encounter the aforementioned problems associated with biodiesel and can use preexisting petroleum infrastructure, engines, and technologies without modifications, allowing for seamless integration into the diesel fuel market and injection into existing pipelines. Yet only recently has renewable diesel production begun to move from lab bench and pilot demonstrations to industrial-scale implementation. To date, only two full-scale commercial facilities in the United States produce renewable diesel, both located in Louisiana, which can potentially make UrbanX's one of the first few in California and the nation. For this Phase I development project, UrbanX shall construct a 10 million gallon per year biorefinery that produces at least 7.5 MGPY of renewable diesel using ARA-Chevron's Isoconversion catalytic hydrothermolysis process.

Goals of the Agreement:

The goals of this Agreement are to:

- Facilitate shifting the biodiesel market in California towards drop-in renewable diesel by developing and implementing a renewable diesel production system that is adaptable, scalable, and accommodates a multitude of renewable feedstock sources;
- Provide technical jobs in the Los Angeles area, a region with currently 10.9% unemployment afflicted by the distressed economy;
- Conserve and protect natural resources which include water, energy, air, and climate; and
- Increase public awareness of renewable transportation fuels.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Construct a 10 million gallons per year biorefinery that shall produce at least 7.5 million gallons per year of renewable diesel, thereby increasing in-state production and availability of renewable diesel—a drop-in replacement for petroleum diesel fuel;
- Improve energy efficiency of the renewable diesel production process by reclaiming grease trap wastewater as boiler feed-water for steam production and recycling propane back into the process to use as a heat source for the boiler;

- Integrate a Quality Control and Quality Assurance program within the renewable diesel production process to achieve ASTM D975 quality standards for renewable diesel;
- Produce renewable co-products, including at least 2.5 million gallons per year of renewable naphtha, for potential sale or use in renewable diesel production facility processes;
- Create approximately 45 temporary construction jobs, retain and support 12 existing jobs from the Recipient's current biodiesel plant operations, and hire approximately 15 additional permanent full-time employees to operate the commissioned renewable diesel facility;
- Lower transportation greenhouse gas emissions by roughly 97,006 tons of CO₂ greenhouse gas equivalents per year by displacing 10 million gallons per year of petroleum products with sustainably-produced, low carbon intensity, NOx-neutral renewable diesel and renewable naphtha;
- Reclaim non-potable water from fats, oils, grease, and debris emulsion to provide to the southern California agricultural industry for crop irrigation; and
- Develop community programs with educational institutions such as California State University, Long Beach, to provide university lectures, educational facility tours, and presentations for students, industry professionals, and government officials.

TASK 1 ADMINISTRATION

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 Commission Agreement Manager (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 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 Review (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
- Documentation of the Recipient's expected 7.5 MGPY renewable diesel production capacity
- Documentation of the Recipient's renewable diesel product's carbon intensity

CAM Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for frank discussions between the Energy Commission and the Recipient. 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.

The CAM may schedule CPR meetings as necessary, and meeting costs will be 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, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the 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 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 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 Officer, and the CAM. 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 project and task goals and objectives were 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 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 to the FTD 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, if requested by the CAM.
- 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, if requested
- Draft Final Report
- Final Report

Task 1.6 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. 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, 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 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 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:

- 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(s) 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 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 the 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 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 the permits or stating that no permits are required
- A copy of each approved permit (if applicable)
- 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)

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 the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures. It 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 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 PRE-CONSTRUCTION

The goals of this task are to identify potential project risks and develop appropriate mitigation strategies, produce the final engineering plans, finalize the project design and construction costs, formally document preparedness to build the project, and secure Energy Commission approval to begin incurring major construction costs.

The Recipient shall:

- Assess project parameters (e.g., project vision and scope, milestones, deliverables, roles and responsibilities) for their associated risk factor; sort risks into high, medium, and low threat categories; and develop a Risk Mitigation and Contingency Plan.
- Determine any necessary changes to be made to the Q2 2013 engineering plans based off input collected from contracted engineers and construction contractor(s) to complete the Final Engineering Plans. Proposed equipment locations under review include:
 - Holding & processing tanks
 - Distillation columns
 - Hydrogen generator
 - Piping
- Prepare a letter documenting the Agreements necessary to construct the project. At a minimum, this letter shall include:

- Land agreement(s) for control of project site
- Supply agreement(s) with feedstock provider(s)
- Off-take agreement(s) with fuel purchaser(s)
- Utilize existing engineering drawings, call-outs, and detailed equipment budget list to prepare a Construction and Equipment List documenting the comprehensive construction costs. The Construction and Equipment List will include all items to be purchased, constructed, or installed on the project. For each item, the letter shall provide:
 - The name of the item
 - The make, model, size, capacity or other information as appropriate to the item
 - The name of the entity that will be carrying out the purchase and/or installation of the item
 - The estimated cost to purchase and install the item
 - The schedule for obtaining a binding bid from the supplying or installing entity
- Solicit bids for select system components based on the Construction and Equipment List.
- Prepare and submit a Written Notification of Readiness to Construct stating the project has obtained all permits, third-party agreements, binding construction and equipment bids, and all other items necessary to begin construction.
- Develop proposed Construction Timeline running from the intended date to begin construction until the commercial operation date of the project.

Products:

- Risk Mitigation and Contingency Plan
- Final Engineering Plans, including engineered designs and modeling schematics and piping & instrumentation design (P&ID)
- Construction and Equipment List
- Written Notification of Readiness to Construct
- Construction Timeline

TASK 3 PLANT MODIFICATION, CONSTRUCTION, AND IMPLEMENTATION

The goal of this task is to construct the renewable diesel production facility and prepare it for commercial operations.

The Recipient shall:

- Execute construction of the project as outlined in the Construction Timeline and Construction and Equipment List. This construction shall include, but not be limited to, the following major components:
 - Modification of the existing World Oil Corporation site for the production of renewable diesel and chemical products, including rerouting piping and rewiring electrical lines
 - Installation of:

- Grease pretreatment membrane system to pre-process the high free fatty acid brown grease or animal fat and low free fatty acid yellow grease
 - Feedstock circulation pumps or other appropriate system to create a homogenous blend between higher and lower free fatty acid feedstocks such as high free fatty acid brown grease or animal fat and low free fatty acid yellow grease
 - Electrical equipment including power transformer, electrical control panels, sensors, and junction boxes which deliver power to individual pumps and processing units
 - Feed bottom pumps which are utilized to agitate, mix and load homogenous feedstock blend
 - Feed bottom exchangers (heating units used to heat feedstock during feedstock processing and pre-processing)
 - Control system hardware at point of electrical control panel installation
 - Hydrotreating reactor
 - Hydrogen generator, compressor, and other auxiliary units
 - Final piping, platforms, catwalks, stairs, and support beams as needed per the Final Engineering Plans
 - Catalyst cradle and thermo-catalyst into hydrotreating reactor unit
- Test and commission facility before operating by performing the following activities:
 - Conduct preliminary start-up testing
 - Calibrate test equipment and install data acquisition system
 - Implement stringent 2-T.I.E.R. (Total Internal & External Reviewed) Quality Assurance and Control Program, in which all test points are sampled and reviewed both internally by an UrbanX chemical process engineer as well as sent out for 3rd party test analysis ensuring that the renewable diesel product meets or exceeds ASTM D975 testing standards.
 - Prepare and submit a Written Notification of Commercial Operation to the Commission Agreement Manager within ten working days following commercial operation of the project. The Written Notification shall contain the following elements:
 - The date the project achieved commercial operation(s)
 - A narrative on the current status of the project and initial operations
 - Any changes made from the project as originally specified in this Agreement and reasons for those changes

Products:

- Progress Letter & Photos certifying 50% completion of construction and installation activities
- Written Notification of Commercial Operation

[CPR shall be held during the execution of this task (Task 3) per Task 1.2]

TASK 4 FACILITY OPERATIONS

The goal of this task is to operate the renewable diesel production facility as designed and to begin to collect data to document the project's fulfillment of its objectives.

The Recipient shall:

- Operate facility while complying with all applicable regulatory standards.
- Utilize the UrbanX Preventative Maintenance Checklist (prepared prior to initial operations) to keep the Flex-RD BioRefinery plant operating safely and efficiently.
- Prepare Monthly Operations Reports as an attachment to the Monthly Progress Reports (Task 1.4) which shall include, but are not limited to, the following information:
 - A narrative specifying operational highlights from the previous month, including any stoppages in production and a statement as to the project's compliance with regulatory requirements
 - The total amount of fuel produced on a monthly basis
 - The total amount of feedstock received and processed on a monthly basis
 - Conversion ratio for feedstock to fuel production
 - Monthly and year-to-date net income statement
 - Accumulation and sale of RIN and LCFS credits

Products:

- Monthly Operations Reports

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. This data collection is in addition to that required under Task 4.

The Recipient shall:

- Develop data collection test plan.
- Troubleshoot any issues identified.
- Collect throughout the term of this agreement, but no less than 6 months, information pertaining to throughput, usage, and operations data from the project including, but not limited to:
 - Maximum capacity of the renewable diesel production system
 - Documentation of the types, qualities, and quantities of all feedstocks used to produce renewable diesel (e.g., brown grease, yellow grease)
 - Documentation of the types, qualities, and quantities of all co-products from the production of renewable diesel (e.g., renewable naphtha, propane, trap water)

- Gallons of gasoline and/or diesel fuel displaced (with associated mileage information)
- Expected air emissions reduction, for example:
 - Non-methane hydrocarbons
 - Oxides of nitrogen
 - Non-methane hydrocarbons plus oxides of nitrogen
 - Particulate Matter
 - Formaldehyde
- Duty cycle of the current fleet and the expected duty cycle of future vehicle acquisitions
- Specific jobs and economic development resulting from this project
- Identify any current and planned use of renewable energy at the facility.
- Identify the source of the alternative fuel.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.
- 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 renewable diesel product's carbon intensity values for life-cycle greenhouse gas emissions.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.
- Collect data, information, and analysis described above and include in the Final Report.

Products:

- Data collection information and analysis will be included in the Final Report

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: URBANX RENEWABLES GROUP, INC.

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-14-034 with UrbanX Renewables Group, Inc. for a \$5,000,000 grant to construct a 10 million gallon per year biorefinery that will produce at least 7.5 million gallons per year of renewable diesel (NOx-neutral, low carbon intensity, drop-in 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 February 25, 2015.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Harriet Kallemeyn,
Secretariat