STATE OF CALIFORNIA

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 01/13) CALIFORNIA ENERGY COMMISSION

A) New Agreement 800-14-004 (To be completed by CGL Office)

B) Division	**Agreement Manager:**	**MS-**	**Phone**
800 Electricity Supply Analysis Division	Ryan Eggers	20	916-651-2920

C) Contractor's Legal Name	**Federal ID Number**
The Regents of the University of California, Irvine Campus	95-2226406

D) Title of Project
Policy Analysis and Monitoring of Transportation Alternative Fuel Supply

E) Term and Amount	**Start Date**	**End Date**	**Amount**
	6 / 30 / 2015	3 / 30 / 2018	$ 750,000

F) Business Meeting Information

☒ Operational agreement (see CAM Manual for list) to be approved by Executive Director

☐ ARFVTP agreements under $75K delegated to Executive Director.

Proposed Business Meeting Date	6 / 10 / 2015	☐ Consent	☒ Discussion
Business Meeting Presenter	Ryan Eggers	Time Needed:	5 minutes

Please select one list serve. Transportation (General Trans / Petroleum Issues)

Agenda Item Subject and Description

Possible approval of Agreement 800-14-004 with The Regents of the University of California, Irvine Campus for a $750,000 contract to provide policy analysis training and data collection support for alternative fuels information.

G) 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 this project to to train staff in evaluating policy and collecting data.
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 section number:
   ☐ Common Sense Exemption. 14 CCR 15061 (b) (3)
   Explain reason why Agreement is exempt under the above section:
   ☐ 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

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

Legal Company Name:	Budget	SB	MB	DVBE
The Regents of the University of California, LA Campus	$ 153,656	☐	☐	☐
The Regents of the University of California, Riverside	$ 100,000	☐	☐	☐
	$ 0	☐	☐	☐

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

Legal Company Name:

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
State - ERPA	2014/2015	600.00B	$750,000
Funding Source			$
Funding Source			$
Funding Source			$
Funding Source			$
R&D Program Area: N/A		TOTAL:	$750,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

K) Contractor's Administrator/ Officer				Contractor's Project Manager			
Name:	Sherrie Dennehy			Name:	Craig Rindt		
Address:	5171 California Ave., Suite 150			Address:	4000 Anteater Instruction and Research BLDG		
City, State, Zip:	Irvine, CA 92697-7600			City, State, Zip:	Irvine, CA 92697		
Phone:	949-824-3428	Fax:	- -	Phone:	949-824-5989	Fax:	949-824-8385
E-Mail:	DennehyS@uci.edu			E-Mail:	crindt@gmail.com		

L) Selection Process Used (For amendments, address amendment exemption or NCB, do not identify solicitation type of original agreement.)

☐ Solicitation Select Type Solicitation #: - - # of Bids: Low Bid? ☐ No ☐ Yes
☐ Non Competitive Bid *(Attach CEC 96)*
☒ Exempt Interagency

M) Contractor Entity Type

☐ Private Company *(including non-profits)*
☒ CA State Agency *(including UC and CSU)*
☐ Government Entity *(i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)*

N) Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE? ☒ No ☐ Yes
If yes, check appropriate box: ☐ SB ☐ MB ☐ DVBE

O) Civil Service Considerations

☒ Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)
☐ Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)
☐ The Services Contracted:
- ☐ are not available within civil service
- ☐ cannot be performed satisfactorily by civil service employees
- ☐ are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system.

☐ The Services are of such an:
- ☐ urgent
- ☐ temporary, or
- ☐ occasional nature

that the delay to implement under civil service would frustrate their very purpose.

Justification:

P) Payment Method

☒ A. Reimbursement in arrears based on:
☒ Itemized Monthly ☐ Itemized Quarterly ☐ Flat Rate ☐ One-time
☐ B. Advanced Payment
☐ C. Other, explain:

Q) Retention

1. Is Agreement subject to retention? ☒ No ☐ Yes
   If Yes, Will retention be released prior to Agreement termination? ☐ No ☐ Yes

R) Justification of Rates

Standard Energy Commission-University of California negotiated personnel and overhead rates for projects were applied.

S) Disabled Veteran Business Enterprise Program (DVBE)

1. ☒ Exempt (Interagency/Other Government Entity)
2. ☐ Meets DVBE Requirements DVBE Amount:$ 0 DVBE %: _____
   - ☐ Contractor is Certified DVBE
   - ☐ Contractor is Subcontracting with a DVBE: Name of DVBE Company
3. ☐ Contractor selected through CMAS or MSA with no DVBE participation.
4. ☐ Requesting DVBE Exemption (attach CEC 95)

T) Miscellaneous Agreement Information

1. Will there be Work Authorizations?	☒ No	☐ Yes
2. Is the Contractor providing confidential information?	☒ No	☐ Yes
3. Is the contractor going to purchase equipment?	☒ No	☐ Yes
4. Check frequency of progress reports ☒ Monthly ☐ Quarterly ☐ Other...		
5. Will a final report be required?	☐ No	☒ Yes
6. Is the Agreement, with amendments, longer than a year? If yes, why? Project will be three years of training and support services.	☐ No	☒ Yes

U) The following items should be attached to this CRF (as applicable)

1. Exhibit A, Scope of Work	☐ N/A	☒ Attached
2. Exhibit B, Budget Detail	☐ N/A	☒ Attached
3. CEC 96, NCB Request	☒ N/A	☐ Attached
4. CEC 30, Survey of Prior Work	☒ N/A	☐ Attached
5. CEC 95, DVBE Exemption Request	☒ N/A	☐ Attached
6. CEQA Documentation	☒ N/A	☐ Attached
7. Resumes	☐ N/A	☒ Attached
8. CEC 105, Questionnaire for Identifying Conflicts		☒ Attached

Agreement Manager	Date	Office Manager	Date	Deputy Director	Date

Exhibit A
SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Agreement Management
2		Evaluation of Energy Commission Transportation Policy Analysis Methods
3		Current Policies, Regulations, and Incentive Strategies
4		Electricity Consumption and Hydrogen Production Data Collection
5		Bio-refining and Ethanol Production and Import Data

Glossary

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

Term/ Acronym	Definition
APEP	UC Irvine Advanced Power and Energy Program
BCP	Budget Change Proposal
Caltrans	California Department of Transportation
CAM	Commission Agreement Manager
CEC	California Energy Commission
CE-CERT	UC Riverside College of Engineering-Center for Environmental Research and Technology
CPR	Critical Project Review
DynaSim	Dynamic Simulation Modeling for Transportation Planning
GGE	Gasoline gallon equivalent
GHG	Green House Gas(es)
IEPR	Integrated Energy Policy Report
ITS-Irvine	The Institute of Transportation Studies at the University of California, Irvine
HOV	High Occupancy Vehicle
LCFS	Low Carbon Fuels Standard
PIIRA	Petroleum Industry Information Reporting Act
RIN	Renewable Identification Number
VMT	Vehicle Miles Traveled

Background/Problem Statement

Existing statutes (Sections 25300-25305 and Section 25320 of the California Public Resources Code) direct the Energy Commission to conduct assessments and forecasts of energy industry supply; production; transport; delivery and distribution; energy demand; and prices for several sectors including transportation fuels. The Energy Commission conducts these assessments and forecasts every two years for inclusion in the Integrated Energy Policy Report (IEPR) to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The statutes require these main transportation forecasting and assessment activities:

- Assessment of trends in transportation fuels, technologies and infrastructure supply and demand, and the current and expected fuel prices
- Forecasts of statewide and regional energy demand
- Evaluation of sufficient transportation fuel supplies, technologies, and infrastructure to meet demand growth
- Assessment of risks of supply disruptions or price shocks
- Evaluation of potential changes needed in the state's energy shortage contingency plans
- Evaluation of alternative transportation scenarios to examine potential effects of alternative fuels use, vehicle efficiency improvements, and shifts of transportation modes
- Recommendations to improve efficient transportation energy use, reduce dependence on petroleum fuels, decrease environmental impacts and reduce greenhouse gas emissions, reduce congestion, promote economic development, and enhance energy diversity and security

Because petroleum fuels represented 98 percent of total transportation fuel consumption for several years, the Energy Commission's supply analysis emphasized petroleum products via the Petroleum Industry Information Reporting Act (PIIRA) which has not been updated since 2006. Since fiscal year 2006/07, the Energy Commission has focused the bulk of its assessment work and resources on transportation energy demand forecasts using its Dynamic Simulation Modeling for Transportation Planning (DynaSim) model platform, with its transportation policy and supply analysis abilities remaining underdeveloped.

However, since 2007, transportation trends show that California has reduced petroleum use and may have begun a shift to alternative fuels. National fuel economy standards require automakers to increase average miles per gallon for passenger vehicles and light trucks from 27.5 to 35.5 in 2016 and to 55.5 in 2020. Hydraulic fracturing technology advances have lowered natural gas prices to $1.00 - $1.50 per gasoline per gallon equivalent (GGE) below diesel and gasoline fuel prices, and the United States Department of Energy projects natural gas prices will remain lower than gasoline and diesel prices for 5-7 years, thus making natural gas vehicles a viable option.

Federal government mandates, regulations and incentives enacted since 2007, continue to spur the development of alternative fuels. The Federal Renewable Fuels Standard requires petroleum fuel producers to increase the use of renewable fuels (biofuels and biogas) to displace gasoline and diesel motor vehicle fuels and established tradable credits (Renewable Identification Numbers (RINs)) to facilitate compliance. Federal tax credits provide additional incentives for biodiesel production, as well as natural gas and electric vehicle rebates. An additional federal regulation, National Ambient Air Quality Standards, administered by the United States Environmental Protection Agency, will require a nationwide 80 percent reduction in nitrogen oxide emissions, primarily from gasoline and diesel internal combustion engines, by 2023. Several industry experts conclude that multiple factors increase the plausibility of alternative fuel growth within the next ten years in North America and particularly in California.

These transportation energy trends indicate that changes will likely occur in California's refineries and fuel distribution centers as gasoline consumption decreases because vehicles are more efficient, while diesel fuel consumption will grow to match freight movement growth. This is expected to compel oil companies to make expensive refinery re-configuration investments, leading to industry consolidation or refinery closures, as well as increased vulnerability to petroleum product price spikes.

With these possible changes to the California transportation network, the Energy Commission has created two new positions to further its supply and policy analysis capabilities. It will be the focus of this agreement to help develop those new staff members and existing staff members in the endeavor of providing the state of California with defensible supply scenarios, policy analysis, and increase data collection capabilities to support those functions

OBJECTIVES OF THE AGREEMENT

As part of the direction Budget Change Proposal (BCP) #7 of Fiscal Year 14/15, two new positions were authorized. The new positions to be hired will:

1) Provide policy and regulation analysis expertise on transportation issues covering both petroleum and alternative fuels for the purpose of identifying gaps in policy and regulation coverage
2) Develop supply scenarios and growth analysis of alternative transportation fuels provided in the California market

Since this type of work isn't well established, the Energy Commission will enter into the following Interagency Agreement with ITS-Irvine (hence known as the Contractor) to provide training and support services to ensure that the assets hired can meet the objectives of these positions. In the attached Statement of Work, Task 2 and 3 were designed to educate the policy and regulation analysis position on the fundamentals of this type of work. This will be accomplished by:

- The Contractor analyzing past transportation policy and regulation work done by not only the Energy Commission, but by other agencies, universities, and private firms to discover strengths and weaknesses in the different approaches. This will be synthesized into a document that will help guild the new position on the proper methods to use in differing analysis situations.
- Creating a Literature Search document on past transportation policy analysis to make sure the new position is fully up-to-date on work that has been done in the past.
- Providing focused training on the “Best Practices” in conducting this type of work to ensure the best quality of work is provided by the new position.
- Support workshop activities resulting from early analysis done by this new position and to provide expert testimony on the methodologies used.

Task 4 and 5 addresses the development of the supply scenarios, which the current development of these scenarios suffers from a lack of coordinated data collection. In order to create a uniform data set to forecast off of, the Energy Commission is seeking support to establish the necessary data collection mechanism support to develop informed projections of possible future fuel supplies. To support this, the Contractor will:

- Conduct a meta-study on different methods to produce alternative fuels to identify the production structures of these fuels and to identify the type of information that can be collected from these processes.
- Look at different analyses and forecasts conducted by the Energy Commission and other entities to identify needed information to support this type of work in the future.
- Assess current Energy Commission PIIRA forms to determine whether these forms can be adapted, changed, used as templates, etc. to support the effort of collecting alternative fuel information.
- Support Energy Commission workshops to begin the process of a rule change to PIIRA to formalize these data collection activities.

Work Plan

FORMAT/REPORTING REQUIREMENTS

Deliverables/Reports

When creating reports, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Agreement Manager (CAM), the latest version of the Consultant Reports Style Manual published on the Energy Commission's web site:

http://www.energy.ca.gov/contracts/consultant_reports/index.html

Each final deliverable shall be delivered as one original, reproducible, 8 ½” by 11”, camera-ready master in black ink. Illustrations and graphs shall be sized to fit an 8 ½” by 11” page and readable if printed in black and white.

Electronic File Format

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CAM) of the full text 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 contract deliverables and establishes the computer platforms, operating systems and software versions that will be required to review and approve all software deliverables.

- Data sets shall be in Microsoft (MS) Access or MS Excel file format.
- PC-based text documents shall be in MS Word file format.
- Documents intended for public distribution shall be in PDF file format, with the native file format provided as well.
- Project management documents shall be in MS Project file format.

Software Application Development

If this scope of work includes any software application development, including but not limited to databases, websites, models, or modeling tools, contractor shall utilize the following standard Application Architecture components in compatible versions:

- Microsoft ASP.NET framework (version 3.5 and up) Recommend 4.0
- Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5
- Visual Studio.NET (version 2008 and up) Recommend 2010
- C# Programming Language with Presentation (UI), Business Object and Data Layers
- SQL (Structured Query Language)
- Microsoft SQL Server 2008, Stored Procedures Recommend 2008 R2
- Microsoft SQL Reporting Services Recommend 2008 R2
- XML (external interfaces)

Any exceptions to the Software Application Development requirements above must be approved in writing by the Energy Commission Information Technology Services Branch.

TASK 1- AGREEMENT MANAGEMENT

The Contractor will conduct all agreement management tasks as described below.

Task 1.1 Kick-off Meeting

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

The Contractor shall:

- Attend a “kick-off” meeting with the CAM, the Contracts Officer, and a representative of the Accounting Office. The meeting will be held in Sacramento, CA and the CAM will designate the specific location. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, or others designated by the CAM in this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting.
- If necessary, prepare an updated Schedule of Deliverables based on the decisions made in the kick-off meeting.

The CAM shall:

- Arrange the meeting including scheduling the date and time.
- Provide an agenda to all potential meeting participants prior to the kick-off meeting.

Deliverables:

1) An Updated Schedule of Deliverables (if applicable)

Task 1.2 Invoices

The Contractor shall:

- Prepare invoices for all reimbursable expenses incurred performing work under this Agreement in compliance with the Exhibit B of the Terms and Conditions of the Agreement. Invoices shall be submitted with the same frequency as progress reports (task 1.4). Invoices must be submitted to the Energy Commission’s Accounting Office.

Deliverables:

1) Invoices

Task 1.3 Manage Subcontractors

The goal of this task is to ensure quality products, to enforce subcontractor Agreement provisions, and in the event of failure of the subcontractor to satisfactorily perform services, recommend solution to resolve the problem.

The Contractor shall:

- Manage and coordinate subcontractor activities. The Contractor is responsible for the quality of all subcontractor work and the Energy Commission will assign all work to The Contractor. If The Contractor decides to add new subcontractors, they shall 1) comply with the Terms and Conditions of the Agreement, and 2) notify the CAM who will follow the Energy Commission’s process for adding or replacing subcontractors.

Task 1.4 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.

The Contractor shall:

- Prepare progress reports which summarize all Agreement activities conducted by The Contractor for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due within 15 calendar days after the end of the reporting period. The CAM will provide the format for the progress reports.

Deliverables:

1) Monthly Progress Reports

Task 1.5 Final Report

The goal of this task is to prepare a written Final Report that compiles conclusions, reports, and presentations of the work completed under this Agreement. The Final Report shall be prepared in language easily understood by the public or layperson with a limited technical background.

The Final Report must be completed before the termination date of the Agreement in accordance with the Schedule of Deliverables.

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

Task 1.5.1 Final Report Outline

The Contractor shall:

- Prepare and submit a draft outline of the Final Report for review and approval. The CAM will provide written comments to the Contractor on the draft outline. The Contractor shall review the comments and discuss any issues with the recommended changes with the CAM.
- Prepare and submit the final outline of the Final Report, incorporating CAM comments.

Deliverables:

1) Draft Outline of the Final Report
2) Final Outline of the Final Report

Task 1.5.2 Final Report

The Contractor shall:

- Prepare the draft Final Report for this Agreement in accordance with the approved outline.
- Submit the draft Final Report for review and comment. The CAM will provide written comments to the Contractor. The Contractor shall review the comments and discuss any issues with the recommended changes with the CAM.
- Prepare and submit the Final Report, incorporating CAM comments.

Deliverables:

1) Draft Final Report
2) Final Report

Task 1.6 Final Meeting

The goal of this task is to discuss closeout of this Agreement and review the project.

The Contractor shall:

- Meet with Energy Commission staff prior to the term end date of this Agreement. The meeting will be held in Sacramento, CA and the CAM will designate the specific location. This meeting will be attended by The Contractor Project Manager and the CAM. The CAM will determine any additional appropriate meeting participants. The administrative and technical aspects of Agreement closeout will be discussed at the meeting.
- Present findings, conclusions, and recommended next steps (if any) for the Agreement, based on the information included in the Final Report.
- Prepare a written document of meeting agreements and unresolved activities.
- Prepare a schedule for completing the closeout activities for this Agreement, based on determinations made within the meeting.

Deliverables:

1) Written documentation of meeting agreements
2) Schedule for completing closeout activities

Task 2: Evaluation of Energy Commission Transportation Policy Analysis Methods

The goal of this task is to evaluate the Energy Commission's current techniques in evaluating transportation policies, regulations, and incentive strategies. The research team will pay special attention any analysis of AB 32 Cap-and-Trade and the Low Carbon Fuels Standard (LCFS). Evaluate the Energy Commission's methods in analyzing these policies and regulations for the purpose of educating staff on the implications of these methods. Recommend improvements or propose new methods in analyzing these problems to refine and improve staff's analysis and forecasts of changes to the energy network.

The Contractor shall:

- Schedule and attend meetings with Energy Commission Staff in the Demand Analysis Office, Supply Analysis Office, and Emerging Fuels and Technology Office to discuss current work done on the analysis of transportation policies, regulations, and incentive strategies. Consult with staff on the methods and details of their analysis work as it relates to incorporating these government interventions.
- Search for previous Energy Commission analysis on transportation policy, regulations and incentive strategies, either via contract or actual staff analysis. Identify strengths and weaknesses of the methodologies used with proposed methods for improving that work.

- Assess staff's "Measuring Progress to Goals" analysis. Identify strengths and weakness of this work and recommend improvements where necessary.
- Assess staff's "2000 to 2014 Estimated Petroleum and GHG Reductions from Transportation Sources" analysis. Identify strengths and weakness of this work and recommend improvements were necessary.
- Document the methodologies used by the Energy Commission for transportation policies, regulations, and incentive strategies analysis in presentation form.
- Make a presentation to Energy Commission staff highlighting the strengths and weaknesses of the different approaches, as well as recommendations on how to improve this analysis moving forward.

Task 2 Deliverables:

1) Draft presentation materials of Energy Commission's Policies, Regulations, and Incentive Strategies Analyses
2) Final presentation of Energy Commission's Policies, Regulations, and Incentive Strategies Analyses

Task 3: Current Policies, Regulations, and Incentive Strategies

The goal of this task is to advise the Energy Commission on current and potential policy tools that will impact the current transportation energy network. The Contractor will pay special attention to the AB 32 Cap-and-Trade and to the LCFS to educate staff on the mechanics of how these government interventions influence fuel markets and identify the metrics needed properly evaluate these policies.

Task 3.1: Review Existing Transportation Policy Impacts and Analysis
In this sub-task, the Contractor will review transportation policy analysis in California and beyond.

The Contractor shall:

- Provide a literature search of analysis on transportation policies, regulations, or incentive strategies and their estimated impacts on petroleum use, GHG admissions, and transportation fueling network changes.
- Perform a meta-study of reports contained in the literature search to identify key statistics in performing such work. Study the effectiveness of those analyses, such as how accurately did the study account for the costs of the policy, were market reactions properly gauged, did technology promotion and transformation occur, etc.

Task 3.1 Deliverables:

1) Draft Transportation Policy Literature Search and Meta-analysis Report
2) Final Transportation Policy Literature Search and Meta-analysis Report

Task 3.2: Education Energy Commission Staff on Policy Analysis Methods
In this sub-task, the Contractor shall provide training to Energy Commission staff in transportation policy analysis methods based upon the findings of Task 3.1.

Energy Commission staff education in Task 3 will be offered both in person and via on-line and/or webinar formats. Two trips per year to Sacramento have been budgeted to provide staff training. If possible, additional training will build on prior efforts at ITS-Irvine to develop on-line training courses for Caltrans covering a variety of technical topics including modeling and policy analysis.

The Contractor shall:

- Educate staff on different allocation methodologies to attribute policies, regulations, and incentive strategies implementations to quantified petroleum volumes, GHG volumes, and vehicle exhaust emission changes. The policy tools to consider shall include but not be limited to:
    - Vehicle subsidies such as rebates, sales tax exemptions, registration fee exemptions, and HOV lane and parking privileges
    - Refueling infrastructure installation rebates and sales tax exemptions

- Educate staff on the metrics and information needed to properly analyze current policies, regulations, and incentive strategies. Identify whether that information is currently collected or requires new data collection activities to be conducted. If new activities need to be conducted, outline any survey, reporting requirements, and/or methodologies that need to be used to collect this information. Metrics and methodologies shall include but not be limited to:
    - Sale (by volume) of alternative fuels
    - The performance (utilization) of refueling infrastructure
    - The growth of the vehicle market
    - Avoided environmental impacts
        - VMT travelled using alternative fuels
        - Avoided greenhouse gas emissions associated with alternative fuel VMT
        - Avoided criteria pollutant emissions associated with alternative fuel VMT
    - Cost- effectiveness analysis for publically expended funds for fuels, infrastructure and vehicles
    - Cost-benefit analysis for publically expended funds for fuels, infrastructure and vehicles
    - Equity impacts of public expenditures per California Air Resources Board Greenhouse Gas Reduction Fund (SB 535)
    - Multi-attribute analysis
    - Tax revenue burden analysis
    - Job-year creation analysis

Task 3.2 Deliverables:

1) Presentation classes to Energy Commission Staff

2) Workshop analysis support and expert presentation

Task 3.3: Present Best Practices

In this sub-task, the Contractor will support the development of new best practices for Energy Commission staff in transportation policy analysis methods based upon the findings of Task 3.1.

The Contractor shall:

- Document the best practices identified in the search of different methods of policies, regulations, or incentive strategies analysis. Make presentation to Energy Commission staff highlighting the strengths and weaknesses of the different approaches, as well as recommendations on how to improve overall analysis moving forward.
- Provide workshop support and expert presentation to Energy Commission staff as they implement the best practices in policies, regulations, or incentive strategies analysis identified by the Contractor. Support for two, 4-hour workshop events will be provided by two representatives from the research team.

Task 3.3 Deliverables:

1) Draft presentation materials of Best Practices in Transportation Policy Analysis

2) Final presentation of Best Practices in Transportation Policy Analysis

Task 4: Electricity Consumption and Hydrogen Production Data Collection

The Energy Commission's Transportation Fuels Data Unit is charged with collecting transportation fuel information under the Petroleum Industry Information Reporting Act (PIIRA)[1]. This regulation focuses on current petroleum related transportation fuel production and provides little means to capture key data on transportation specific hydrogen production and transportation electricity consumption. To prepare for the possible transformation of this transportation fueling network in California, the Contractor will analyze current PIIRA data collection activities and forms to create a proposal to update PIIRA data collection activities.

The Contractor shall:

- Conduct a meta-analysis of California transportation energy supply forecasts for transportation hydrogen and electricity. Identify the different production methods that are viable to produce hydrogen for transportation consumption and estimate the needed infrastructure for each supply scenario. Document these findings in a *Hydrogen and Electricity Supply Scenario Assessment Report* and will include:

[1] PIIRA: SB 1962 (Costa, Chapter 288, Statutes of 2000); AB 1340 (Kehoe, Chapter 692, Statutes of 2003); Public Resources Code 25350-25366; California Code of Regulations, Title 20, sections 1361-1371

- Analysis of current PIIRA reporting forms to assess the gaps in reporting coverage created from switching to both electricity and hydrogen. If a reporting gap is found, devise a form or method to obtain needed information on the hydrogen dispensing, storage, distribution, and production.
- Assessment of current CEC A15 form design for the purpose of updating it to include electricity and hydrogen dispensing activities. Identify the proper units for retailers to report in and create a list of retailers that current dispense electricity and hydrogen in California.
- Development of a method to acquire electricity consumption data that will capture consumption of electricity for electric vehicles from all sources. Access current PIIRA reporting surveys to determine if the current forms can be modified to incorporate this sort of transportation use.

Task 4 Deliverables:

1) Draft Hydrogen and Electricity Supply Scenario Assessment Report
2) Final Hydrogen and Electricity Supply Scenario Assessment Report

Task 5: Bio-refining and Ethanol Production and Import Data

The goal of this task is to provide the Energy Commission with production data of biomass based fuel production within California and for sources importing into California.

The Contractor shall:

- Conduct a meta-analysis of California transportation energy consumption forecasts to access the differing supply scenarios for transportation biofuel production. Contractor will assess information from various sources, including state agencies such as the Energy Commission and California Air Resources Board, as well as sources in industry, such as the Western States Petroleum Association, the natural gas industry, and industries tied to electrical or zero technology vehicles. This will include a review of the available literature, as well as discussions with experts in the area of energy forecasts. Contractor will also review the available production technologies that would likely be available in the marketplace.
- Contractor will identify the biofuel production methods most likely to meet the state's energy needs. It is estimated that several scenarios could be identified using different arrays of production technologies. Contractor will evaluate the potential siting and infrastructure needs for each of the production scenarios.
- Contractor will assess PIIRA forms to determine whether biofuel production can be properly accounted for with current forms. If not, Contractor will determine the best method to obtain production, storage, and distribution. Contractor will recommend key information to be obtained and make suggestions on how forms may be adapted to start accounting for these fuels.

- Findings and recommendations will be documented in a *Transportation Biofuel Supply Scenario Assessment Report*. This report will include the results of the meta-analysis of California transportation energy consumption forecasts and a summary of the different supply scenarios for transportation biofuel production. This will include the identified production methods that are considered to be most likely to meet the state's energy needs and the needed infrastructure needed for those productions methods to be viable. This report will also provide an evaluation of the PIIRA forms and any gaps in terms of quantifying the penetration of alternative/biofuels into the marketplace. This evaluation will include recommendations for added inputs on the PIIRA forms to fully characterize the alternative fuel marketplace.

Task 5 Deliverables:

1) Draft Transportation Biofuel Supply Scenario Assessment Report
2) Final Transportation Biofuel Supply Scenario Assessment Report

RESOLUTION NO: 15-0610

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: UNIVERSITY OF CALIFORNIA, IRVINE

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 800-14-004 with **The Regents of the University of California, Irvine Campus** for a **$750,000** contract to provide policy analysis training and data collection support for alternative fuels information; 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 June 10, 2015.

AYE: [List of Commissioners]
NAY: [List of Commissioners]
ABSENT: [List of Commissioners]
ABSTAIN: [List of Commissioners]

_____
Harriet Kallemeyn,
Secretariat