

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 5/11)

CALIFORNIA ENERGY COMMISSION


 New Contract 600-10-612 Amendment to Existing Contract: _____ - _____ Amendment Number: _____

Division	Contract Manager:	MS-	Phone	CM Training Date
600 Fuels and Transportation Division	Monica Rudman	23	916-654-4462	11/6/97

Contractor's Legal Name	Federal ID Number
RAND Corporation	95-1958142

Title of Project
Evaluation, Measurement and Verification of ARFVT Projects and Program

Term	Start Date	End Date	Amount
New/Original Contract	6 / 1 / 12	6 / 1 / 16	\$ 4,474,558

Line up the Amendment information as best as possible in the following boxes

Amendment #	End Date (mm/dd/yy)	Amount

Business Meeting Information			
Proposed Business Meeting Date	5/9/12	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Monica Rudman	Time Needed:	10 minutes

Agenda Item Subject and Description
Possible approval of contract 600-10-612 for \$4,474,558 with the RAND Corporation for the evaluation, measurement and verification of the Alternative and Renewable Fuel and Vehicle Technology (ARFVT) program and projects. The RAND Corporation was selected from a competitive request for proposals to evaluate the impact, process, market baseline, market effect, and costs of the ARFVT program and projects.

Business Meeting approval is not required for the following types of contracts: *Executive Director's signature is required in all cases.*

- Contracts less than \$10k (*Policy Committee's signature is also required*)
- Amendment for a no-cost time extension. Must be first extension, less than one year and original contract less than \$100k.
- Contracts less than \$25k for Expert Witness in Energy Facility licensing cases and amendments.

Purpose of Contract or Purpose of Amendment, if applicable
The goals of the contract are to gain insight on: costs and preferred features of ARFVT technologies, program performance in meeting policy goals and targets, how the markets for these products changed as a result of the program, and how program processes can be improved. This analysis will inform future programs and market interventions. The evaluation, measurement and verification effort of this contract will help deploy public funds in a transparent manner and will lead to the increased availability of alternative fuels and vehicle technologies, increased customer awareness, and, ultimately, increased cost-effective reductions in petroleum fuel use and greenhouse gas emissions.

**California Environmental Quality Act (CEQA) Compliance**

1. Is Contract considered a "Project" under CEQA?
 Yes: skip to question 2 No: complete the following (PRC 21065 and 14 CCR 15378):
 Explain why contract is not considered a "Project":
 Contract will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because project consists solely of data gathering, reporting and analysis of previously approved projects.
2. If contract is considered a "Project" under CEQA:
 a) Contract **IS** exempt. (Draft NOE required)
 Statutory Exemption. List PRC and/or CCR section number: _____
 Categorical Exemption. List CCR section number: _____
 Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why contract is exempt under the above section: _____
- b) Contract **IS NOT** exempt. The Contract Manager needs to consult with the Energy Commission attorney assigned to their division and the Siting Office regarding a possible Initial Study.

Budgets Information

Contract Amount Funded		Breakdown by FY			Funding Sources			
Funding Source	Amount	FY	Amount	Approved ?	Funding Source	FY	Budget List No.	Amount
ARFVTF	\$4,474,558	10-11	\$1,474,558	Yes	ARFVTF	10-11	601.118.C	\$1,474,558
ECAA	\$	11-12	\$1,500,000	Yes	ARFVTF	11-12	600.118.A	\$1,500,000
State- ERPA	\$	12-13	\$1,500,000	No	ARFVTF	12-13	600.118.B	\$1,500,000
Federal	\$		\$	No	Funding Source			\$
PIER - E	\$		\$	No	Funding Source			\$
PIER - NG	\$		\$	No	Funding Source			\$
Reimbursement	\$		\$	No	Funding Source			\$
RRTF	\$		\$	No	Funding Source			\$
Other:	\$		\$	No	Other:			\$
TOTAL: \$4,474,558		TOTAL: \$4,474,558			TOTAL: \$4,474,558			
Reimbursement					Federal Agreement #:			

Contractor's Administrator/ Officer		Contractor's Project Manager	
Name:	Liisa Hiatt	Name:	Lloyd Dixon
Address:	1776 Main Street	Address:	1776 Main Street
City, State, Zip:	Santa Monica, CA 90401	City, State, Zip:	Santa Monica, CA 90401
Phone/ Fax:	(310) 393-0411 ext. 6221	Phone/ Fax:	(310) 393-0411 ext. 7480
E-Mail:	hiatt@rand.org	E-Mail:	Dixon@rand.org

Contractor Is

- 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)

Selection Process Used

- Solicitation RFP Solicitation #: 600-10-612 # of Bids: 3 Low Bid? No Yes
 Non Competitive Bid (Attach CEC 96)
 Exempt Select Exemption (see instructions)

**Civil Service Considerations**

- Not Applicable (Contract 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:**Payment Method**

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

Retention

1. Is contract subject to retention? No Yes
- If Yes, Do you plan to release retention prior to contract termination? No Yes

Justification of Rates

The Evaluation Committee gave the average hourly rates and cost justification a score of 44.2 out of 50 points, which is interpreted as "good"

Disabled Veteran Business Enterprise Program (DVBE)

1. Not Applicable
2. Meets DVBE Requirements DVBE Amount:\$ 45,000 DVBE %: 5%
- Contractor is Certified DVBE
- Contractor is Subcontracting with a DVBE: Advent Consulting, Katin Engineering Consulting
3. Contractor selected through CMAS or MSA with no DVBE participation.
4. Requesting DVBE Exemption (attach CEC 95)

Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE?

No Yes

If yes, check appropriate box: SB MB DVBE

Is Contractor subcontracting any services?

No Yes

If yes, give company name and identify if they are a Small Business (SB), Micro Business (MB) and/or DVBE:

Advent Consulting; Katin Engineering Consulting	<input type="checkbox"/> No	<input checked="" type="checkbox"/> SB	<input type="checkbox"/> MB	<input checked="" type="checkbox"/> DVBE
Raney Associates; Sierra Research; Stillwater; Transportation Analysis	<input type="checkbox"/> No	<input checked="" type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE
Cambridge Systematics; Total Battery Consulting	<input checked="" type="checkbox"/> No	<input type="checkbox"/> SB	<input type="checkbox"/> MB	<input type="checkbox"/> DVBE

Miscellaneous Contract 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 contract, with amendments, longer than a year? If yes, why? No Yes
- ARFVT program is a multi-year program and key EM&V activities must follow program implementation

CONTRACT REQUEST FORM (CRF)



The following items should be attached to this CRF

1. Scope of Work, Attach as Exhibit A.	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached
2. Budget Detail, Attach as Exhibit B.	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached
3. CEC 96, NCB Request	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Attached
4. CEC 30, Survey of Prior Work	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached
5. CEC 95, DVBE Exemption Request	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Attached
6. Draft CEQA Notice of Exemption (NOE)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Attached
7. Resumes	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Attached
8. CEC 105, Questionnaire for Identifying Conflicts		<input checked="" type="checkbox"/> Attached
9. CEC 106, IT Component Reporting Form		<input checked="" type="checkbox"/> Attached

 Contract Manager Date Office Manager Date Deputy Director Date

The following signatures are only required when contract approval is delegated to the Executive Office and not approved at a Business Meeting. See Business Meeting Information Section.

 Presiding Policy Committee Date Associate Policy Committee Date Executive Director Date

Scope of Work and Deliverables

ABOUT THIS SECTION

This section describes the contract scope of work, deliverables and due dates under the direction of the CCM.

TASK LIST

Task #	Task Name
1	Agreement Management
2	Evaluation Advisory Committee
3	Evaluation Planning
4	Develop Recommendations of Program Status Indicators and Case Studies
5	Assess the Business Case for a Web-based Tracking and Reporting System / Dashboard
6	Evaluation, Measurement and Verification of ARFVT Program

TERMS/ACRONYMS/DEFINITIONS

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

Term/ Acronym	Definition
Activity	Actions taken by Awardees to implement agreements
ARB	California Air Resources Board
ARFVT	Alternative and Renewable Fuel and Vehicle Technology Program
ARRA	American Recovery and Reinvestment Act
Awardee	The recipient of ARFVT funds under a contract, grant, loan, or other financial mechanism. For purposes of this contract, "awardee" does not include recipients of funds under technical support contracts.
Category	A logical grouping of technologies, fuels, funding mechanisms, or activities.
CCM	Energy Commission Contract Manager
EM&V	Evaluation, Measurement and Verification
IEPR	Integrated Energy Policy Report
WA	Work Authorization

BACKGROUND

The purpose of this contract is to provide technical support to the Energy Commission with Evaluation, Measurement and Verification (EM&V) of the Alternative and Renewable Fuel and Vehicle Technology (ARFVT) program established under Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007). The ARFVT program provides funding to leverage public and private investment to develop and deploy clean, efficient, and low carbon alternative fuels and vehicle technologies. Technologies, fuels and activities funded include:

Vehicle Deployment Rebates and Buydowns for light-, medium-, and heavy-duty:

- Electric Vehicles
- Natural Gas Vehicles
- Propane Vehicles

Vehicle Prototypes and Demonstrations

- Non-Petroleum Engines and Hybrid Electric/Hydraulic Vehicles

Fueling/Dispensing Infrastructure

- Electric Vehicle Charging Stations
- Natural Gas (CNG and LNG)
- Hydrogen
- E85
- Propane
- Blending and Storage Terminals

Fuel Production

- Biofuel Production Plants
- Biomethane Production Plants
- Advanced Ethanol Production Plants

Manufacturing

- Vehicles and Component Parts for Alternative-Fueled/Electric Vehicles

Innovative Technology/Advanced Fuels

Workforce Training and Development

Planning Programs

- Regional Electric Vehicle Planning

Research Projects

Federal cost-share programs

To successfully administer the ARFVT Program, the Transportation Committee of the California Energy Commission requested that the 2010-2011 Investment Plan include a discussion of the need for the Energy Commission to develop and implement an EM&V program to independently verify the performance of the ARFVT Program and its awards, to document program, activity and technology benefits, and to quantify progress towards fulfilling policy goals and targets, including the Global Warming Solutions Act of 2006 (AB 32, Nunez, Chapter 488, Statutes of 2006), the California Air Resources Board's Low Carbon Fuel Standard, The State Alternative Fuel Plan (AB 1007, Pavley, Chapter 371, Statutes of 2005), California's *2011 Bioenergy Action Plan* and the Renewables Portfolio Standards (California Public Utilities Code section 399.11). This information will be used to develop the benefits report that is required for the Energy Commission's annual Integrated Energy Policy Report (IEPR) and update and to guide the management and direction of the ARFVT Program.

GOALS AND OBJECTIVES

The goals of the Agreement are to gain insight on costs and preferred features of technologies, how activities funded through the ARFVT program performed, how the markets for these products changed as a result of the program, and how program processes can be improved. This analysis will be used to choose technologies and fuels for future program support and to develop future market interventions. This will help to deploy public funds in a manner that will

lead to the increased availability of alternative fuels and vehicle technologies, increased customer awareness, and, ultimately, increased cost-effective reductions in petroleum fuel use and greenhouse gas emissions.

Table 1 provides the objectives for the agreement, the key questions and indicators that the evaluation must address, and an assessment of how the Contractor should allocate its effort between evaluation types.

Table 1. Evaluation Objectives

Evaluation Type	Objectives	Key Questions/ Indicators	% Effort
Impact Evaluation	<p>Prepare analysis to support IEPR benefits report on ARFVT Program, as required by California Health and Safety Code section 44273, subd. (c).</p> <p>Prepare analysis to support quantification of progress towards fulfilling other state policy goals and targets (e.g., Global Warming Solutions Act of 2006 (AB 32, Nunez, Chapter 488, Statutes of 2006), Executive Order S-03-05, the Low Carbon Fuel Standard, the State Alternative Fuel Plan (AB 1007, Pavley, Chapter 371, Statutes of 2005), the <i>2011 Bioenergy Action Plan</i> and the Renewables Portfolio Standard (Cal. Pub. Util. Code sections 399.11 et seq.).</p> <p>Verify whether Awardees' achieved the impacts that they predicted or claimed in their proposals and reports to the Energy Commission.</p>	<p>Types and quantity of alternative and renewable fuel and vehicle technologies in California attributed to the ARFVT Program by award, by vendor, by sector (goods movement, warehouse, school district, etc.), category and by the ARFVT Program.</p> <p>Geographic coverage of awards and technologies, including those located in non-attainment areas, in adversely impacted communities, in disadvantaged communities, in different air basins, or out-of-state.</p> <p>Changes in annual fuel consumption (diesel, gasoline, biofuels, hydrogen, electricity, and natural gas) due to the ARFVT program or program category</p> <p>Changes in annual GHG and criteria pollutant emissions due to the ARFVT program or program category</p> <p>Changes in carbon intensity values for lifecycle GHG emissions</p> <p>Characterization of workforce training activities</p> <p>Quantity of ARFVT program funding and leveraged funding</p> <p>Changes in annual direct indirect, and induced jobs (quantity, type, duration, location) due to the ARFVT program or program category</p> <p>Changes in business formation for</p>	35

		<p>California and nationwide due to the ARFVT program or program category</p> <p>Changes in California gross state product (GSP) due to the ARFVT program or program category</p> <p>Attribution of impacts between other market actors (such as ARB, Cal. Public Utilities Commission)</p>	
Process Evaluation	Identify how program processes are performing from both the program and participant perspectives and indicate how they can be improved	<p>Has the administrative and financial performance of the program and awardees met an acceptable standard? (ie were funds allocated quickly enough, were requirements clearly stated from an early stage of the process, are the overhead costs appropriate, is record keeping adequate, etc.)</p> <p>Do awardees that received match funding under ARRA comply with ARRA requirements?</p> <p>Which program areas were oversubscribed or undersubscribed and what are the reasons?</p> <p>Are workforce training activities effectively targeted?</p> <p>Are awardees and market participants satisfied with the program?</p> <p>Are there aspects of the program which have been effective in increasing the degree to which practices have been sustained? Are there areas for improvement?</p> <p>Are solicitations targeting the most effective market factor and or actor (suppliers versus end-users versus other)?</p> <p>What are the ARFVT awardees' recommendations for enhancements to program process and content? What do entities that were not awarded funds recommend?</p>	35

		What marketing and delivery channels are working well to achieve each of the program's targeted objectives at minimal cost?	
Market Baseline Analysis	For those fuel and technology categories where the ARFVT program intends to change the structure or function of related markets, develop baseline information against which to compare future progress. Some market baseline studies have already been prepared for the ARFVT program. If gaps exist, develop baselines that are consistent with the IEPR- approved assumptions (such as for fuel prices, population etc.) or prepare an analysis and obtain approval from the CCM if different assumptions must be used.	<p>What is the pre-program availability of alternative and renewable fuel and vehicle technologies? How many were sold by what vendors?</p> <p>How many potential program participants are there?</p> <p>For awards targeting end users only, what is the level of awareness regarding the technologies?</p> <p>What are the characteristics of the ARFVT awardees and their customers (% innovators, % early adopters, % late adopters, etc.)? How does this compare to all potential market participants?</p> <p>What are the barriers and opportunities to expanded utilization of the program's alternative fuels and vehicle technologies?</p>	5
Market Effect Evaluation	<p>Assess how awards and project categories funded under the ARFVT program are expected to drive new technology advancement for vehicles, engines, and other equipment, and promote the deployment of such technologies in the marketplace.</p> <p>For those fuel/technology categories where the ARFVT program intends to change the structure or function of related markets, determine the short-term, medium-term and long-term (the year 2020) changes that take place for the various targeted markets (trucking, aviation, goods movements, school buses etc.) and assess whether they were affected by the program and are sustainable with or without the program.</p>	<p>Has the ARFVT program accelerated the deployment of alternative vehicles, technologies and fuels?</p> <p>Has the ARFVT program accelerated the timeframe to advance the market development cycle from pre-commercialization to commercialization?</p> <p>Has the quantity of potential participants changed over the life of the ARFVT program?</p> <p>Has awardees' financial solvency changed over the life of the ARFVT program?</p> <p>Has consumer knowledge and acceptance of technologies changed? (only for awards targeting end users)</p>	15

		<p>Have the knowledge, skills and capabilities of alternative fuel and vehicle technology product and service providers changed?</p> <p>Have workforce training activities achieved their objectives?</p> <p>Have any permanent changes to the markets for alternative and renewable fuel and vehicle technologies occurred due to the program? For example, have regulations, pricing, services, or availability of financing etc. changed due to the program?</p> <p>Will the identified market changes be sustained without continued public funding?</p>	
Cost Assessment	<p>Assess the viability of various categories of ARFVT activities in transitioning towards a diverse portfolio of alternative fuels and vehicle technologies and reduced petroleum dependency. Compare the costs and benefits, evaluate the degree of uncertainty associated with each estimate of each type of cost and benefit, and describe the costs and benefits not captured or quantified but likely to exist.</p>	<p>What are the costs and benefits of fuel and vehicle technology categories (aggregates of similar projects) and how do they compare to each other?</p> <p>What are the relative lifecycle GHG emissions for gasoline, diesel and petroleum substitutes?</p> <p>What are the combined fuel and vehicle costs to end-use customers? To wholesale suppliers? To retail suppliers?</p>	10

TASKS

TASK 1.0 AGREEMENT MANAGEMENT

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 CCM, the Contracts Officer, and a representative of the Accounting Office. The meeting will be held in Sacramento, CA and the CCM will designate the specific location. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the CCM 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.
- Prepare a Gantt Chart for the Agreement.
- Prepare a one page summary of the kick-off meeting discussion.

The CCM shall:

- Arrange the meeting including scheduling the date and time.
- Prior to the kick-off meeting, provide an agenda to all potential meeting participants

Contractor Deliverables:

- An Updated Schedule of Deliverables (if applicable)
- Gantt Chart
- Kick-off meeting summary

Task 1.2 Invoices

The Contractor shall:

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

Deliverables:

- Invoices

Task 1.3 Management of Work Authorizations under Technical Task 6

The goal of this task is to provide technical assistance to the CCM in preparing Work Authorizations that adequately address the work under Task 6, Evaluation, Measurement and Verification of ARFVT Program.

The Contractor shall:

- Assist the CCM in drafting WAs in accordance with the Work Authorization provision in Exhibit E.

Task 1.4 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 contract, and 2) notify the CCM who will follow the Energy Commission's process for adding or replacing subcontractors.

Task 1.5 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 CCM will provide the format for the progress reports.

Deliverables:

- Monthly Progress Reports

Task 1.6 Summary Report

The goal of this task is to prepare a written Summary Report that describes the original purpose, approach, results and conclusions of the work completed under this Agreement. The Summary Report shall be prepared in language easily understood by the public or layperson with a limited technical background.

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

The Summary Report shall be a public document. If the Contractor has obtained confidential status from the Energy Commission and will be preparing an additional confidential version of

the Summary Report, the Contractor shall perform the following subtasks for both the public and confidential versions of the Summary Report.

Task 1.6.1 Summary Report Outline

The Contractor shall:

- Prepare and submit a draft outline of the Summary Report to the CCM for review and approval. The CCM will provide written comments to the Contractor on the draft outline. The Contractor shall review the comments and discuss any problematic recommended changes with the CCM.
- Once agreement has been reached on the draft, the Contractor shall prepare and submit the final outline of the Summary Report to the CCM, incorporating CCM comments.

Deliverables:

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

Task 1.6.2 Summary Report

The Contractor shall:

- Prepare the draft Summary Report for this Agreement in accordance with the approved outline.
- Submit the draft Summary Report to the CCM for review and comment. The CCM will provide written comments to the Contractor. The Contractor shall review the comments and discuss any problematic recommended changes with the CCM, incorporating CCM comments.
- Once agreement has been reached on the draft, the Contractor shall prepare and submit the Final Summary Report.

Deliverables:

- Draft Summary Report
- Final Summary Report

Task 1.7 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 via Web-Ex or teleconference. This meeting will be attended by the Contractor Project Manager and the CCM. The CCM 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 Summary 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:

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

TECHNICAL TASKS

Task 2 Evaluation Advisory Committee

The goal of this task is to prepare a process for facilitating input from an Evaluation Advisory Committee of at least two EM&V experts that would be paid out of contract funds. These experts shall not be ARFVT awardees or be involved in drafting or implementing the evaluation efforts or be employees of the Contractor. The Evaluation Advisory Committee's purpose is to provide a quality assurance review process. At key stages of the process (as noted in the tasks), the Evaluation Advisory Committee will review progress and provide constructive input.

The Contractor shall:

- Prepare and submit a draft Evaluation Advisory Committee memo on who is included in the Evaluation Advisory Committee and the proposed process to facilitate review of the EM&V effort. Contents shall include: a schedule of meeting times, topics for review and the process for review.
- Incorporate comments by the CCM and prepare a final Evaluation Advisory Committee memo.

Deliverables:

- Draft Evaluation Advisory Committee Memo
- Final Evaluation Advisory Committee Memo

Task 3 Evaluation Planning

The goal of this task is to develop a detailed plan to guide the EM&V effort. The EM&V plan should ensure that the EM&V goals are clearly specified and evaluation metrics are clearly defined, and that necessary data collection procedures are in place. The evaluation plan shall be detailed enough so as to allow implementation of the full evaluation effort.

The Contractor may develop ARFVT EM&V information from a variety of sources and methods. Some of these sources may already exist, such as Awardees' progress reports. Other data may

be developed by the Contractor by various methods including: administering surveys, conducting interviews, developing or applying models, taking measurements, or conducting on-site data collection. The evaluation approach should be designed in a way that provides findings with the highest level of reliability that can be achieved within the available budget and term of the contract. Where possible, the EM&V Plan shall emphasize on-site data collection.

Evaluation planning shall be conducted in a collaborative and transparent manner, in coordination with the CCM and Energy Commission Staff.

The Contractor shall:

- Group technologies or awards into logical categories with similar characteristics that would have similar evaluation objectives and approaches. The categories should include consideration of (but not be limited to) the technology, fuel type, commercialization phase, supply chain target, infrastructure type, and maturity of the market. Categories shall be developed so that the evaluation approach can be consistent for all technologies or awards in the category.
- Prepare a draft Categorization of ARFVT Projects Memo which describes and explains the rationale for the categories.
- Incorporate comments by the CCM and prepare a final Categorization of ARFVT Projects Memo.
- For each category, develop and submit draft theories of how program categories' actions are intended to lead to reductions in petroleum use and greenhouse gas emissions. The Category Theories should specify the program categories' goals, objectives, resources, strategies, activities, outputs, target audience, short-term outcomes, medium-term outcomes and long-term outcomes.
- Implement the Evaluation Advisory Committee procedures on the draft Category Theories according to the Evaluation Advisory Committee memo.
- Document the Evaluation Advisory Committee's recommendations on Category Theories in a draft Description of Steps Memo and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo.
- Incorporate comments by the CCM and prepare a final Description of Steps Memo (Category Theories).
- Incorporate comments by the CCM and Evaluation Advisory Committee for each category and prepare Final Category Theories.
- In coordination with the CCM and key Energy Commission staff, and in consideration of the Category Theories, prepare a draft Questions/Indicators Memo which selects the working list of evaluation objectives for each category or subcategory. The Memo shall discuss the relevance of all of the researchable questions and key indicators from Table 1 for each category. If the Contractor recommends that some researchable questions or indicators not be included in the EM&V for a particular category, then the Contractor shall document in the memo why that question/indicator should be omitted.

- Implement the Evaluation Advisory Committee procedures on the draft Questions/Indicators according to the Evaluation Advisory Committee memo.
- Document the Evaluation Advisory Committee's recommendations on Questions/Indicators in a draft Description of Steps Memo and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo.
- Incorporate comments by the CCM and prepare a final Description of Steps Memo (Questions/Indicators).
- Incorporate comments by the CCM and the Evaluation Advisory Committee and prepare a final Questions/Indicators Memo.
- Determine whether the existing baseline information by category is adequate. If there are gaps, develop an approach to establish baselines for categories. Prepare a draft Baseline Memo which summarizes the baseline information or describes the approach to develop a baseline.
- Implement the Evaluation Advisory Committee procedures on the baselines according to the Evaluation Advisory Committee memo.
- Document the Evaluation Advisory Committee's recommendations on the baselines in a draft Description of Steps Memo and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo.
- Incorporate comments by the CCM and prepare a final Description of Steps Memo (Baselines).
- Incorporate comments from the CCM and the Evaluation Advisory Committee and prepare a final Baseline Memo.
- Develop draft Program Category EM&V Plans for each program category. Each draft Program Category EM&V Plan shall include:
 - Category description
 - Status of category (for example: number of awardees, funds obligated, funds expended, interim achievements toward milestones and activities and locations of activities, awards, and technology categories, etc.)
 - Category theory
 - Baseline information
 - EM&V metrics and key questions/indicators
 - Data collection, estimation, and monitoring procedures (if one exists, include the reference to the adopted verification procedure to be used) to answer questions and develop information on indicators that were selected for each category. Identify the populations from which data will be collected, the sampling procedures, the expected robustness and reliability of the estimates of metric and performance

- indicators, and how these rigor levels compare to established EM&V standards.
- Comprehensive EM&V Report tables' templates
 - Budget to implement EM&V Plan by Category
 - Timelines for achieving EM&V objectives, including activity schedules, milestones, and deliverable due dates, in coordination with the IEPR schedule
 - Roles of subcontractors and Energy Commission staff in implementing the Final EM&V Plan for each category
 - The approach to implementing the EM&V Plan to ensure that the findings from individual evaluations can be used to make valid inferences about all program activities of each broad category and about the entire portfolio of ARFVT activities. The approach must lead to reliable, replicable and unbiased results within the budget. Identify the anticipated margin of error of the results.
- Implement the Evaluation Advisory Committee procedures on the draft EM&V Plan by Category according to the Evaluation Advisory Committee memo.
 - Document the Evaluation Advisory Committee's recommendations on the EM&V Plan by Category in a draft Description of Steps Memo and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo.
 - Incorporate comments by the CCM and prepare a final Description of Steps Memo (EM&V Plan by Category).
 - Revise the draft EM&V program category plans based on recommendations from the CCM and the Evaluation Advisory Committee, and develop final Program Category EM&V Plans.
 - Combine all these efforts into a draft EM&V Plan. Each program category shall represent a separate chapter of the EM&V plan. Cross-cutting issues may be combined in a separate chapter. The EM&V plan shall include an outline of the Comprehensive Program EM&V Report (Task 6) and an executive summary presenting an overview of key evaluation objectives and approaches for each category.
 - Implement the Evaluation Advisory Committee procedures on the draft EM&V Plan according to the Evaluation Advisory Committee memo.
 - Document the Evaluation Advisory Committee's recommendations on the EM&V Plan in a draft Description of Steps Memo and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo.
 - Incorporate comments by the CCM and prepare a final Description of Steps Memo (EM&V Plan).
 - Revise the draft EM&V Plan based on input from the CCM, Evaluation Advisory Committee, and Energy Commission staff and prepare the final EM&V Plan. The final EM&V Plan shall be a bound document.

Deliverables:

- Draft Categorization of ARFVT Projects Memo
- Final Categorization of ARFVT Projects Memo
- Draft Category Theories (for each category)
- Final Category Theories (for each category)
- Draft Description of Steps Memo (Category Theories)
- Final Description of Steps Memo (Category Theories)
- Draft Questions/Indicators Memo
- Final Questions/Indicators Memo
- Draft Description of Steps Memo (Questions/Indicators)
- Final Description of Steps Memo (Questions/Indicators)
- Draft Baseline Memo
- Final Baseline Memo
- Draft Description of Steps Memo (Baselines)
- Final Description of Steps Memo (Baselines)
- Draft Program Category EM&V Plans
- Final Program Category EM&V Plans
- Draft Description of Steps Memo (EM&V Plan by Category)
- Final Description of Steps Memo (EM&V Plan by Category)
- Draft EM&V Plan
- Final EM&V Plan
- Draft Description of Steps Memo (EM&V Plan)
- Final Description of Steps Memo (EM&V Plan)

Task 4 Develop Recommendations of Program Status Indicators and Case Studies

The goals of this task are to develop recommendations on which indicators of performance should be regularly tracked to provide routine data and visual tools that indicate progress, outputs and outcomes that assess whether the ARFVT program and projects are performing at expected levels; and to prepare quarterly case studies highlighting program successes. Tracking of these indicators and their trends would provide Energy Commission staff with information to quickly identify and monitor ARFVT program performance. The Energy Commission may use this information to provide updates to policy makers and to proactively identify problems so that corrective action can occur.

The Contractor shall:

- Recommend a small set of core metrics and indicators of performance to track and summarize in internal tracking documents or reports. Metrics and performance indicators shall:
 - Tie to program goals (as defined in program regulations and/or statute)
 - Be defined as positive outcomes (benefits).
 - Have formats which are the same across activities to the extent feasible
 - Be able to be scaled up from the awardee to the category of award to the program category. Where scaling is not feasible, define the appropriate metrics and data (i.e., on a per awardee basis, by category or by technology).
 - Include: funds obligated, funds expended, interim achievements toward milestones and activities, and locations of activities and categories.

- Distinguish between expected results from the original project proposal, actual results reported by the awardee, and results as evaluated, verified or measured by the contractor.
- Prepare and submit a draft Metrics and Performance Indicators memo that includes the Contractor's recommendation of core metrics and indicators of performance, the proposed data sources of those core metrics and indicators of performance, and proposed protocols and procedures to gather the data. The protocols and procedures to develop the core metrics and indicators of performance should consider Awardees' or Energy Commission staff's time and funding constraints.
- Implement the Evaluation Advisory Committee procedures on the Metrics and Performance Indicators according to the Evaluation Advisory Committee memo.
- Document the Evaluation Advisory Committee's recommendations in a draft Description of Steps Memo and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo.
- Incorporate comments by the CCM and prepare a final Description of Steps Memo.
- Prepare a final Metrics and Performance Indicators Memo based on input from the CCM and the Evaluation Advisory Committee.
- Assess quality of data provided by awardees in the original project proposal, the regular progress reports, and any task-based reports. Conduct a gap analysis and develop recommendations for filling any gaps and improving the quality of data. Include this information in a draft data quality assessment.
- Prepare a final data quality assessment based on input from the CCM.
- Develop and submit a draft case study format which presents the layout and organization and the "look" of quarterly case studies.
- Based on input from the CCM, prepare a final case study format.
- Submit a proposed list of five (5) awards or categories to highlight in the quarterly case studies.
- Prepare and submit draft quarterly case studies based on the approved list which:
 - Use the approved metrics and performance indicators to highlight success stories from individual awards or categories,
 - Include concise descriptions and metrics for determining success,
 - Include graphical displays of information and pictures of case studies.
- Based on input from the CCM, prepare final quarterly case studies.

Deliverables:

- Draft Metrics and Performance Indicators Memo

- Final Metrics and Performance Indicators Memo
- Draft Description of Steps Memo (Metrics and Performance Indicators)
- Final Description of Steps Memo (Metrics and Performance Indicators)
- Draft data quality assessment
- Final data quality assessment
- Draft Case Study Format
- Final Case Study Format
- Quarterly list(s) of 5 case studies
- Draft Quarterly Case Studies
- Final Quarterly Case Studies

Task 5 Assess the Business Case for a Web-based Tracking and Reporting System/Dashboard

The goal of this task is to assess the fiscal and technical feasibility of a web-based system/dashboard that would provide a platform for ARFVT funding recipients to enter progress and performance information and could automate data gathering, calculations and reporting. An effective web-based tool would increase the consistency of reporting and reduce the time and resources required to manage information.

The Contractor shall:

- Prepare and submit a draft Web-based Tracking System Assessment Report that analyzes whether transitioning the development and presentation of program status documents to a web-based system would save staff time, save State funds, or increase the quality of services. The assessment shall explore the business case for the web-based system (including both pros and cons), discuss the challenges, specify important functional requirements, approximate the associated costs, recommend and compare future products, and suggest recommended timelines.
- Prepare and submit a final Web-based Tracking System Assessment Report based on comments from the CCM.

Deliverables:

- Draft Web-based Tracking System Assessment Report
- Final Web-based Tracking System Assessment Report

Task 6 Evaluation, Measurement and Verification of ARFVT Program (Work Authorization Task) (80% of the effort)

The goals of this task are to implement the EM&V Plan and to prepare an annual Comprehensive Program EM&V Report. The report will be read by Energy Commission staff, Energy Commissioners, the Legislature, interested members of other agencies and the public.

This is a “Work Authorization” task and no work shall be undertaken for this task unless authorized by the Energy Commission through a specific written document called a Work Authorization (WA). Each WA shall define the scope of work, the deliverables, the schedule of deliverables and the project budget for work requested by the Energy Commission. The

Contractor shall begin work only when a written WA is signed by both the Contractor and the CCM and has been approved by the Department of General Services.

The Contractor shall:

- Assist the CCM in drafting WAs in accordance with the Work Authorization provision in Exhibit E.
- Sign a non-disclosure agreement with the Energy Commission and with each ARFVT awardee, as appropriate, to allow receipt of confidential information.
- Implement the EM&V Plan. The Contractor may be required to coordinate with other audit processes (such as audits by the Energy Commission, U.S. Department of Energy, or the California Bureau of State Audits) while implementing the EM&V Plan.
- In consultation with the CCM and Energy Commission staff, assign new ARFVT activities to the EM&V Plan on a quarterly basis and as they are approved by the Energy Commission.
- Implement the Evaluation Advisory Committee procedures at key stages of the EM&V implementation and for each Comprehensive EM&V Report, according to the Evaluation Advisory Committee memo.
- Document the Evaluation Advisory Committee's recommendations in draft Description of Steps Memo(s) and include the steps the Contractor will take to address the Evaluation Advisory Committee's recommendations. If the Contractor disagrees with a recommendation, include reasons explaining the disagreement in the memo(s).
- Incorporate comments by the CCM and prepare final Description of Steps Memo(s).
- As the measurement and verification of each awardee is completed, prepare a draft Awardee Report documenting the findings. Include: a description of the awardee's proposed project, baseline conditions, expected outcomes, questions/indicators applied, methodology used, assumptions, data gathered, and conclusions.
- Incorporate comments by the CCM and prepare Final Awardee Report(s)
- After conducting a site visit or a series of visits to a particular site, prepare a draft Site Visit Report. The Site Visit Report shall include:
 - An executive summary
 - A description of the awardee's proposed project, baseline conditions, and expected outcomes at the site.
 - The method of analysis that the Contractor used to measure and verify the expected outcomes.
 - The identification of the key calculation inputs used and the source of the data for these inputs (if assumption-based, describe the source supporting that

assumption. If derived from collected data, describe the monitoring procedure, the equipment used, the monitoring schedule and the justification of the sampling rate of monitored equipment).

- The findings (including a table which compares the awardee and the Contractor's assumptions and outcomes).
- Prepare Final Site Visit Reports based on comments from the CCM.
- As all the individual data gathering activities within a category are completed, prepare a draft Category Summary report estimating the impacts for that category. Each Category Summary Report shall:
 - Have a section that summarizes the findings from the evaluation in a way that allows readers who are not familiar with the topics of energy or with ARFVT Program's fuels or technologies to quickly understand key results without reading the entire document.
 - Be formatted for ease of incorporation into a single report that documents the results for the entire ARFVT program.
 - Meet the Energy Commission reporting specifications for format, content, and quality, including the Energy Commission's style guide.
 - Use professional editors and evaluation experts with extensive writing and communication skills.
- Prepare a final Category Summary Report for each category based on comments from the CCM.
- Implement the quality assurance review process by soliciting input from the Evaluation Advisory Committee. Facilitate review and input from key Energy Commission staff and the Evaluation Advisory Committee's on implementation of the EM&V Plan at key stages.
- Prepare a draft outline of the annual Comprehensive Program EM&V Report.
- Prepare a final outline of the annual Comprehensive Program EM&V Report.
- Prepare a draft Comprehensive Program EM&V Report based on implementation of the EM&V Plan on a yearly basis. The Comprehensive Program EM&V Report shall:
 - Describe the findings related to all the evaluation objectives for each category and for the entire ARFVT Program.
 - Present results in a way that allow all program effects to be easily understood.
 - Include a comparison table and a discussion of effects by awardee, by category, and per dollar of ARFVT funding.
 - Where outcomes differ from program goals, discuss the reasons for this and provide recommendations to improve the delivery of the ARFVT Program and outcomes.

- Describe key obstacles and challenges to meeting the goals identified by funded projects and make recommendations for future program designs or funding opportunities.
- Include an executive summary that presents the findings from the evaluation in a way that allows readers who are not familiar with the topics of energy or with the ARFVT Program's fuels or technologies to quickly understand key results without reading the entire document.
- Adhere to the Energy Commission reporting specifications for format, content, and quality, including the Energy Commission's style guide.
- Include photographs, charts and figures as appropriate to convey to the reader the necessary information.
- Be professionally edited and clearly written.
- Be a bound document.
- Attend and participate in at least two public workshops held by the Energy Commission in coordination with the IEPR. For each workshop:
 - Prepare and submit a draft PowerPoint presentation.
 - Incorporate comments from the CCM and prepare a final PowerPoint presentation.
 - Prepare handouts and other workshop materials.
 - Present the PowerPoint and respond to questions.

Deliverables:

All deliverables will be detailed in the Work Authorizations.

Deliverables and Due Dates

Task	Deliverable	Due Date
1.1	An Updated Schedule of Deliverables (if applicable)	10 working days after contract execution
	An Updated Gantt Chart	10 working days after contract execution
	Kick-off meeting summary	10 working days after contract execution
1.2	Invoices	Monthly
1.3	None	N/A
1.4	None	N/A
1.5	Monthly Progress Reports	Monthly
1.6	Draft Outline of the Summary Report Final	January 15 ,2016
	Outline of the Summary Report	January 31, 2016
	Draft Final Summary Report	February 28, 2016
	Summary Report	March 1 ,2016
1.7	Written documentation of meeting agreements and all pertinent information	3 working days after final meeting
	Schedule for completing closeout activities	3 working days after final meeting
2	Draft Evaluation Advisory Committee Memo	July 27, 2012
	Final Evaluation Advisory Committee Memo	7 days after receipt of CCM comments
3	Draft Categorization of ARFVT Projects Memo	July 27, 2012
	Final Categorization of ARFVT Projects Memo	7 days after receipt of CCM comments
	Draft Category Theories (for each category)	July 1, 2012
	Draft Description of Steps Memo (Category Theories)	August 31, 2012
	Final Description of Steps Memo (Category Theories)	7 days after receipt of CCM comment
	Final Category Theories (for each category)	7 days after receipt of CCM comments
	Draft Questions/Indicators Memo	August 17, 2012
	Draft Description of Steps Memo (Questions/Indicators)	September 7, 2012
	Final Description of Steps Memo (Questions/Indicators)	7 days after receipt of CCM comment
	Final Questions/Indicators Memo	7 days after receipt of CCM comments
	Draft Baseline Memo	August 31, 2012

	<p>Draft Description of Steps Memo (Baselines)</p> <p>Final Description of Steps Memo (Baselines) Final Baseline Memo</p> <p>Draft Program Category EM&V Plans</p> <p>Draft Description of Steps Memo (EM&V Plan by Category)</p> <p>Final Description of Steps Memo (EM&V Plan by Category)</p> <p>Final Program Category EM&V Plans</p> <p>Draft EM&V Plan</p> <p>Draft Description of Steps Memo (EM&V Plan)</p> <p>Final Description of Steps Memo (EM&V Plan)</p> <p>Final EM&V Plan</p>	<p>September 14, 2012</p> <p>7 days after receipt of CCM comment</p> <p>15 days after receipt of CCM comments</p> <p>October 5, 2012</p> <p>October 26, 2012</p> <p>7 days after receipt of CCM comment</p> <p>November 9, 2012</p> <p>November 23, 2012</p> <p>December 3, 2012</p> <p>December 17, 2012</p> <p>January 14, 2013</p>
4	<p>Draft Metrics and Performance Indicators Memo</p> <p>Draft Description of Steps Memo (Metrics and Performance Indicators)</p> <p>Final Description of Steps Memo (Metrics and Performance Indicators)</p> <p>Final Metrics and Performance Indicators Memo</p> <p>Draft data quality assessment</p> <p>Final data quality assessment</p> <p>Draft Case Studies Format</p> <p>Final Case Studies Format</p> <p>Quarterly List(s) of 5 Case Studies</p> <p>Draft Quarterly Case Studies</p> <p>Final Quarterly Case Studies</p>	<p>August 17, 2012</p> <p>September 7, 2012</p> <p>7 days after receipt of CCM comments</p> <p>September 21, 2012</p> <p>August 17, 2012</p> <p>September 7, 2012</p> <p>August 17, 2012</p> <p>September 7, 2012</p> <p>60 days before the end of each quarter</p> <p>15 days before the end of each quarter</p> <p>Last day of each quarter</p>
5	<p>Draft Web-based Tracking System Assessment Report</p> <p>Final Web-based Tracking System Assessment Report</p>	<p>August 1, 2013</p> <p>15 days after receipt of CCM comments</p>
6	<p>Deliverables will be established in WAs</p>	<p>Due dates will be established in WAs.</p>

