

GRANT AMENDMENT REQUEST FORM (GARF)

CEC-277 (Revised 02/13)

CALIFORNIA ENERGY COMMISSION



Original Agreement #	ARV-11-013	Amendment #	1
Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Aida Escala	27	916-654-4726
Recipient's Legal Name			Federal ID Number
Electric Power Research Institute, Inc.			23-717375
Revisions: (check all that apply)			
<input type="checkbox"/> Term Extension	New End Date: / /	Include revised schedule and complete items A, B, C, & F below.	
<input checked="" type="checkbox"/> Budget Augmentation	Amendment Amount: \$ 220,908	Include revised budget and complete items A, B, C, D, & F below.	
<input type="checkbox"/> Budget Reallocation		Include revised budget and complete items A, B, C, & F below.	
<input type="checkbox"/> Scope of Work Revision		Include revised scope of work and complete items A, B, C, E, & F below.	
<input checked="" type="checkbox"/> Change in Project Location or Demonstration Site		Include revised scope of work and complete items A, B, C, E, & F below.	
<input type="checkbox"/> Novation/Name Change of Prime Contractor/Recipient		Include novation documentation and complete items A, B, C, & F below.	
<input type="checkbox"/> Terms and Conditions Modification		Include applicable exhibits with bold/underline/strikeout and complete items A, B, C, & F below.	
A) Business Meeting Information			
Business Meeting approval is not required for the following types of Agreements:			
<input type="checkbox"/> ARFVTP minor amendments delegated to Executive Director.			
Proposed Business Meeting Date	5 / 8 / 2013	<input checked="" type="checkbox"/> Consent	<input type="checkbox"/> Discussion
Business Meeting Presenter	Aida Escala	Time Needed:	5 minutes
Please select one list serve. Altfuels (AB118- ARFVTP)			
Agenda Item Subject and Description			
Possible approval of an amendment to Agreement ARV-11-013 with the Electric Power Research Institute (EPRI) to: 1) augment the grant by \$220,908 to correct an administrative error made under the original grant agreement; and 2) to change its fleet partners to the City of Sacramento, City of Los Angeles, and City of San Francisco for the demonstration of 5 Odyne pre-commercial Gen2 Advanced Technology Plug-In Hybrid Electric work trucks. The total new agreement amount would be \$1,185,118. This agreement will include \$671, 570 in match funds.			
B) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)			
Legal Company Name:		Budget	
Odyne Systems LLC		\$ 466,000.00	
Electric Power Research Institute, Inc.		\$ 359,861.00	
Valley Power Systems, Inc.		\$ 300,000.00	
C) List all key partners: (attach additional sheets as necessary)			
Legal Company Name:			
UC Irvine, Johnson Controls, Inc. Remy International, Inc. City of Sacramento, City of Los Angeles, Johnson Controls, Inc., City of San Francisco			
D) Budget Information (only include amendment amount information)			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTF	FY 11/12	601.118E	\$220,908
Funding Source			\$
R&D Program Area:	Select Program Area	TOTAL:	\$ 0
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

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TECHNICAL TASK LIST

Task #	Task Name
1	Administration
2	Retrofit Plug-In Hybrid Truck Project

KEY NAME LIST

Task #	Key Personnel	Subgrantee	Key Partner(s)
1	Mark Kosowski, EPRI Program Manager		
2	Matt Jarmuz, Project Manager	Odyne Systems LLC	Johnson Controls, Inc. (JCI), Remy International, Inc. (Remy), <u>Valley Power Systems, Inc.,</u> <u>City of Sacramento, City of</u> <u>Los Angeles, City of San</u> <u>Francisco, UC Irvine</u>

GLOSSARY

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

Term/ Acronym	Definition
ARFVT	<i>Alternative and Renewable Fuel and Vehicle Technology</i>
CPR	Critical Project Review
FTD	Fuels and Transportation Division
GHG	Greenhouse gas emissions
EPRI	Electric Power Research Institute
Odyne	Odyne Systems LLC

Background

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVT Program). The statute, subsequently amended by AB 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the Energy Commission to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. 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;

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- 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 California Energy Commission issued solicitation PON-10-603 to provide funding opportunities under the ARFVT Program for projects to demonstrate and enhance market viability acceptance of near-term commercial applications of alternative technologies and alternative fueled vehicles for use in California's commercial goods movement, transit, and other sectors. To be eligible for funding under PON-10-603, the projects must also be consistent with the Energy Commission's ARFVT Investment Plan updated annually.

In response to PON-10-603, Recipient submitted application #7 which was proposed for funding in the Energy Commission's Notice of Proposed Awards revised March 8, 2012, and is incorporated by reference to this Agreement in its entirety.

Problem Statement:

Diesel buses and trucks on the road represent the largest source of toxic diesel and GHG emissions in California. These emissions are responsible for causing premature deaths and respiratory diseases. Construction and utility workers are especially vulnerable to illnesses caused by toxic emissions.

Successful retrofit of in-use work trucks to plug-in hybrid electric vehicles (PHEV) will speed air quality improvements, as more in-use trucks convert to PHEV use prior to retirement.

Fleets have been hesitant to retrofit existing vehicles to plug-in hybrids because of the high incremental cost and lack of familiarity with a relatively new technology. The demonstration of retrofit PHEV work trucks in California fleets will enable the partners to gain real world experience to verify and validate the vehicle's operating performance, emissions and fuel reduction benefits. This information will be used in formulating strategies to reduce costs and accelerate PHEV market expansion.

Goal of the Agreement:

The goal of this Agreement is the demonstration of five (5) Odyne pre-commercial Gen2 Advanced Technology Plug-In Hybrid Electric (PHEV) work trucks in California in a variety of applications in the South Coast Air Basin, **Sacramento Valley Air Basin, and Bay Area Air Basin**. The demonstration will establish a substantial database of

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real-world operating experience, fuel savings and emission reductions to serve as a basis for fine-tuning, and launching, wide-scale commercialization.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Develop agreements with projects identified by the California Energy Commission representing low and zero emission alternative fuel and hybrid trucks, advanced alternative fuel transit vehicles, and hybrid and alternative fuel off-road equipment.
- Demonstrate Advanced Diesel Plug-in Hybrid Electric work trucks in several applications, in the South Coast Air Basin, evaluating vehicle performance and collecting data on fuel consumption, mileage, operations/duty cycle, repair, maintenance, and other parameters.
- Create and retain at least 80 jobs with commercialization of the identified project by 2015.
- Generate at least \$3.36 million in tax revenue to the State of California by 2015.
- Reduce up to 91 percent of NOx, 88 percent of CO, 61 percent of hydrocarbons, and 44 percent of particulate matter by 2015.
- Reduce petroleum use by an average 1750 gallons per year per vehicle.

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 Recipient shall:

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

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

- Discussion of the terms and conditions of the Agreement, including the special terms and conditions
- Discussion of Critical Project Review (Task 1.2)
- Match fund documentation (Task 1.6) No work may be done on any project until the documentation is in place for that approved project. Permit documentation (Task 1.7)

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- Discussion of subgrant agreements needed to carry out project(s) (Task 1.8)
 - Discussion of any amendments to this Agreement to include new technical tasks and subgrants, if the Commission makes additional funding available for additional projects (Task 1.9)
 - Discussion of responsibility to review and validate invoices submitted by subgrantees (Task 1.10).
- Discussion of each approved project and related administrative processes.

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

- The Commission Agreement Manager's expectations for accomplishing the Recipient and Subgrantee tasks described in the Scope of Work
- An updated Master Schedule of Products
- Discussion of Progress Reports (Task 1.4)
- Discussion of Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions, and Special Terms and Conditions).
- Discussion of the Final Report (Task 1.5)

The Commission Agreement Manager shall designate the date and location of this meeting.

Recipient Products:

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

Commission Agreement Project Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

The goal of this task is to determine if the Recipient's project should continue to receive Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

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

Participants include the Commission Agreement Manager and the Recipient and may include the Commission ~~Grants~~ **Agreement** Officer, the Fuels and Transportation

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Division (FTD) team lead, other Energy Commission staff and Management as well as other individuals selected by the Commission Agreement Manager to provide support to the Energy Commission.

The Commission Agreement Manager shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- 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. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the project(s), 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 Commission Agreement Manager concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for FTD for 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 Commission Agreement Manager and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

Commission Agreement Manager Products:

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

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to 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~~ **Agreement** Officer, and the Commission Agreement Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Agreement Manager.

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 Commission Agreement Manager will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the Commission Agreement Manager and the ~~Grants~~ **Commission Agreement** 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 goals and objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed by the Recipient and subgrantees 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 Commission Agreement Manager within 10 days of the end of the reporting period agreed to at the Kick-Off Meeting. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- Collect and submit monthly reports from each of subgrantee, which shall individually summarize the same factors described herein for each individual project.

Product:

- Monthly Progress Reports from Recipient and each subgrantee.

Task 1.5 Final Report

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

The objectives of the Final Report are to clearly and completely describe the project administered by the Recipient, including the purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project(s) 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.

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The Recipient shall:

- Prepare an Outline of the Final Report.
- Prepare a Final Report following the approved outline and the latest version of the Final Report guidelines which will be provided by the Commission Project **Agreement** Manager. The Commission Agreement Manager 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:

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

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for each project under 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 and/or subgrantee 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 and/or subgrantee can incur any costs sought to be reimbursed.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Agreement Manager 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

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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 Commission Agreement Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Agreement Manager within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR.

Products:

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

Task 1.7 Identify and Obtain Required Permits

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

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

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If there are no permits

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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 Commission Agreement Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Agreement Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Agreement Manager 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 and Subgrant Agreements

The goal of this task is for Recipient to identify any subcontracts required to carry out the tasks under this Agreement and to procure them consistent with the terms and conditions of this Agreement 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 goal of this task is also for Recipient to execute subgrant agreements for each project under this Agreement, and to execute them consistent with the proposed goals, objects and tasks of each project as described in Recipient's application and with the

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terms and conditions of this Agreement including any special terms and conditions and other provisions required to be flowed down to subgrantees.

The Recipient shall:

- Prepare a letter documenting the subcontracts required to conduct this Agreement, and submit it to the Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If there are no subcontracts required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that subcontracts will be required during the course of the Agreement, provide in the letter:
 - A list of the subcontracts that describes the anticipated maximum budget and general scope of work for each,
 - A description of the procurement process to be used, and
 - The schedule the Recipient will follow in applying for and obtaining these subcontracts
- Submit a draft of each subcontract and subgrant agreement that will include a budget with the information required in the budget details to the Commission Agreement Manager for review and approval, and incorporate any changes recommended by the Commission Agreement Manager.
- Submit a final copy of each executed subcontract and subgrant agreement.

Products:

- Letter describing the subcontracts needed, or stating that no subcontracts are required
- Draft subcontracts and subgrant agreements
- Final subcontracts and subgrant agreements

1.9 Steps to Add Subgrantee

The goal of this task is to provide an optional procedure that enables the Energy Commission and Recipient to amend this Agreement consistent with any revised Notice of Proposed Awards which may allocate funding for a project proposed by the Recipient but not funded under the original Agreement.

The Recipient shall:

- Upon publication of any revised Notice of Proposed Awards, review and execute an amended Agreement proposed by the Commission.
- After execution of amended Agreement, Recipient shall carry out Task 1.8 to prepare a new subgrant agreement for the new project.

Products:

- Executed amended Agreement.
- Draft and final subgrant agreements.

1.10 Review and Validate Subgrantee Invoices

The goal of this task to ensure that the Recipient is actively reviewing and validating all invoices submitted by any subgrantee for their compliance with the Payment of Funds provision (Terms and Conditions, Section 17.)

The Recipient shall:

- Review and validate all invoices for reimbursements from subgrantees for compliance with the Payment of Funds provisions in this Agreement.
- Confirm that subgrantee is meeting the match share requirements.

Products:

- Invoice accompanied by Recipient certification and sufficient backup documentation that the costs attributable to each subgrantee comply with all Payment of Funds provisions in this Agreement.

TECHNICAL TASKS

Each technical task is for a single sub-grantee project. Subgrants executed by Recipient shall include sufficient detail as reflected in subgrantee's application to adequately reflect products proposed. Recipient will provide demonstration of products identified in each of the subtasks identified here.

TASK 2 RETROFIT PLUG-IN HYBRID ELECTRIC TRUCK PROJECT

The goal of this task is to enter into an agreement with Odyne Systems LLC and its partners to retrofit and demonstrate five (5) Odyne pre-commercial, Gen 2 Advanced Technology Plug-In Hybrid Electric (PHEV) work trucks in California in a variety of applications in the South Coast Air Basin, **Sacramento Valley Air Basin, and Bay Area Air Basin**. Odyne will establish a substantial database of real-world operating experience, fuel savings and emission reductions to serve as a basis for fine-tuning, and launching, wide-scale commercialization.

The Recipient shall

- Provide a summary report of the achievement of tasks in the project schedule in Odyne's application, as follows:
 - Manufacture and ship the kits for demonstration to California.

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- Deliver the retrofit demonstration vehicles back to the fleet partners.
- Submit demonstration vehicles data and final reports on field performance of demonstration vehicles **to the Commission Agreement Manager.**
- Submit Third Party Emission and Fuel Testing Results report **to the Commission Agreement Manager.**
- Submit Customer Feedback Report **to the Commission Agreement Manager.**

Products:

- **Vehicles Data** Summary Report
- Third Party Emission and Fuel Testing Results report
- Customer Feedback Report