



**CALIFORNIA  
ENERGY COMMISSION**



**California Energy Commission  
July 26, 2023 Business Meeting  
Backup Materials for Agenda Item No 03f:  
The Regents of the University of California, on behalf of the Davis Campus**

The following backup materials for the above-referenced agenda item are available in this PDF packet as listed below:

1. Proposed Resolution
2. Contract Request Form
3. Scope of Work

**STATE OF CALIFORNIA**  
**STATE ENERGY RESOURCES**  
**CONSERVATION AND DEVELOPMENT COMMISSION**

**RESOLUTION: The Regents of the University of California, on behalf of the Davis Campus**

**RESOLVED**, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

**RESOLVED**, that the CEC approves agreement 600-23-002 with the Regents of the University of California, on behalf of the Davis Campus (UCD) for a \$357,625 contract to better understand consumer experiences for fuel cell electric vehicle (FCEV) owners. UCD will conduct a light-duty FCEV customer survey, as well as interviews with medium- and heavy-duty fuel cell truck automakers, fleets, fuel suppliers, and equipment providers; and

**FURTHER BE IT RESOLVED**, that the Executive Director or their designee shall execute the same on behalf of the CEC.

**CERTIFICATION**

The undersigned Secretariat to the CEC 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 CEC held on July 26, 2023.

AYE:  
NAY:  
ABSENT:  
ABSTAIN:

Dated:

\_\_\_\_\_  
Liza Lopez  
Secretariat



## CONTRACT REQUEST FORM (CRF)

### A. New Agreement Number

**IMPORTANT:** New Agreement # to be completed by Contracts, Grants, and Loans Office.

New Agreement Number: 600-23-002

### B. Division Information

1. Division Name: Fuels and Transportation Division
2. Agreement Manager: Mark Johnson
3. MS-6
4. Phone Number: 916-776-7196

### C. Contractor's Information

1. Contractor's Legal Name: The Regents of the University of California, on behalf of the Davis Campus
2. Federal ID Number: 94-6036494

### D. Title of Project

Title of project: California Light-Duty Fuel Cell Electric Vehicle Survey and California Fuel Cell Truck Interview Study

### E. Term and Amount

1. Start Date: 7/26/2023
2. End Date: 3/31/2025
3. Amount: \$357,625

### F. Business Meeting Information

1. Operational agreement to be approved by Executive Director? No
2. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
3. The Proposed Business Meeting Date: 7/26/2023
4. Consent or Discussion? Consent
5. Business Meeting Presenter Name: N/A
6. Time Needed for Business Meeting: N/A
7. The email subscription topic is: Altfuels (AB118-ARFVTP)

#### Agenda Item Subject and Description:

The Regents of the University of California, on behalf of the Davis Campus. Proposed resolution approving Agreement 600-23-002 with the Regents of the University of California, on behalf of the Davis Campus (UCD) for a \$357,625 contract to better understand consumer experiences for fuel cell electric vehicle (FCEV) owners, and adopting staff's determination that this action is exempt from the California Environmental Quality Act (CEQA). UCD will conduct a light-duty FCEV customer survey, as well as interviews with medium- and heavy-duty fuel cell truck automakers, fleets, fuel suppliers, and equipment providers. (Clean Transportation Program (CTP) Funding) Contact: Mark Johnson

### G. California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?  
Yes



If yes, skip to question 2.

If no, complete the following (PRC 21065 and 14 CCR 15378) and explain why Agreement is not considered a "Project":

Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because: If Agreement is considered a "Project" under CEQA skip to question 2. Otherwise, provide explanation.

**2. If Agreement is considered a "Project" under CEQA answer the following questions.**

a) Agreement **IS** exempt?

Yes

Statutory Exemption?

No

If yes, list PRC and/or CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

PRC section number: None

CCR section number: None

Categorical Exemption?

No

If yes, list CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

CCR section number: None

Common Sense Exemption? 14 CCR 15061 (b) (3)

Yes

If yes, explain reason why Agreement is exempt under the above section. If no, enter "Not applicable" and go to the next section.

Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect change in the environment because it is for a paper study and computational analyses, encompassing basic data collection, research, experimental management, and resource evaluation activities that do not result in major disturbances to an environmental resource. Specifically, work under this project consists of sending paper surveys to households throughout California, as well as assembling focus groups; and subsequently compiling and analyzing the survey responses and focus group feedback.

The project will not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; does not involve any cumulative impacts of successive projects of the same type in the same place that might be considered significant; does not involve unusual circumstances that might have a significant effect on the environment; will not result in damage to scenic resources within a highway officially designated as a state scenic highway; the project site is not included on any list compiled pursuant to Government Code section 65962.5; and the project will not cause a substantial adverse change in the significance of a historical resource. Therefore, none of the exceptions to categorical exemptions



listed in CEQA Guidelines section 15300.2 apply to this project, and this project will not have a significant effect on the environment.

b) Agreement **IS NOT** exempt.

**IMPORTANT:** consult with the legal office to determine next steps.

No

If yes, answer yes or no to all that applies. If no, list all as “no” and “None” as “yes”.

| Additional Documents                   | Applies |
|--|---------|
| Initial Study                          | No      |
| Negative Declaration                   | No      |
| Mitigated Negative Declaration         | No      |
| Environmental Impact Report            | No      |
| Statement of Overriding Considerations | No      |
| None                                   | Yes     |

#### H. Subcontractors

List all Subcontractors listed in the Budget (s). Insert additional rows if needed. If no subcontractors to report, enter “No subcontractors to report” and “0” to funds. **Delete** any unused rows from the table

| Subcontractor Legal Company Name | Budget |
|----------------------------------|--------|
| No subcontractors to report.     | \$ 0   |

#### I. Key Partners

List all key partner(s). Insert additional rows if needed. If no key partners to report, enter “No key partners to report.” **Delete** any unused rows from the table.

| Key Partner Legal Company Name |
|--------------------------------|
| No key partners to report.     |

#### J. Budget Information

Include all budget information. Insert additional rows if needed. If no budget information to report, enter “N/A” for “Not Applicable” and “0” to Amount. **Delete** any unused rows from the table.

| Funding Source | Funding Year of Appropriation | Budget List Number | Amount    |
|----------------|-------------------------------|--------------------|-----------|
| ARFVTP         | 21/22                         | 600.118K           | \$357,625 |

**TOTAL Amount:** \$357,625

R&D Program Area: N/A



Explanation for "Other" selection N/A

Reimbursement Contract #: N/A

Federal Agreement #: N/A

**K. Contractor's Contact Information**

**1. Contractor's Administrator/Officer**

Name: Michael Barry

Address: 1605 Tilia St. Suite 100

City, State, Zip: Davis, CA, 95616

Phone: 530-754-8561

E-Mail: mcbarry@ucdavis.edu

**2. Contractor's Project Manager**

Name: Kenneth S. Kurani

Address: 1605 Tilia Street

City, State, Zip: Davis, CA, 95616

Phone: 916-300-5641

E-Mail: knkurani@ucdavis.edu

**L. Selection Process Used**

There are three types of selection process. List the one used for this CRF.

| Selection Process | Additional Information |
|-------------------|------------------------|
| Exempt            | Not Applicable         |

**M. Contractor Entity Type**

| Contractor Entity Type  | Yes or No? |
|---|------------|
| Private Company ( <i>including non-profits</i> )  | No         |
| CA State Agency ( <i>including UC and CSU</i> )   | Yes        |
| Government Entity ( <i>i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state</i> ) | No         |

**N. Is Contractor a certified Small Business (SB), Micro Business (MB) or Disabled Veterans Business Enterprise (DVBE)?**

The contractor is a certified: N/A.

**O. Civil Service Considerations**

a. Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)? Yes



- b. Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER) No
- c. The Services Contracted: No.

If no, go to the next question. If yes, which of the following applies to the contract? More than one can apply, list each answer choice, and separate them with a comma:

- are not available within civil service
- cannot be performed satisfactorily by civil service employee
- 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 following applies to the contract: N/A.

- d. The Services are of such an urgent, temporary, or occasional nature that the delay to implement under civil service would frustrate their very purpose?

N/A.

**Justification:**

**P. Payment Method**

1. Is the payment method Reimbursement, Advanced Payment, or Other?  
Reimbursement  
If Other, explain: N/A.
2. If Reimbursement, is it in arrears based on Itemized Monthly, Itemized Quarterly, Flat Rate, or One-time?  
Itemized Quarterly.

**Q. Retention**

Is Agreement subject to retention? No.

If Yes, Will retention be released prior to Agreement termination? N/A.

**R. Justification of Rates**

Fringe Benefits have been calculated for each personnel title code in accordance with the University's current federally negotiated rate agreement, available online at [http://afs.ucdavis.edu/our\\_services/contracts-e-grants/index.html](http://afs.ucdavis.edu/our_services/contracts-e-grants/index.html). Fringe rates are escalated by 3% annually beginning 7/1/17 to estimate costs in fiscal years not covered by the current agreement.

**S. Disabled Veteran Business Enterprise Program (DVBE)**

Provide requested additional information.

1. Exempt (Interagency/Other Government Entity) Yes.
2. Meets DVBE Requirements DVBE No.  
Amount: \$ 0 DVBE %:
3. Is the Contractor Certified DVBE or Subcontracting with a DVBE? If subcontracting with a DVBE, provide the name of the DVBE company. If none applies, enter "Not Applicable".  
Not Applicable



4. Contractor selected through CMAS or MSA with no DVBE participation No.
5. Requesting DVBE Exemption (attach CEC 95) No.

**T. Miscellaneous Agreement Information**

1. Will there be Work Authorizations? No.
2. Is the contractor providing confidential information? No.
3. Is the contractor going to purchase equipment? No.
4. What is the check frequency of the progress reports? Monthly, Quarterly, or Other? If Other, please provide explanation.

Quarterly

5. Will a final report be required? Yes.
6. Is the Agreement, with amendments, longer than three years? If yes, why?

No

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

List all items that should be attached to this CRF by entering "Yes" or "No".

| Item Number | Item Name  | Attached |
|-------------|--|----------|
| 1           | Exhibit A, Scope of Work/Schedule                | Yes      |
| 2           | Exhibit B, Budget Detail                         | Yes      |
| 3           | DGS-GSPD-09-007, NCB Request                     | N/A      |
| 4           | CEC 95, DVBE Exemption Request                   | N/A      |
| 5           | Awardee CEQA Documentation                       | N/A      |
| 6           | Resumes  | Attached |
| 7           | CEC 105, Questionnaire for Identifying Conflicts | Attached |

**Approved By**

Individuals who approve this form must enter their full name and approval date in the MS Word version.

**Agreement Manager:** Mark Johnson

**Approval Date:** 1/6/2023

**Office Manager:** Elizabeth John

**Approval Date:** 1/10/2023

**Deputy Director:** Melanie Vail

**Approval Date:** 1/27/2023



## Exhibit A – Scope of Work

### Project Summary & Scope of Work

☒ Contract

☐ Grant

**PI Name:** University of California, Davis

**Project Title:** California Light-Duty Fuel Cell Electric Vehicle Survey & California Fuel Cell Truck Interview Study

### Project Summary/Abstract

The fuel cell electric vehicle (FCEV) market has been experiencing barriers to mass adoption of FCEVs in California. A large barrier to mass adoption of FCEVs is a lack of diversity to the hydrogen supply which can disrupt the ability to fuel resulting in a negative customer experience. Other barriers include a lack of refueling infrastructure throughout the state, lack of consumer choice in FCEV models, the high price of hydrogen at the pump, high price of operating and maintaining hydrogen refueling stations, loud noises at the stations, and long queues of FCEVs while customers wait to refuel. The California Energy Commission (CEC) has an initial understanding of the customer experiences revolving around using hydrogen as a transportation fuel and would like to give light-duty FCEV customers a chance to share their experiences with hydrogen infrastructure.

There is also a need to understand the experiences surrounding the medium- and heavy-duty (MDHD) fuel cell truck (FCT) market. The California Air Resources Board approved the Advanced Clean Truck Regulation and is expected to approve the complementary Advance Clean Fleet regulation. These two rules will require truck manufacturers to produce zero-emission trucks (ZETs) for sale and fleets to purchase ZETs. In some applications, such as long-haul trucks, fuel cells may be preferred over batteries due to issues of range, payload constraints, and refueling times.

To gain a better understanding of customer experiences with light-duty hydrogen refueling and hydrogen refueling market potential, UC Davis will conduct a customer survey that will investigate the following:

- Purchase or lease motivations for fuel cell electric vehicles
- Driver experiences with fuel cell electric vehicles and hydrogen refueling
- Refueling behavior and hydrogen station use
- Whether FCEV buyers will continue with FCEV ownership
- FCEV owner conversations with others about FCEV ownership

To gain a better understanding of the experiences surrounding the MDHD FCT market, UC Davis will conduct interviews with automakers, fleets, fuel suppliers, and equipment providers to investigate the following:

- Experience with operating FCTs
- Experience providing hydrogen fuel
- Experience procuring hydrogen fuel
- Barriers to the adoption of FCTs
- Suggested solutions to those barriers
- Perceptions regarding the future of FCTs
- Plans of fleet operators on potentially incorporating FCTs as part of future fleet procurement
- Expectations for the necessary hydrogen infrastructure and fuel supply

## **Scope of Work**

### **TASK 1- 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 Commission Agreement Manager (CAM), the Commission Agreement Officer (CAO), and a representative of the Accounting Office. The meeting will be held remotely. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and 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:**

- 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 CEC’s Accounting Office.

**Deliverables:**

- 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 CEC 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 CEC'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:**

- Quarterly Progress Reports

**Task 1.5 Final Report**

The goal of this task is to prepare a comprehensive written Final Report that describes the original purpose, approach, results and conclusions 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 CEC and will be preparing both a public and a confidential version of the Final Report, the Contractor shall perform the following for both the public and confidential versions of the Final Report.

**The Contractor shall:**

- Prepare the draft Final Report for this Agreement in accordance with the current CEC style manual.
- 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:**

- Draft Final Report
- 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 CEC staff prior to the term end date of this Agreement. The meeting will be held remotely. 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:**

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

**TECHNICAL TASKS****Task 2 California Light-Duty Vehicle Study**

The goal of this task is to gain a better understanding of customer experiences with light-duty hydrogen refueling and hydrogen refueling market potential and to extend those results, for CEC's review, to guide continued policy support for hydrogen fueling infrastructure. UC Davis will conduct a study that will consist of two main research activities:

- 1) Large sample survey of car-buying households statewide with oversampling of households who have acquired FCEVs.
- 2) Focus groups bringing together FCEV drivers and non-FCEV drivers.

**Task 2.1 Develop Questionnaire Survey**

The goal of this task is to develop and program a large sample questionnaire survey of light-duty vehicle car-buying households statewide with oversampling of households who have acquired FCEVs.

**The Contractor shall:**

- Aim for a target survey sample size of 1,500 households of which 500 would be households driving an FCEV.
- With guidance from the CAM, develop a light-duty vehicle survey that will include questions related to:
  - Household socio-economics and demographics
  - Travel patterns
  - Vehicle acquisition and ownership
  - Perception and preferences for FCEVs

- Within the FCEV oversample, additional questions will address:
  - Experiences with hydrogen infrastructure
  - Inclinations to continue or discontinue acquiring FCEVs
- Submit *Draft Light-Duty Fuel Cell Electric Vehicle Survey* to CAM for technical review and input
- Develop *Final Light-Duty Fuel Cell Electric Vehicle Survey* based on CAM's input

**Deliverables:**

- *Draft Light-Duty Fuel Cell Electric Vehicle Survey*
- *Final Light-Duty Fuel Cell Electric Vehicle Survey*

**Task 2.2 Administer questionnaire survey**

The goal of this task is to administer the light-duty questionnaire survey via post or electronically.

**The Contractor shall:**

- Work with the Department of Motor Vehicles (DMV) to obtain vehicle registration data which includes the addresses for which the survey will be mailed. Vehicle registration data as well as the survey responses are Personal and Confidential Information (see Exhibit G, Negotiated Alternate UTC Terms).
- Use the Office of State Printing (OSP) to print and mail the Final Light-Duty Fuel Cell Electric Vehicle Survey. Approximately 75,000 light-duty vehicle owners will be targeted.
- Compile a list of initial survey findings, for CAM review and approval.
- Present the initial survey findings at a CEC Fuel Cell Electric Vehicle Customer Experience workshop.

**Deliverables:**

- Initial survey findings, reported in aggregate

**Task 2.3 Analysis and Modelling**

The goal of this task is to analyze data gathered from the light-duty FCEV customer survey.

**The Contractor shall:**

- Analyze the data using statistical techniques which will provide meaningful findings of the light-duty FCEV customer survey.

**Deliverables:**

- No deliverables

**Task 2.4 Develop Focus Group Protocol**

The goal of this task is to develop the overall plan for convening two focus groups. Data collected from focus groups is Personal and Confidential Information (see Exhibit G, Negotiated Alternate UTC Terms). The focus groups will bring together FCEV drivers and non-FCEV drivers to discuss FCEVs and hydrogen infrastructure including topics such as:

1. Purchase or lease motivations for fuel cell electric vehicles
2. Driver experiences with fuel cell electric vehicles and hydrogen refueling
3. Refueling behavior and hydrogen station use
4. Whether FCEV buyers will continue with FCEV ownership
5. FCEV owner conversations with others about FCEV ownership

**The Contractor shall:**

- With guidance from the CAM, develop the overall focus group plan, including:
  - Select a region in which to conduct the focus groups
  - Select target number of participants in each focus group
  - Complete focus group outlines
- Submit *Draft Focus Group Plan* to CAM for technical review and input
- Develop *Final Focus Group Plan* based on CAM's input

**Deliverables:**

- *Draft Focus Group Plan*
- *Final Focus Group Plan*

**Task 2.5 Convene focus groups**

The goal of this task is to convene the focus groups that will bring together FCEV drivers and non-FCEV drivers.

**The Contractor shall:**

- Sub-contract a market research firm to host the focus groups.
- Convene focus groups in a suitable space.
- Recruit non-FCEV driver participants based on parameters supplied by the Contractor.
- Video-record the focus groups and provide these to the researchers.
- Recruit focus group participants and FCEV driver participants
- Compile a list of initial focus group findings.
- Present the initial focus group findings to CEC.

**Deliverables:**

- List of initial focus group findings.

**Task 2.6 Further Focus Group Analysis**

The goal of this task is to complete the focus group analysis.

**The Contractor shall:**

- Analyze the data using qualitative techniques to provide meaningful findings of the focus groups.
- Compile *Focus Group Findings*, for CAM review and approval

**Deliverables:**

- *Focus Group Findings*

**Task 2.7 Report, Policy Brief, and Webinar**

The goal of this task is to report on the survey findings.

**The Contractor shall:**

- Include the survey and focus group findings in the final report (Task 1.5).
- With guidance from the CAM, develop one or more policy briefs that will summarize the survey and focus group findings and provide recommendations.

**Deliverables:**

- Final Report (Task 1.5)
- Policy Brief(s)

**Task 3 California Fuel Cell Truck Study**

The goal of this task is to gain a better understanding of the MDHD FCT market experiences. UC Davis will conduct a study of MDHD vehicle manufacturers (OEMs), fleets operating such vehicles, hydrogen fuel suppliers, and equipment providers to investigate:

- Fleet experience with operating FCTs
- Experience providing hydrogen fuel
- Experience procuring hydrogen fuel
- Barriers to the adoption of FCTs
- Suggested solutions to those barriers
- Perceptions regarding the future of FCTs
- Potential future FCT procurement
- Expectations for the necessary hydrogen infrastructure and fuel supply

UC Davis will conduct a study including two main research activities:

1. Interview representatives of companies, agencies, and other relevant groups who have some experience in FCTs or hydrogen fueling.
2. Delphi study of fleets and hydrogen fuel suppliers.

**Task 3.1 Develop Interview Protocol**

The goal of this task is to develop and program the MDHD FCT market interview protocols.

**The Contractor shall:**

- Plan interviews with representatives of:
  - FCT manufacturers
  - Hydrogen fueling providers
  - Fleets operating (or having had operated) FCTs
  - Fleets who may have an interest in acquiring FCTs
  - Truck leasing companies
- With guidance from the CAM, develop interview protocols that will include questions related to:
  - Experience operating FCTs
    - Benefits of FCTs
    - Barriers to the fleet acquisition and use of FCTs
      - Suggested solutions to those barriers
  - Plans of fleet operators to incorporate FCTs as part of future fleet procurement
  - Experience providing hydrogen fuel
  - Expectations of the necessary hydrogen infrastructure and fuel supply
  - Perceptions regarding the future of FCTs
  - Submit *Draft MDHD FCT market interview protocols* to CAM for input
  - Develop *Final MDHD FCT market interview protocols* based on CAM's input

**Deliverables:**

- *Draft MDHD FCT market interview protocols*
- *Final MDHD FCT market interview protocols*

### **Task 3.2 Conduct Interviews**

The goal of this task is to conduct the interviews using internet-based meeting platforms.

#### **The Contractor shall:**

- Interview participants with knowledge of FCTs and hydrogen fueling in businesses identified as having operating experience with one, the other, or both. Contact information will be obtained via professional contacts and lists of participating entities in FCT trials.
- Secure the participation of the interviewees in the subsequent Delphi study (Task 3.5).
- Compile a list of initial interview findings.
- Present the initial survey findings to CEC.

#### **Deliverables:**

- Initial survey findings including a list of commonly discussed barriers and opportunities to FCT deployment more broadly across fleets and continued development of hydrogen fueling locations

### **Task 3.3 Analysis and Modelling**

The goal of this task is to analyze data gathered from the MDHD interviews.

#### **The Contractor shall:**

- Analyze the data using qualitative techniques which will provide meaningful findings of the MDHD interviews.
- Compile *MDHD Findings*, for CAM review and approval

#### **Deliverables:**

- *MDHD Findings*

### **Task 3.4 Develop Delphi Materials**

The goal of this task is to develop the plan according to which a Delphi study will be conducted. The Delphi method involves participants responding to an initial information impetus (often in the form of a survey each participant completes individually) and their subsequent (and possibly repeated) individual reaction to the collective responses of the entire “panel” of participants. The Delphi study will seek participants who represent multiple perspectives on an issue including non-experts, e.g., fleets who have not acquired or experimented with FCETs.

The goals are to:

1. Reveal to all participants the multiple different perspectives on and arguments for and against a proposition, e.g., fleet acquisition and use of FCTs.
2. Estimate the impact and consequences—or in the case of this study of fleet acquisition and use of FCTs, barriers and opportunities.
3. Estimate the propositions acceptability, i.e., describe whether and how participants’ views on FCETs shift as they learn how other participants respond to the proposition.

#### **The Contractor shall:**

- With guidance from the CAM, develop the overall Delphi plan, including:
  - Determine the participants who will take part in the Delphi, including:
    - MDHD fleets who have experience with FCTs
    - Fuel Suppliers
    - Fleets operating MDHDs who have no experience of FCTs
  - Prepare initial questionnaire to be completed by all participants (“the panel”).



- Plan the analysis process that will prepare the summary of the panel's responses that is to be shared back to the panel.
- Determine the number of times the panel will be asked to iterate their responses.
- Submit *Draft Delphi plan* to CAM for input
- Develop *Final Delphi plan* based on CAM's input

**Deliverables:**

- Draft Delphi plan
- Final Delphi plan

**Task 3.5 Convene Delphi Panel**

The goal of this task is to complete the Delphi study.

**The Contractor shall:**

- Recruit panel participants who do not have experience with FCTs or hydrogen fueling.
- Initiate the Delphi by circulating the initial questionnaire.
- Analyze and summarize the panel's responses.
- Present the summary back to the panel for their response.
- Iterate according to the Delphi Plan.
- Prepare the final Delphi panel results.
- Analyze the data using quantitative and qualitative techniques to provide meaningful findings of the workshops.

**Deliverables:**

- Policy Delphi initial results, for CAM review and approval

**Task 3.6 Report and Policy Brief**

The goal of this task is to report on the interview and Policy Delphi findings.

**The Contractor shall:**

- Include the interview (Task 3.2) and Delphi (Task 3.4) findings in the final report (Task 1.5).
- With guidance from the CAM, develop one or more policy briefs that will summarize the interview and Delphi findings and provide recommendations.

**Deliverables:**

- Final Report (Task 1.5)
- Policy Brief(s)