



**CALIFORNIA
ENERGY COMMISSION**



**California Energy Commission
June 16, 2023 Business Meeting
Backup Materials for Agenda Item No 03b:
Alliance for Sustainable Energy, LLC (Alliance)**

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: Alliance for Sustainable Energy, LLC (Alliance)

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 600-22-008 with Alliance, manager, and operator of the U.S. Department of Energy's National Renewable Energy Laboratory, for a \$375,000 contract to provide modeling support for the CTP. Alliance will prepare a benefits assessment report and develop additional model runs for the Electric Vehicle Infrastructure-Pro model to support the Assembly Bill 2127 (Ting, Chapter 365, Statutes of 2018) charging infrastructure assessment; 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 June 16, 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: 600-22-008

B. Division Information

1. Division Name: Fuels and Transportation
2. Agreement Manager: Susan Ejlalmaneshan
3. MS-6
4. Phone Number: (916) 891-9154

C. Recipient's Information

1. Recipient's Legal Name: Alliance for Sustainable Energy, LLC.
2. Federal ID Number: 26-1939342

D. Title of Project

Title of project: Modeling Support for Clean Transportation Program Analyses

E. Term and Amount

1. Start Date: 06/16/2023
2. End Date: 03/31/2024
3. Amount: \$375,000

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: 06/16/2023
4. Consent or Discussion? Consent
5. Business Meeting Presenter Name: Susan Ejlalmaneshan
6. Time Needed for Business Meeting:
7. The email subscription topic is: Clean Transportation

Agenda Item Subject and Description:

Alliance for Sustainable Energy, LLC (Alliance). Proposed resolution approving Agreement 600-22-008 with Alliance for Sustainable Energy, LLC, manager, and operator of the U.S. Department of Energy's National Renewable Energy Laboratory, for a \$375,000 contract to provide modeling support for the Clean Transportation Program analyses and adopting staff's determination that this action is exempt from CEQA. Alliance will prepare a benefits assessment report and develop additional model runs for the Electric Vehicle Infrastructure-Pro model to support the Assembly Bill 2127 (Ting, Chapter 365, Statutes of 2018) charging infrastructure assessment. (CTP Funding)

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:

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: PRC section number 1, PRC section number 2. Or, "None"

CCR section number: CCR section number 1, CCR section number 2. Or, "None"

Categorical Exemption?

Yes

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: 14 CCR 15306

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.

Enter "Not applicable" or reason why Agreement is exempt under the above section

This Agreement is for technical assistance where tasks are collection and analysis of pre-existing data, running models and writing reports. None of the tasks in this contract involve physical construction, installation of equipment, or other activities that have potential for resulting in either a direct or indirect physical change in the environment. Rather, the work consists solely of computer-based and document-based activities.

Therefore, this Agreement is exempt under CEQA Guidelines section 15306 as basic data collection, research and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource, and exempt under CEQA Guidelines section 15061(b)(3), the common sense exemption, because it can be seen with certainty that there is no possibility the activity in question may have a significant effect on the environment.

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.

Enter Yes or 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	Enter Yes or No
Negative Declaration	Enter Yes or No
Mitigated Negative Declaration	Enter Yes or No
Environmental Impact Report	Enter Yes or No
Statement of Overriding Considerations	Enter Yes or No
None	Enter Yes or No

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.



STATE OF CALIFORNIA
CALIFORNIA ENERGY COMMISSION

Contract Request Form
CEC-94 (Revised 01/2023)

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTP	2020-2021	600.118J	375,000

TOTAL Amount: \$375,000

R&D Program Area: N/A

Explanation for "Other" selection Enter explanation for "Other"

Reimbursement Contract #: Enter Reimbursement Contract Number

Federal Agreement #: Enter Federal Agreement Number

K. Contractor's Contact Information

1. Contractor's Administrator/Officer

Name: Erin Hensley

Address: 15013 Denver West Parkway

City, State, Zip: Golden, Co. 80401

Phone: (303) 384-7989

E-Mail: erin.hensley@nrel.gov

2. Contractor's Project Manager

Name: Eric Wood

Address: 15013 Denver West Parkway

City, State, Zip: Golden, Co. 80401

Phone: (303) 275-3290

E-Mail: eric.wood@nrel.gov

L. Selection Process Used

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

Selection Process	Additional Information
Competitive Solicitation #	Enter the Solicitation Number, number of Bids, and if it is a Low Bid. If no, enter "Not Applicable".
Non Competitive Bid (<i>Attach DGS-GSPD-09-007</i> https://www.dgs.ca.gov/PD/Forms)	Enter "Non Competitive" selection process used or "Not Applicable".
Sole Source	Applied research for Clean Transportation Program pursuant to HSC section 44272(f)

M. Contractor Entity Type



Contractor Entity Type	Yes or No?
Private Company (<i>including non-profits</i>)	Yes
CA State Agency (<i>including UC and CSU</i>)	No
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: Enter "SB", "MB", or "DVBE".

O. Civil Service Considerations

- Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)? No
- Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER) No
- The Services Contracted: Yes.

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: 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?

Urgent, temporary.

Justification:

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Clean Transportation Program and authorizes the CEC to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies. The statute requires the CEC to include an evaluation of Clean Transportation Program efforts as part of each biennial Integrated Energy Policy Report (IEPR). Since 2013, NREL (operated by Alliance for Sustainable Energy) has supported the Clean Transportation Program's biennial benefits assessment with in-house models to quantify the program's expected benefits and market transformation benefits. NREL is familiar with the methodology, the nature of the data, and the CEC's expectations, which would expedite data collection and analysis. Work needs to begin as soon as possible to meet the milestones set forth by the CEC's IEPR team to ensure final



publication by February 2024. The schedule requires a draft assessment and public workshop in August 2023.

Additionally, NREL has developed the EVI-Pro modeling tool with capabilities that match the needs of the CEC in developing the biennial charging infrastructure assessment. Governor Brown issued Executive Order B-48-18 which set a goal of having 250,000 EV chargers by 2025. In September 2020, Governor Newsom issued Executive Order N-79-20 which set the following targets: by 2035, 100 percent zero-emission vehicle (ZEV) in-state sales for new passenger vehicles and 100 percent ZEV operations for drayage trucks and off-road vehicles and equipment, and by 2045, 100 percent ZEV operations for medium- and heavy-duty vehicles where feasible. Executive Order N-79-20 also directed the CEC to update its EV charging infrastructure assessment originally set forth by Assembly Bill 2127 (Ting, Chapter 365, Statutes of 2018). This assessment relies on several modeling efforts including NREL's development of EVI-Pro. The assessment is due for publication by November 2023. Milestones for this work includes updates to charger counts in June and again in September 2023.

The civil service process would require time that isn't available to develop modeling assets to perform this work. Modeling assets already exist within NREL's production units. Using NREL would only require updates to previous analyses and not require starting from scratch.

P. Payment Method

1. Is the payment method Reimbursement, Advanced Payment, or Other?

Advanced payment.

If Other, explain: Enter explanation for "Other" payment method.

2. If Reimbursement, is it in arrears based on Itemized Monthly, Itemized Quarterly, Flat Rate, or One-time?

Enter "Itemized Monthly", "Itemized Quarterly", "Flat Rate", or "One-time".

Q. Retention

Is Agreement subject to retention? No.

If Yes, Will retention be released prior to Agreement termination? Enter Yes or No.

R. Justification of Rates

The rates are comparable to engineering rates found in many technical assistance projects funded by the CEC. Alliance for Sustainable Energy's rates are audited and approved by the U.S. Department of Energy.

S. Disabled Veteran Business Enterprise Program (DVBE)

Provide requested additional information.

1. Exempt (Interagency/Other Government Entity) No.

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) Yes.

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	No
4	CEC 95, DVBE Exemption Request	Yes
5	Awardee CEQA Documentation	No
6	Resumes	Yes
7	CEC 105, Questionnaire for Identifying Conflicts	Yes

Approved By

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

Agreement Manager: Susan Ejlalmaneshan

Approval Date: 5/10/2023

Office Manager: Charles Smith

Approval Date: Office Manager's Approval Date

Deputy Director: Melanie Vail

Approval Date: Deputy Director's Approval Date

Exhibit A SCOPE OF WORK

TASK LIST

Task #	Task Name
1	Agreement Management
2	Program Analysis Support
3	PEV Infrastructure Assessment

ACRONYMS/GLOSSARY

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

Acronym	Definition
CAM	Commission Agreement Manager
CAFÉ	Corporate Average Fuel Economy
CTP	Clean Transportation Program
CVRP	Clean Vehicle Rebate Program
EPA	Environmental Protection Agency
EVI-PRO Model	Electric Vehicle Infrastructure-Project Model
EVSE	Electric Vehicle Supply Equipment
FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
REET Model	Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model
IMIA	Integrated Market Impact Assessment
LCA	Life Cycle Assessment
LCFS	Low Carbon Fuel Standard
LDV	Light Duty Vehicle
PEV	Plug-in Electric Vehicle
RPS	Renewable Portfolio Standard
ZEV	Zero Emission Vehicle

BACKGROUND/PROBLEM STATEMENT

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007) created the Clean Transportation Program. This law, as amended by AB 109 (Núñez, Chapter 313, Statutes of 2008) and later by AB 8 (Perea, Chapter 401, Statutes of 2013), authorizes the California Energy Commission (CEC) to “develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.” AB 8 extended funding for the Clean Transportation Program until January 1, 2024.

California Health and Safety Code Section 44273 requires the CEC to include, in its biennial Integrated Energy Policy Report, “an evaluation of research, development, and deployment efforts” funded by the Clean Transportation Program. This includes the expected benefits of the funded projects, in terms of air quality, petroleum use reduction, greenhouse gas (GHG)

emissions reduction, technology advancement, benefit-cost assessment, and progress towards achieving these benefits. To fulfill these evaluations, the CEC contracted with the National Renewable Energy Laboratory (NREL) to provide the CEC with the necessary analytical support to develop and prepare the biennial evaluations in 2017, 2019, and 2021. Additional NREL support is needed to expand and update this evaluation for 2023.

Additionally, AB 2127 (Ting, Chapter 365, Statutes of 2018) requires the CEC to prepare a biennial assessment of the charging infrastructure needed to meet the goals of putting 5 million zero-emission vehicles (ZEVs) on California roads by 2030, and reducing emissions of greenhouse gases to 40 percent below 1990 levels by 2030. In September 2020, Governor Gavin Newsom issued Executive Order N-79-20, which directed the CEC to update the AB 2127 assessment to support expanded ZEV adoption targets.

The CEC contracted with Alliance for Sustainable Energy operating for National Renewable Energy Laboratory(NREL) to provide the CEC with analytical support in quantifying the charging needs and impacts of plug-in electric vehicles (PEVs) and their electric vehicle supply equipment (EVSE) to support the inaugural AB 2127 charging infrastructure assessment. NREL also contributed to the initial development of analysis for the second AB 2127 assessment. Additional support is needed to refine the framework for the 2023 assessment.

GOALS/OBJECTIVES OF THE AGREEMENT

The goals and objectives of this agreement are to provide analytical support to the CEC in its development of the 2023 benefits assessment for the Clean Transportation Program as well as the 2023 charging infrastructure assessment.

FORMAT/REPORTING REQUIREMENTS

Deliverables/Reports

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

<https://www.energy.ca.gov/funding-opportunities/funding-resources/formatting-reports-and-writing-style-consultants-california>

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

Electronic File Format

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CAM) of the full text in a compatible version of Microsoft Word (.doc).

The following describes the accepted formats of electronic data and documents provided to the CEC as contract deliverables and establishes the computer platforms, operating systems and software versions that will be required to review and approve all software deliverables.

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

- Project management documents shall be in MS Project file format.

Software Application Development

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

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

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

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 CAM, the Commission Agreement Officer, and a representative of the CEC Accounting Office. The meeting may 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 all subcontractor work and the CEC will assign all work to the Contractor. If the Contractor decides to add new subcontractors, the new subcontractors 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 on time and within budget.

The Contractor shall:

- Participate in progress conference calls with the CAM at least once every other week
- 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 subtasks for both the public and confidential versions of the Final Report.

The Contractor shall:

- Prepare the draft Final Report for this Agreement.
- 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 may 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 Program Analysis Support

The goal of this task is to update previous analysis of Clean Transportation Program (Program) project-level data and assess progress toward achieving the policy goals guiding the Program. The range of evaluation metrics or topics includes, but is not limited to, climate change impacts, petroleum consumption, job creation, criteria air emissions, localized environmental impacts, as well as market transformation, short-term market forecasting and long-term scenario analysis. In general, the scope of these evaluation activities will be limited to empirical data collected on the various projects or relevant studies. Results from this framework will feed into the Benefits Report.

2.1 Benefits Analysis

The goal of this task is to analyze Program data to gauge progress toward Program and larger state goals, relying upon a range of benefits metrics.

The Contractor shall:

- Update benefit estimates for both Expected and Market Transformation Benefits. Expected Benefits are benefits directly associated with vehicles and fuels deployed through projects receiving Program funds. These include, but are not limited to, reductions in petroleum fuel use, criteria and particulate emissions, and GHG emissions, and public health benefits. Market Transformation Benefits are benefits which accrue

due to the influence of Program projects on future market conditions to accelerate the adoption of new technologies. These include increased availability of public EVSE and hydrogen refueling stations, consumer incentives for ZEV investments in ZEV demonstrations and manufacturing facilities, and deployment of next-generation fuel production facilities and advanced and zero-emission medium- and heavy-duty vehicle demonstrations.

- Update Expected Benefit estimates using methodologies developed previously by Contractor and most recently used for the 2021 Benefits Report. These updates will be conducted using updated Program data. The Contractor will ensure consistency in how metrics are evaluated across projects and fuel/vehicle categories. For example, the Contractor shall perform time series analysis by drawing from the same electricity grid projections for California and other regions, relying upon the Contractor's grid modeling capabilities, existing published studies, and baseline suggestions from state agencies. Similarly, the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model life cycle assessment (LCA) framework (national, or California GREET) and inputs will be relied upon for fuel carbon intensities. This will involve the following:
 - Metrics framework will exceed anticipated reporting requirements for AB 8 (e.g., will include a broader range of metrics).
 - Compilation of existing publicly-available data, not collected by the Contractor from individuals, related to analysis of social equity issues, including income, race, and age.
 - Publicly-available health impact data from the United States Environmental Protection Agency (EPA), including criteria emission impacts at the county level and any underlying aggregated data on vehicle operation or usage patterns.
 - Social cost of carbon estimates and guidance on appropriate use for analysis.
 - Social and environmental benefits associated with petroleum use reductions.
 - Jobs and economic benefits associated with Program projects, market impacts, and fuel savings.
- Update Market Transformation Benefits using updated Program data. The analytic capabilities supporting market transformation benefit estimates will continue to be improved upon by leveraging existing Contractor transportation analysis models to estimate the market impacts of Program activities within the context of California's unique transportation sector policy environment. The Contractor shall link market influence estimates to a select number of California's policies to provide robust and realistic estimates of the market impacts from Program activities. The feedback between the two estimation methods (Expected and Market Transformation) will ensure consistency and allow for greater flexibility in assessing market influences and resulting benefits associated with Program activities.
- As directed by the CAM, draw from available Program data to update previous program and project- level performance on the basis of petroleum displacement, GHG reductions, project cost efficiency, job creation, equity, economic development, or other key metrics deemed appropriate by the CAM.
- Update the retrospective analysis on past program successes where public funding is no longer necessary.

- Update the forward-looking analysis of how Program funding will support the long-term growth of charging infrastructure and hydrogen refueling infrastructure.
- Prepare and submit a *Preliminary Summary of Findings* to the CAM.
- Prepare and submit draft and final versions of a *2023 Assessment of Clean Transportation Program Benefits Report*, building upon the previous Benefits Report methodology and summarizing the analysis and evaluation results of projects funded to date. This report shall:
 - Synthesize information from the analysis results for project performance and relevant Market Assessment data from Task 2.1.
 - Assess Program progress toward the 2035 goals and beyond.
 - These include, but are not limited to, progress toward a goal of five million ZEVs on California roads by 2030, toward the goals of 100 percent ZEV sales or operations under Executive Order N-79-20, and toward the goal of a carbon neutral economy by 2045.

Deliverables:

- Preliminary Summary of Findings
- 2023 Assessment of Clean Transportation Program Benefits Report – Draft Version
- 2023 Assessment of Clean Transportation Program Benefits Report – Final Version

Task 3 PEV Infrastructure Assessment

The goal of this task is to support CEC in the rapidly changing area of PEV market adoption and EVSE infrastructure planning by drawing upon the Contractor's existing software, knowledge base, and interactions with industry stakeholders. As market dynamics continue to evolve and new empirical data is collected, this task aims to examine electric grid impacts, support public/private infrastructure investments, and inform policy regarding PEVs and EVSE deployment.

Task 3.1 Assessment Framework Updates

The Contractor shall:

- Perform PEV charging infrastructure planning, including providing estimates of network capacity requirements (charger counts) and electrical load analysis (load curves) derived through development and application of the Electric Vehicle Infrastructure Projection (EVI-Pro 3) and Electric Vehicle Infrastructure for Road Trips (EVI-RoadTrip) models.
- Support regional planning efforts by providing model results at various levels of geographic resolution, including statewide, planning region, county, zip code, tract, and traffic analysis zones.
- Coordinate with CEC to ensure modeling assumptions (PEV adoption, technology attributes, residential access, etc.) are aligned with parallel efforts.
- Iterate with CEC to develop modeling inputs that are reflective of multiple future scenarios including low and high baseline (main scenarios) and variations of potential future charging behaviors and investment priorities (alternative future scenarios).
- Prepare and provide progress reports on updated model results (charger counts and load curves) for main scenarios and alternative future scenarios based on public and other comments of AB 2127 report drafts for use in the updated AB 2127 staff report.

- Perform modifications to the EVI-Pro 3 model to accommodate new alternative future scenarios (in coordination with the CEC).
- Develop, review, iterate, and finalize two main scenarios and up to 10 alternative future scenarios for the final AB 2127 commission report.
- Provide model results (charger counts and load curves) for main scenarios and alternative future scenarios for use in the final AB 2127 commission report.
- Attend virtual meetings every four weeks to review progress with the CEC (or as requested by the CEC).

Deliverables:

- Progress reports on updated EVI Pro 3 modeling results. Use bulleted list summarizing updates (no longer than 2 pages).
- Updated charger counts differentiated by charger type, disaggregated by traffic analysis zone and year for main scenarios from 2023 to 2035 for the AB 2127 staff report
- Updated charger counts for 2030 alternative futures for the AB 2127 staff report
- Updated load curves by year for two main scenarios for the AB 2127 staff report
- Updated load curves for 2030 alternative futures for the AB 2127 staff report
- Updated charger counts differentiated by charger type, disaggregated by traffic analysis zone and year for main scenarios from 2023 to 2035 for the AB 2127 commission report
- Updated charger counts for 2030 alternative futures for the AB 2127 commission report
- Updated load curves results by year for two main scenarios for the AB 2127 commission report
- Updated load curves usage results for 2030 alternative futures for the AB 2127 commission report

SCHEDULE OF DELIVERABLES AND DUE DATES

Task Number	Deliverables	Due Date
1	Agreement Management	
1.1	An Updated Schedule of Deliverables	If applicable
1.2	Invoices	Quarterly
1.4	Quarterly Progress Reports	Quarterly
1.5	Draft Final Report	11/2/2023
1.5	Final Report	11/30/2023
1.6	Written documentation of meeting agreements	Within 10 days of the final meeting
1.6	Schedule for completing closeout activities	Within 10 days of the final meeting
2	Program Analysis Support	
2.1	Preliminary Summary of Findings	7/17/2023
	2023 Assessment of Clean Transportation Program Benefits Report – Draft Version	9/30/2023
	2023 Assessment of Clean Transportation Program Benefits Report – Final Version	11/30/2023
3	PEV Infrastructure Assessment	
3.1	Assessment framework updates	
	Progress reports on updated EVI Pro 3 modeling results.	7/12/2023 and 9/29/2023
	Updated charger counts differentiated by charger type, disaggregated by traffic analysis zone and year for main scenarios from 2023 to 2035 for the AB 2127 staff report	7/21/2023
	Updated charger counts for 2030 alternative futures for the AB 2127 staff report	7/21/2023
	Updated load curves by year for two main scenarios for the AB 2127 staff report	7/21/2023
	Updated load curves for 2030 alternative futures for the AB 2127 staff report	7/21/2023
	Updated charger counts differentiated by charger type, disaggregated by traffic analysis zone and year for main scenarios from 2023 to 2035 for the AB 2127 commission report	9/15/2023
	Updated charger counts for 2030 alternative futures for the AB 2127 commission report	9/15/2023

	Updated load curves results by year for two main scenarios for the AB 2127 commission report	9/15/2023
	Updated load curves usage results for 2030 alternative futures for the AB 2127 commission report	9/15/2023