



**California Energy Commission  
September 13, 2023 Business Meeting  
Backup Materials for Agenda Item No 03g:  
Recurve Analytics, Inc.**

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: Recurve Analytics, Inc.**

**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 800-23-004 with Recurve Analytics, Inc., for up to \$1,992,447 to analyze customer energy use data, including advanced meter infrastructure data. The agreement will initially be for \$1,000,000. Additional funding, up to the \$1,992,447 total, will require approval from the CEC's Executive Director through an amendment. This agreement will help the CEC better understand the state's energy load, the impact of decarbonization actions and equipment on the grid, buildings, ratepayer energy costs or burden, and energy usage, and the performance of decarbonization equipment and measures, including distributed energy resources; 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 September 13, 2023.

AYE:

NAY:

ABSENT:

ABSTAIN:

Dated:

\_\_\_\_\_  
Kristine Banaag  
Secretariat



## CONTRACT REQUEST FORM (CRF)

### A. New Agreement Number

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

New Agreement Number: 800-23-004

### B. Division Information

1. Division Name: Energy Assessments
2. Agreement Manager: Tom Flynn
3. MS-20
4. Phone Number: (916) 891-8299

### C. Contractor's Information

1. Contractor's Legal Name: Recurve Analytics, Inc.
2. Federal ID Number: 7-5297273

### D. Title of Project

Title of project: Distributed Energy Resource Programmatic and Technical Analysis

### E. Term and Amount

1. Start Date: October 13, 2023
2. End Date: October 13, 2026
3. Amount: \$ 1,000,000

### F. Business Meeting Information

1. Operational agreement to be approved by Executive Director?
2. Are the ARFVTP agreements \$75K and under delegated to Executive Director?
3. The Proposed Business Meeting Date: **September 13, 2023**
4. Consent or Discussion? **Consent**
5. Business Meeting Presenter Name: Tom Flynn
6. Time Needed for Business Meeting: 0 minutes.
7. The email subscription topic is: Energy Policy (Integrated Energy Policy Report)

#### Agenda Item Subject and Description:

**Recurve Analytics, Inc.** Proposed resolution approving agreement 800-23-004 with Recurve Analytics, Inc., for up to \$1,992,447 to analyze customer energy use data, including advanced meter infrastructure data and adopting staff's determination that this action is exempt from CEQA. The agreement will initially be for \$1,000,000. Additional funding, up to the \$1,992,447 total, will require approval from the CEC's Executive Director through an amendment. This agreement will help the CEC better understand the state's energy load, the impact of decarbonization actions and equipment on the grid, buildings, ratepayer energy costs or burden, and energy usage, and the performance of decarbonization equipment and measures, including distributed energy resources. (One Time General Fund and ERPA Funding) Contact: Tom Flynn

### 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":

**N/A**

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

a) Agreement **IS** exempt?

**N/A**

Statutory Exemption?

**N/A**

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?

**N/A**

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.

Under CEQA Guidelines section 15061(b)(3), where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

This agreement will not have a significant effect on the environment because the work under this contract is to analyze customer energy use data and provide technical expertise to the CEC's Energy Assessments Division. This will help CEC better understand the state's energy load, improve energy forecasting, assist with program development, and measure program performance.

b) Agreement **IS NOT** exempt.

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

**N/A**

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	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
Verdant Associates, LLC	\$333,268

**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
One Time General Fund	2022/2023	800.100	\$500,000
ERPA	2022/2023	303.108	\$500,000

**TOTAL Amount:** \$1,000,000

R&D Program Area: Not applicable.

Explanation for “Other” selection: Not applicable.

Reimbursement Contract #: Not applicable.

Federal Agreement #: Not applicable.

**K. Contractor’s Contact Information**

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

Name: Anja Trost



Address: Recurve Analytics, Inc.  
440 N Barranca Ave #8958  
City, State, Zip: Covina, CA 91723  
Phone: (510) 788-0310  
E-Mail: [admin@recurve.com](mailto:admin@recurve.com)

**2. Contractor’s Project Manager**

Name: Mia Hermine  
Address: Recurve Analytics, Inc.  
Address: 440 N Barranca Ave #8958  
City, State, Zip: Covina, CA 91723  
Phone: (408) 675-8455  
E-Mail: [CEC\\_analytics@recurve.com](mailto:CEC_analytics@recurve.com)

**L. Selection Process Used**

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

Selection Process	Additional Information
Competitive Solicitation #	RFP-22-806, # of bids 7

**M. Contractor Entity Type**

Contractor Entity Type	Yes or No?
Private Company ( <i>including non-profits</i> )	Yes

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

The contractor is a certified: No.

**O. Civil Service Considerations**

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

- 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? Yes.

**Justification:**

These services are by their very nature “urgent” and of such an “occasional nature” that it would not be feasible to implement them under civil service. This type of expertise is not readily available through civil service. This technical support contract provides the necessary specialized expertise and technical support to complement staff’s current analytic capabilities. It also fills in highly technical and specialized knowledge gaps that will be needed to quickly and accurately assess California’s ever changing and highly integrated energy systems.

**P. Payment Method**

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

“Reimbursement”.

If Other, explain:

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

“Itemized Monthly”.

**Q. Retention**

Is Agreement subject to retention? Yes.

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

**R. Justification of Rates**

The rates are similar to the rates for this company in a previous contract.

**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 %: 0%
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: Not applicable.
5. Requesting DVBE Exemption (attach CEC 95): Yes.

**T. Miscellaneous Agreement Information**



1. Will there be Work Authorizations? Yes.
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.  
Monthly.
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	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:** Tom Flynn

**Approval Date:** 7/31/2023

**Office Manager:** David Erne

**Approval Date:** 8/1/2023

**Deputy Director:** Aleecia Gutierrez

**Approval Date:** 8/2/2023



# Exhibit A

## SCOPE OF WORK

### TASK LIST

Task #	Task Name
1	Agreement Management
2	DER Analytics Leveraging Customer Energy Use Data

### ACRONYMS/GLOSSARY

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

Acronym	Definition
CAM	Commission Agreement Manager
CEC	California Energy Commission
EAD	Energy Assessments Division
DER	Distributed Energy Resource
WA	Work Authorization

### BACKGROUND/PROBLEM STATEMENT

California is a leader in advancing renewable energy generation; developing efficiency standards for buildings and appliances; advancing load management and flexible demand appliances; and supporting the development and implementation of DER, broad building decarbonization, and a growing market of electric vehicles. To meet the state's clean energy goals, it is necessary to advance and deploy these activities and resources. One of the most significant barriers to better planning and deploying of decarbonization programs has been the lack of data on existing customer energy usage. The CEC now has Customer Energy Use Data (including AMI data, as available) from customers in the service territories of Pacific Gas and Electric, Southern California Edison, San Diego Gas and Electric, Los Angeles Department of Water and Power, Sacramento Municipal Utility District, and Southern California Gas Company.

CEC is seeking a contractor team to analyze Customer Energy Use Data (including AMI data, as available) to support multiple CEC program needs.

- **Informing Policy:** Through and supporting CEC's Order Instituting Informational Proceeding on Distributed Energy Resources in California's Energy Future (22-DER-01), California Energy Efficiency Action Plan, and/or Integrated Energy Policy Report, CEC will require analysis of customer data to, among other things, assess the impacts and benefits decarbonization measures and activities can provide to customers, communities, and electricity and natural gas systems. This analysis should take into account, where relevant, building type, end use, energy usage, climate zone, occupant incomes, equity, and different combinations of decarbonization activities. CEC is also interested in investigating co-optimization of DER, electric vehicle infrastructure, building decarbonization strategies, and/or load flexibility with utility-scale resources and evaluate strategies to optimize benefits and value, particularly for under-resourced communities.

- Forecasting/Planning: The CEC seeks to continually improve electric and natural gas demand and supply forecasts and to develop credible future scenarios of resource deployment to inform system planning. This includes near-, mid-, and long-term analyses such as annual demand and supply forecasts, mid-term reliability studies, and long-term planning to achieve SB 100 goals. Analysis of electric and natural gas use will inform assumptions on deployment and the resulting changes in load to improve forecasts and scenario development.
- Program Development and Implementation: The CEC has on-going and new programs that would benefit from analyses of Customer Energy Use Data. Existing programs include the load management standards; flexible demand appliance standards; building and appliance energy efficiency standards; the Electric Program Investment Charge (EPIC) research, development and deployment program; and Strategic Reliability Reserve. CEC is also developing and implementing new incentive programs to advance building decarbonization, energy equity, electric vehicle charging, and grid reliability. Analysis of Customer Energy Use Data (including AMI data, as available) will enable the CEC to better design programs, target customers, make program changes, and guide research, development, and demonstration.
- Program Evaluation, Measurement, and Verification: To assess program performance, measure impact and costs, and make necessary improvements in a time sensitive and nimble fashion, CEC will need evaluation, measurement and verification plans, recommendations, tools, and/or support that provide as close to real time guidance as feasible. This initially includes the Equitable Building Decarbonization Program but may be expanded to other local, state and federal decarbonization incentive programs.
- Assessment of Pathways to Share Relevant Information and Data with Others: State agencies, tribes, local governments, utilities and community choice aggregators, community planners, researchers, commercial aggregators, program implementers, DER providers, federal government, other states, and others could gain value from analysis of California's Customer Energy Use Data. Because the Customer Energy Use Data (including AMI data, as available) may have personally identifiable information (PII), it cannot be shared publicly in a complete form. CEC is looking for specific methods, strategies or recommendations to anonymize data at a level that enables the CEC to provide information at a granularity that is valuable to external parties and further advances and expands decarbonization while still preventing the release of PII.

The volume of and detail in the Customer Energy Use Data (including AMI data, as available) opens up myriad possibilities for statistical and regression analysis that enables, for example, comparisons across similar building types, customer types, decarbonization actions, and climate zones to identify how decarbonization activities/measures are performing for customers relative to similar customers with no changes. With energy rate information, it can also be possible to assess cost savings to the customer and effectiveness of incentives. This analysis on a large scale can be used to inform forecasting, policy, and program development by determining how widespread or targeted decarbonization can reduce or shift load to support the grid. It would also be possible to inform the development of performance-based incentive structures, using average implementation costs by measure or package of measures.

A key component of each work authorization in this Agreement will be the analysis of Customer Energy Use Data (including AMI data, as available). This may be for small geographic locations, for all customers in the utility service territories for which CEC has data, or somewhere in

between. This will require the contractor to work with CEC to access potentially large volumes of Customer Energy Use Data (including AMI data, as available) through the CEC's Snowflake-based data platform. The contractor will need an analytic platform that can ingest the data, conduct statistical or regression analysis on and with the data, develop quantitative results, provide reports of results in appropriate CEC format so they can be used for public review, and provide briefings on the results to decision makers, staff, and the public.

The Contractor shall provide technical assistance for the following tasks, as directed by the CAM.

## **FORMAT/REPORTING REQUIREMENTS**

### **Deliverables/Reports**

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

[http://www.energy.ca.gov/contracts/consultant\\_reports/index.html](http://www.energy.ca.gov/contracts/consultant_reports/index.html)

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

### **Electronic File Format**

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

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

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

### **Software Application Development**

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

- Microsoft ASP.NET framework version 4.6 or above
- Microsoft ASP.NET MVC 5.0 or above
- Microsoft ASP.Net Core 6.0 or above
- Microsoft Entity Framework 6.0 or above
- Microsoft Internet Information Services IIS 10.0 or above
- Microsoft SQL Server 2016 or above
- Microsoft SQL Reporting Services 2016 or above
- Visual Studio.NET 2019 or above

- Python, C# Programming Language with layered architectures (Presentation, Business logic, Data Access).
- MSSQL (Structured Query Language).
- Bootstrap 5.0 or above
- XML and JSON.
- Telerik, Redgate, and Postman
- AWS, Snowflake and Salesforce

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

## **TASK 1- AGREEMENT MANAGEMENT**

### **Task 1.1 Kick-off Meeting**

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

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

- Attend a “kick-off” meeting with the CAM, the Contracts Officer, and a representative of the Accounting Office. The meeting will be held via Zoom or teleconference. 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.
- Submit signed Information Security Program Plan Attestation that Contractor has an Information Security Program Plan (ISPP) that meets the minimum requirements as stated in SAM 5300 and any other applicable law. CAM will provide ISPP Attestation form.
- Submit signed Non-Disclosure Agreements (NDAs) from Contractor and Subcontractor employees prior to the sharing of confidential information with the employees. CAM will provide NDA form.
- Contractor shall ensure that all individuals employed by Contractor or a Subcontractor who will have access to confidential information take an annual security awareness training and submit the Employee Security Awareness Training Certificates.
- Submit verification that confidential information and personal information is destroyed at agreement end (or when work is completed).

#### **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:**

- Draft and Final Agendas
- Summary of the kickoff to be included in the monthly progress report.
- Signed non-disclosure agreement from Contractor and Subcontractor employees
- Signed Information Security Program Plan Attestation Form
- Employee Security Awareness Training Certificates
- Verification of destruction of confidential information and personal information

### **Task 1.2 Invoices**

**The Contractor shall:**

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

**Deliverables:**

- Monthly invoice (to be included with monthly progress reports)

**Task 1.3 Manage Subcontractors**

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

**The Contractor shall:**

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

**Task 1.4 Progress Reports**

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement.

**The Contractor shall:**

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

**Deliverables:**

- Monthly Progress Reports (including monthly invoice)

**TASK 1.5 WORK AUTHORIZATIONS**

The goal of this task is to develop and manage all technical and budgetary aspects of work authorizations (WA) in accordance with the requirements of this Agreement for work to be performed under Technical Task 2.

**The Contractor shall:**

- Help prepare WAs in accordance with the contract requirements.
- The WA format and content shall be specified by the CAM.
- The WA end date should be no later than 60 days prior to the term end date of the Agreement.
- Submit all required WA Documents to the CAM.
- Administer WAs.
- Establish and maintain contractual agreements with entities performing work.
- Develop project schedules.

- Manage Subcontractor activities in accordance with the Agreement terms and conditions.
- Provide oversight and first-level review of reports and documentation, and comment on the content of deliverables.
- Review and approve all WA invoices.
- Provide audit and accounting services for all WAs.
- Immediately report any significant variances affecting performance of WAs and recommend mitigation actions for consideration by the Project Manager and CAM. Examples of significant variances include the inability to submit deliverables by key WA due dates, unavailability of key personnel that will affect timely submittal of deliverables, and key technical issues that would require change in scope, redirection of the effort, or discontinuation of the project.
- Coordinate with the CAM to close out completed WAs and remaining unallocated balances.
- Monitor and track each WA and the overall agreement.
- Provide updated WA project schedules, as needed, and determine if each WA is on schedule and deliverables are satisfactory.
- Determine the fiscal status of each WA and the overall Agreement.
- Prevent cost overruns.
- Track the start, progress, and closure of each WA.

**Deliverables:**

WA Documents

**Task 1.6 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 Energy Commission and will be preparing both a public and a confidential version of the Final Report, the Contractor shall perform the following subtasks for both the public and confidential versions of the Final Report.

**Deliverables:**

Final Report

**TECHNICAL TASKS**

**Task 2: DER Analytics Leveraging Customer Energy Use Data**

The goal of this task is to obtain a range of analytical studies using Customer Energy Use Data (including AMI data, as available) in combination with other data sets provided by CEC. These assignments will be varied and complex.

At the direction of the CAM through a properly executed Work Authorization, the Contractor will perform the one or more of the following tasks. No work will be undertaken unless authorized by the CAM through a specific Work Authorization.

### **2.1 Analysis to Inform Policy Options:**

Conduct analysis to evaluate the benefit of decarbonization activities or DER individually or in combination. Analysis may be conducted by utility territory, across all utility territories for which CEC has data, or somewhere in between. Identify customer types, equipment mixes, and geographies that provide the greatest customer and grid value. Assist CEC in conducting cost comparison of different scenarios and assess where financial incentives may be necessary to support deployment to meet other state priorities, such as for energy equity. Conduct analysis of both electric and fossil gas use that assists in informing decarbonization policy.

### **2.2 Analysis to Improve Forecasting/Planning:**

Conduct analyses to inform the electricity hourly load shapes used for DER end-uses in the California Energy Demand forecast, including electric vehicle charging and discharging, battery storage charging and discharging, electric space heating, and electric water heating technologies. Assess how a customer's electricity and fossil gas consumption changes with DER adoption by comparing electricity and gas consumption before and after adoption. Work with CEC to identify potential future scenarios of DER deployment and analyze how the scenarios might impact customer energy use and cost and electric system reliability.

### **2.3 Analysis, Recommendations, Plans, and Tool Development to Support Program Development, Implementation & Verification:**

Conduct analyses of Customer Energy Use Data (including AMI data, as available) to inform program design, development, requirements, and implementation; support the targeting of regions, buildings and technologies; and support program administration. Develop and provide plans, recommendations, tools, and/or program support for program EM&V that can be used to assess program performance, measure impact and costs, and make necessary improvements in a time sensitive and nimble fashion. Develop tools to analyze Customer Energy Use Data (including AMI data, as available) and decarbonization and resiliency measures, in coordination with other data (e.g. income, CalEnviroScreen, climate zones, building age and characteristics, electric and gas rates, GHG, etc.) to support program targeting and assist CEC and program implementers in project and measure selection. Work with CEC to evaluate program effectiveness and make improvements across a number of decarbonization and resiliency programs and use-cases. Support and provide training and resources to CEC staff and program implementers (potentially public- or third-parties) on above analyses, plans, recommendations, and tools. Support the development and training of CEC staff to strengthen their skills and ability to conduct analysis of Customer Energy Use Data (including AMI data, as available).

### **2.4 Supporting the Development of Strategies to Share Relevant Information with Interested Parties:**

Support the CEC in developing strategies that may include anonymizing or otherwise aggregating data to a level that enables sharing the information without releasing PII or other confidential data and is useful for planners and program implementers, including communities, community choice aggregators, and DER deployment program

implementers. This may include advice on how to make this data available through CEC's existing data infrastructure or CEC's planning library, which is in development.

**Deliverables:**

- Will be specified in each Work Authorization

**SCHEDULE OF DELIVERABLES AND DUE DATES**

Note: Actual deliverables will be specified in each Work Authorization

<b>Task Number</b>	<b>Deliverable</b>	<b>Due Date</b>
<b>1</b>	Agreement Management	
1.1	<ul style="list-style-type: none"> <li>• Draft and Final Agendas</li> <li>• Summary of the kickoff to be included in the monthly progress report.</li> <li>• Signed non-disclosure agreement from Contractor and Subcontractor employees</li> <li>• Signed Information Security Program Plan Attestation Form</li> <li>• Employee Security Awareness Training Certificates</li> <li>• Verification of destruction of confidential information and personal information</li> </ul>	Monthly
1.2	Monthly invoice (to be included with monthly progress reports)	Monthly
1.3	Manage Subcontractors	Ongoing
1.4	Monthly Progress Reports (including monthly invoice)	Monthly
1.5	WA Document	Monthly
1.6	Final Report	End of term
2	DER Analytics Leveraging Customer Energy Use Data	To Be Determined in each WA.