

## MOEV Subcontract Agreement



Subcontractor: <b>South Bay Cities</b> Address:	MOEV Agreement Number: MOEV-21-007 CEC Agreement Number: EPC-20-038  Agreement Term: 09/27/2021 to 11/30/2024  The effective date of this Agreement is either the start date or the approval signature date by MOEV Inc. representative below, whichever is later. MOEV Inc. shall be the last party to sign. No work is authorized, nor shall any work begin, until on or after the effective date.
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The parties agree to comply with the terms and conditions of the following Exhibits which are by this reference made a part of the agreement.

<b>Exhibit I</b> - Subcontractor Scope of Work	Page(s):1
<b>Exhibit II</b> - Subcontractor Terms and Conditions	Page(s):3
<b>Exhibit III</b> - Energy Commission flow-down provisions	Page(s):22
<b>Exhibit IV</b> - CEC Grant Agreement which include the followings:	
<b>Exhibit A</b> - Scope of Work	Page(s):24
Exhibit A1 - Attachments	Page(s):2
Exhibit A2 - Attachments	Page(s):4
<b>Exhibit C</b> - General Terms and Conditions	Page(s):34
Exhibit C1 - Attachments	Page(s):10

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### Total Reimbursable Amount: \$15,000 USD

The undersigned parties have read the attachments to this agreement and will comply with the standards and requirements contained therein.

MOEV Inc.		Subcontractor	
AUTHORIZED SIGNATURE:	DATE:	AUTHORIZED SIGNATURE:	DATE:
NAME: Hemanshu Pota		NAME:	
TITLE: CEO			
MOEV ADDRESS: 907 Westwood Blvd, Ste 420 Los Angeles, CA 90024		TITLE:	

**Exhibit I**  
**Subcontractor Scope of Work**

**Subcontractor Scope of Work**

1. In reference to the Scope of Work document in CEC Grant Agreement (Exhibit IV - Exhibit A, A1, A2), the Subcontractor is responsible for performing the following task(s):

**TASK 7 COMMUNITY OUTREACH AND EDUCATION**

The goal of this task is to perform engagement and provide outreach and education to the neighborhood community residents about the benefits of electric power mobility – lower pollution, lower cost of electricity, less noise from electric transportation, increased clean energy in the grid, a more reliable electric grid, and reducing climate change.

**The Subcontractor shall:**

- Identify and compile a list of Community-Based Organizations (CBOs) and public sector agencies, establish Outreach Contact Database, Outreach/Education Calendar, Coordinate and schedule Outreach Events and create an Outreach/Education Solicitation Matrix
- Prepare a Gardena Community Outreach Report that presents the results of the CBO and Public Sector Outreach Database, Outreach/Education, Solicitation Matrix, Outreach/Education Calendar

**Products:**

- Gardena Community Outreach Report
2. The Subcontractor will also support MOEV Inc. by providing documents and material for inclusion in the following reports:
    - a. CPR Report (subtask 1.3)
    - b. Monthly Progress Report and Invoices (subtask 1.5)
    - c. Final Report (subtask 1.6)
    - d. Project Performance Metrics Results (task 1.12)

**Exhibit II**  
**Subcontractor Terms and Conditions**

**Subcontractor Terms and Conditions**

**1. Agreement Conflict**

The terms of CEC Grant Agreement (Exhibit IV - Exhibit C) will prevail if they conflict with the subcontract terms.

**2. Flow-Down Provisions**

The required list of Energy Commission flow-down provisions is included in CEC Grant Agreement (Exhibit IV - Exhibit C Section 7 b)

**3. Due Diligence**

The Subcontractor must take timely actions that, taken collectively, move this project to completion. The MOEV Inc. (MOEV) Project Manager will periodically evaluate the project schedule for completion of Scope of Work tasks. If the MOEV Project Manager determines that: (1) the Subcontractor is not diligently completing the tasks in the Scope of Work; or (2) the time remaining in this Agreement is insufficient to complete all project tasks by the Agreement end date, the MOEV Project Manager may recommend that this Agreement be terminated, and MOEV Inc. may terminate this Agreement without prejudice to any of its other remedies.

**4. Payment and Funds**

a. Reimbursable Cost Requirements

In addition to any other requirements in this Agreement, MOEV Inc. is only obligated to reimburse the Subcontractor for Incurred and Paid Costs that are (1) incurred during the Agreement Term; (2) invoiced within the required timeframes of this Agreement; (3) made in accordance with the Agreement's Budget; and (4) actual and allowable expenses under this Agreement.

b. Payment Requests

The Subcontractor may request payment from MOEV Inc. monthly by submitting its invoice and progress report by the 5th day of the month to be included in the overall invoice and progress report to Energy Commission. MOEV Inc. will initiate payment to Subcontractor only after receipt of payment from the CEC of the Subcontractor's invoice submitted to CEC. The final payment request, including retention, MUST be received by MOEV Inc. no later than the agreement end date.

c. Invoice Approval and Disputes:

Each request for payment is subject to MOEV Inc. Project Manager's approval. Payments will be made to the Subcontractor for undisputed invoices. An undisputed invoice is an invoice submitted by the Subcontractor for work performed, for which project expenditures and products meet all Agreement conditions, and for which additional evidence is not required to determine its validity.

d. Allowability of Costs

Please refer to CEC Grant Agreement (Exhibit IV - Exhibit C Section 8 j)

e. Payment Request Format

**Exhibit II**  
**Subcontractor Terms and Conditions**

Each request for payment will consist of, but not be limited to, the following:

- 1) An invoice that includes a list of Incurred and Paid Costs. Backup documentation is required at the time of invoice submittal, such as time cards, vendor invoices, and proof of payment (e.g., cancelled checks). The invoice must include the following:
  - a) MOEV Agreement number;
  - b) Date prepared;
  - c) Subcontractor's Federal tax ID number;
  - d) Billing period;
  - e) Subcontractor's actual labor expenditures, including hourly unloaded labor rates by individual name and classification, hours worked, and benefits (fully loaded rates may only be used if they are included in the grant budget);
  - f) Non-labor expenses, including fringe benefits, indirect overhead, and general/administrative expenses;
  - g) Operating expenses, including travel, equipment, materials, and other;
  - h) By budget line item (cost component) category, the budgeted amount, amount billed to date, currently billed amount, and balance of funds;
  - i) Match fund expenditures (if applicable);
  - j) Receipts for travel (including departure and return times), equipment, materials, and miscellaneous; and
- 2) A progress report (in MS Word format) that documents evidence of progress, as described in the Scope of Work for inclusion in the overall progress report to Energy Commission.
- 3) Products prepared by the Subcontractor during the invoicing period, as described in the Scope of Work.

The Subcontractor must submit all invoices to the following address:

MOEV Inc.  
907 Westwood Blvd, Ste 420  
Los Angeles, CA 9002

An electronic copy of the invoices and progress report can be mailed to [info@moevinc.com](mailto:info@moevinc.com)

f. Certification

The following certification will be included on each payment request form and signed by the Subcontractor's authorized officer:

The documents included in this request for payment are true and correct to the best of my knowledge and I, as an agent of South Bay Cities have authority to submit this request. I certify that reimbursement for these costs has not and will not be received from any other sources, including but not limited to a government entity contract, subcontract, or other procurement method. For projects considered to be a public work, prevailing wages were paid to eligible workers who provided labor for the work covered by this invoice; the Subcontractor, South Bay Cities, has complied with prevailing wage laws.

**Exhibit II**  
**Subcontractor Terms and Conditions**

g. Retention

Please refer to CEC Grant Agreement (Exhibit IV - Exhibit C Section 8 n). MOEV Inc. will flow down the retention requirement to the Subcontractors. This means that the MOEV will not reimburse the Subcontractor the amount of retention held by the CEC from the invoice submitted by the Subcontractor to MOEV which MOEV would include in its invoice to CEC, until the CEC reimburses in full the retention amount to MOEV.

## Exhibit III: Energy Commission flow-down provisions



### 1. Standard of Performance

In performing work under the Agreement, South Bay Cities (Subcontractor) and their employees are responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures for the type of work performed.

### 2. Due Diligence

The Subcontractor must take timely actions that, taken collectively, move this project to completion. The MOEV Inc (MOEV) Project Manager will periodically evaluate the project schedule for completion of Scope of Work tasks. If the MOEV Project Manager determines that: (1) the Subcontractor is not diligently completing the tasks in the Scope of Work; or (2) the time remaining in this Agreement is insufficient to complete all project tasks by the Agreement end date, the MOEV Project Manager may recommend that this Agreement be terminated, and MOEV Inc. may terminate this Agreement without prejudice to any of its other remedies.

### 3. Products

- a. "Products" are any tangible item specified for delivery to the Energy Commission in the Scope of Work, such as reports and summaries.
  - The Subcontractor will submit all Products identified in the Scope of Work to the MOEV Project Manager, in the manner and form specified in the Scope of Work. The MOEV Project manager will, in turn, submit the Products to the Energy Commission.
  - The Subcontractor will also submit all Products prepared during the invoicing period to MOEV Inc. along with the invoice, as specified in the MOEV Subcontract Agreement, Exhibit I - Subcontractor Scope of Work.

If the MOEV Project Manager or the Commission Agreement Manager determine that a product is substandard given its description and intended use as described in this Agreement, the MOEV Project Manager, without prejudice to any of its other remedies, may refuse to authorize payment for the product and any subsequent products that rely on or are based upon the product under this Agreement.

- b. Confidential Products

Please see Section 18 (Confidentiality, Exhibit C - General Terms and Conditions) for instructions regarding confidential products.

- c. Rights in Products

The Energy Commission owns all products identified in the Scope of Work, with the exception of products that fall within the definition of "intellectual property." The Subcontractor owns all intellectual property developed under this Agreement (please see the "Intellectual Property" section).

The Subcontractor has a non-exclusive, non-transferable, irrevocable, worldwide, perpetual license to use, publish, translate, modify, and reproduce products that do not fall within the definition of “intellectual property.”

d. Failure to Submit Products

Failure to submit a product required in the Scope of Work may be considered material noncompliance with the Agreement terms. Without prejudice to any other remedies, noncompliance may result in actions such as the withholding of future payments or awards, or the suspension or termination of the Agreement.

e. Final Report and Payment

The Subcontractor may only submit a request for the final payment (including any retention) after the final Product is completed, submitted to the MOEV Project Manager, and MOEV Inc. has verified satisfactory completion of work.

f. Legal Statements on Products

- 1) All documents that result from work funded by this Agreement and are released to the public must include the following statement to ensure no Commission endorsement of documents:

**LEGAL NOTICE**

**This document was prepared as a result of work sponsored by the California Energy Commission. It does not necessarily represent the views of the Energy Commission, its employees, or the State of California. Neither the Commission, the State of California, nor the Commission’s employees, contractors, or subcontractors makes any warranty, express or implied, or assumes any legal liability for the information in this document; nor does any party represent that the use of this information will not infringe upon privately owned rights. This document has not been approved or disapproved by the Commission, nor has the Commission passed upon the accuracy of the information in this document.**

- 2) The Subcontractor will apply copyright notices to all documents prepared for this Agreement that are released to the public (including reports, articles submitted for publication, and all reprints) using the following form or any other form that may be reasonably specified by the Energy Commission.

**“ [Year of first publication of product] [the Copyright Holder’s name]. All Rights Reserved.”**

#### **4. Travel and Per Diem**

- a. Travel not listed in the budget requires prior written authorization from MOEV Project Manager. MOEV will request approval from CEC and MOEV will inform the Subcontractor of CEC’s decision, and if CEC disapproves, MOEV will not accept any invoice that lists travel as an expense.

- b. No reimbursement for food or beverages will be made other than for allowable per diem charges.
- c. The Subcontractor will be reimbursed for authorized travel and per diem up to, but not to exceed, the rates allowed nonrepresented state employees. Current allowable travel reimbursement rates can be obtained from the Commission's web site at: [http://www.energy.ca.gov/contracts/TRAVEL\\_PER\\_DIEM.PDF](http://www.energy.ca.gov/contracts/TRAVEL_PER_DIEM.PDF).
- d. Travel expense claims must detail expenses using the allowable rates, and the Subcontractor must sign and date each travel expense claim before submitting it to MOEV for payment. Expenses must be listed by trip, including dates and times of departure and return. Travel expense claims supporting receipts and expense documentation must be attached to the Subcontractor's Payment Request. A vehicle license number is required when claiming mileage, parking, or toll charges. Questions regarding allowable travel expenses or per diem should be addressed to the Commission Agreement Manager.

## 5. Prevailing Wage

### a. Requirement

Projects funded by the Energy Commission often involve construction, alteration, demolition, installation, repair, or maintenance work over \$1,000. Such projects might be considered "public works" under the California Labor Code (See California Labor Code Section 1720 et seq. and Title 8 California Code of Regulations, Section 16000 et seq.). Public works projects require the payment of prevailing wages. Prevailing wage rates can be significantly higher than non- prevailing wage rates.

### b. Determination of Project's Status

Only the California Department of Industrial Relations (DIR) and courts of competent jurisdiction may issue legally binding determinations that a particular project is or is not a public work. If the Subcontractor is unsure whether the project funded by the Agreement is a "public work" as defined in the California Labor Code, it may wish to seek a timely determination from DIR or an appropriate court. As such processes can be time consuming, it may not be possible to obtain a timely determination before the date for performance of the Agreement.

By accepting this grant, the Subcontractor is fully responsible for complying with all California public works requirements, including but not limited to payment of prevailing wage. As a material term of this grant, the Subcontractor must either:

- 1) Timely obtain a legally binding determination from DIR or a court of competent jurisdiction before work begins on the project that the proposed project is not a public work; or
- 2) Assume that the project is a public work and ensure that:
  - Prevailing wages are paid unless and until DIR or a court of competent jurisdiction determines that the project is not a public work;



- The project budget for labor reflects these prevailing wage requirements; and
- The project complies with all other requirements of prevailing wage law, including but not limited to keeping accurate payroll records and complying with all working hour requirements and apprenticeship obligations.

California Prevailing Wage law provides for substantial damages and financial penalties for failure to pay prevailing wages when such payment is required.

c. Subcontractors and Flow-down Requirements

The Subcontractor will ensure that its subcontractors also comply with the public works/prevailing wage requirements above. The Subcontractor will ensure that all agreements with its subcontractors to perform work related to this Project contain the above terms regarding payment of prevailing wages on public works projects. The Subcontractor is responsible for any failure of its subcontractors to comply with California prevailing wage and public works laws.

d. Indemnification and Breach

Any failure of the Subcontractor or its subcontractors to comply with the above requirements will constitute breach of this Agreement which excuses the Commission's performance of this Agreement at the Commission's option, and will be at the Subcontractor's sole risk. In such a case, MOEV Inc. will refuse payment to the Subcontractor of any amount under this award and MOEV Inc. will be released, at its option, from any further performance of this Agreement or any portion thereof. The Subcontractor will indemnify MOEV Inc. and hold it harmless for any and all financial consequences arising out of or resulting from the failure of the Subcontractor and/or any of its subcontractors to pay prevailing wages or to otherwise comply with the requirements of prevailing wage law.

e. Budget

The Subcontractor's budget on public works projects must indicate which job classifications are subject to prevailing wage. For detailed information about prevailing wage and the process to determine if the proposed project is a public work, the Subcontractor may wish to contact DIR or a qualified labor attorney for guidance.

f. Covered Trades

For public works projects, the Subcontractor may contact DIR for a list of covered trades and the applicable prevailing wage.

g. Questions

If the Subcontractor has any questions about this contractual requirement or the wage, record keeping, apprenticeship, or other significant requirements of California prevailing

wage law, the Subcontractor should consult DIR and/or a qualified labor attorney before entering into this Agreement.

h. Certification

The Subcontractor will certify to MOEV Inc. on each payment request form either that: (a) prevailing wages were paid to eligible workers who provided labor for work covered by the payment request and the Subcontractor and all contractors and subcontractors otherwise complied with all California prevailing wage laws; or (b) the project is not a public work requiring the payment of prevailing wages. In the latter case, the Subcontractor will provide competent proof of a DIR or court determination that the project is not a public work requiring the payment of prevailing wages. Prior to the release of any retained funds under this Agreement, the Subcontractor will submit to the Energy Commission the above-described certificate signed by the Subcontractor and all contractors and subcontractors performing public works activities on the project. Absent this certificate, the Subcontractor will have no right to any funds under this Agreement, and MOEV Inc. will be relieved of any obligation to pay any funds.

**6. Recordkeeping, Cost Accounting, and Auditing**

a. Cost Accounting

The Subcontractor will keep separate, complete, and correct accounting of the costs involved in completing the project and any match-funded portion of the project. The Commission or MOEV and/or their agents will have the right to examine the Subcontractor's books of accounts at all reasonable times, to the extent necessary to verify the accuracy of the Subcontractor's reports.

b. Accounting Procedures

The Subcontractor's costs will be determined on the basis of its accounting system procedures and practices employed as of the effective date of this Agreement, provided that the Subcontractor uses generally accepted accounting principles and cost reimbursement practices. The Subcontractor's cost accounting practices used in accumulating and reporting costs during the performance of this Agreement will be consistent with the practices used in estimating costs for any proposal to which this Agreement relates; provided that such practices are consistent with the other terms of this Agreement and that such costs may be accumulated and reported in greater detail during performance of this Agreement.

The Subcontractor's accounting system will distinguish between direct and indirect costs. All costs incurred for the same purpose, in like circumstances, are either direct costs only or indirect costs only with respect to costs incurred under this Agreement.

c. Audit Rights

The Subcontractor will maintain books, records, documents, and other evidence, based on the procedures set forth above, sufficient to reflect properly all costs claimed to have

been incurred in the performance of this Agreement. The Energy Commission, another state agency, and/or a public accounting firm designated by the Energy Commission may audit the Subcontractor's accounting records at all reasonable times, with prior notice by the Energy Commission.

It is the intent of the parties that the audits will ordinarily be performed not more frequently than once every twelve (12) months during the performance of the work and once at any time within three (3) years after payment by the Energy Commission of the Subcontractor's final invoice. However, performance of any such interim audits by the Energy Commission does not preclude further audit. The Energy Commission may audit books, records, documents, and other evidence relevant to the Subcontractor's royalty payment obligations (see Section 21) for a period of ten (10) years after payment of the Subcontractor's final invoice.

The Subcontractor will allow the auditor(s) to access such records during normal business hours, and will allow interviews of any employees who might reasonably have information related to such records. The Subcontractor will include a similar right of the state to audit records and interview staff in any subcontract related to the performance of this Agreement.

d. Refund to the MOEV Inc.

If either MOEV Inc. or CEC determine that any invoiced and paid amounts exceed the actual allowable incurred costs, the Subcontractor will repay the amounts to the MOEV Inc. within thirty (30) days of request. If MOEV Inc. does not receive such repayments, it will be entitled to take actions such as withholding further payments to the Subcontractor and seeking repayment from the Subcontractor.

e. Audit Cost

The Subcontractor will bear its cost of participating in any audit (e.g., mailing or travel expenses). The Energy Commission will bear the cost of conducting the audit unless the audit reveals an error detrimental to the Energy Commission that exceeds more than ten percent (10%) or \$5,000 (whichever is greater) of: (1) the amount audited; or (2) if a royalty audit, the total royalties due in the period audited. The Subcontractor will pay the refund as specified in subsection (d), and will reimburse the Energy Commission for reasonable costs and expenses incurred by the Commission in conducting the audit.

f. Match or Cost Share

If the budget includes a match share requirement, the Subcontractor's commitment of resources, as described in this Agreement, is a required expenditure for receipt of Energy Commission funds. The funds will be released only if the required match percentages are expended. The Subcontractor must maintain accounting records detailing the expenditure of the match (actual cash and in-kind, non-cash services), and report on match share expenditures on its request for payment.

## **7. Equipment**

Title to equipment acquired by the Subcontractor with grant funds will vest in the Subcontractor. The Subcontractor may use the equipment in the project or program for which it was acquired as long as needed, regardless of whether the project or program continues to be supported by grant funds. However, the Subcontractor may not sell, lease, or encumber the property (i.e., place a legal burden on the property such as a lien) during the Agreement term without the Commission Agreement Manager's prior written approval.

The Subcontractor may refer to the applicable federal regulations incorporated by reference in this Agreement for guidance regarding additional equipment requirements.

## **8. Indemnification**

To the extent allowed under California law, the Subcontractor will indemnify, defend, and hold harmless the state (including the Energy Commission) and state officers, agents, and employees from any and all claims and losses in connection with the performance of this Agreement.

To the extent allowed under California law, the Subcontractor will indemnify, defend, and hold harmless MOE Inc. and its officers, agents, and employees from any and all claims and losses in connection with the performance of this Agreement.

## **9. Confidentiality**

### **a. Identification of Confidential Information**

- 1) Prior to the effective date of this Agreement, the Subcontractor will identify all products (or information contained within products) that it considers to be confidential, in addition to the legal basis for confidentiality, in Exhibit C - General Terms and Conditions and in Exhibit C1 - Attachments. If the Energy Commission agrees that the information is confidential, it will not disclose it except as provided in subsection (b).
- 2) During the Agreement, if the Subcontractor develops additional products (or information contained within products) not originally anticipated as confidential, it will follow the procedures for a request for designation of confidential information specified in Title 20 California Code of Regulations (CCR) Section 2505.

The Energy Commission's Executive Director will make the confidentiality determination. Such subsequent determinations may be added to the list of confidential deliverables in the Attachment 1 to this Exhibit. The Energy Commission will not disclose information subject to an application for confidential designation except as provided in subsection (b).

- 3) When submitting products containing confidential information, the Subcontractor will mark each page of any document containing confidential information as “confidential”, and present it in a sealed package to the Contracts, Grants, and Loans Office.

The MOEV Project Manager may require the Subcontractor to submit a non-confidential version of the product, if it is feasible to separate the confidential information from the non-confidential information. The Subcontractor is not required to submit such products in a sealed package.

b. Disclosure of Confidential Information

The Energy Commission will only disclose confidential information under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508. All confidential information that is legally disclosed by the Subcontractor or any other entity will become a public record and will no longer be subject to the Energy Commission’s confidentiality designation.

c. Waiver of Consequential Damages

In no event will MOEV Inc, the Energy Commission, the California Public Utilities Commission, or the state of California be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory for the disclosure of the Subcontractor’s confidential information, even if the MOEV or Commission has been advised of the possibility of such damages.

Damages that MOEV Inc, the Energy Commission, the California Public Utilities Commission, and the state of California will not be responsible for include but are not limited to: lost profit; lost savings or revenue; lost goodwill; lost use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities, or services; downtime; the claims of third parties including customers; and injury to property.

d. Limitations on the Disclosure of Products

- 1) During the Agreement, the Subcontractor must receive approval from the Commission Agreement Manager prior to disclosing the contents of any draft product to a third party. However, if the Energy Commission makes a public statement about the content of any product provided by the Subcontractor and the Subcontractor believes the statement is incorrect, the Subcontractor may state publicly what it believes is correct.
- 2) Except as provided in Title 20 CCR Sections 2506, 2507, and 2508, the Subcontractor may not disclose any information provided to it by the Energy Commission for the performance of this Agreement if the information has been designated as confidential or is the subject of a pending application for confidential designation. At the election of the Commission Agreement Manager,

the Subcontractor, and its employees must execute a confidentiality agreement provided by the Commission Agreement Manager.

- 3) The Subcontractor will ensure that each of its officers, employees, and subcontractors who are involved in the performance of this Agreement are informed about these disclosure limitations and will abide by them.

## 10. Pre-Existing and Independently Funded Intellectual Property via Flow-Down Provision of the Energy Commission Contract to the Subcontractor

### a. Ownership

The Energy Commission makes no ownership, license, or royalty claims to pre-existing intellectual property, independently funded intellectual property, or project-relevant pre-existing or independently funded intellectual property. **“Ownership”** means exclusive possession and control of all rights to property, including the right to use and transfer property. Intellectual property licenses and royalties are discussed in Sections 20 and 21 in Exhibit C - General Terms and Conditions.

- 1) **“Pre-existing intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that the Subcontractor or a third party owned or possessed prior to the effective date of this Agreement and that have not been developed, altered, or reduced to practice with Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.
- 2) **“Independently funded intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice by the Subcontractor or a third party during or after the Agreement term without Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

“Works of authorship” does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices. The Commission owns such products regardless of their funding source.

- 3) **“Project-relevant pre-existing intellectual property”** and **“project-relevant independently funded intellectual property”** mean pre-existing and independently funded intellectual property used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement.

b. Project-Relevant Pre-Existing and Independently Funded Intellectual Property

1) Identification of Property

- a) The Subcontractor will identify all project-relevant pre-existing intellectual property in Attachment 1 to this Exhibit prior to the effective date of the Agreement, or within sixty (60) days of becoming aware that the property has been or will be used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement. Exhibit C1 - Attachments may be amended (see the "Amendments" section).
- b) The Subcontractor will identify all project-relevant independently funded intellectual property and the source of funding for the property in Exhibit C1 - Attachments to this Exhibit within sixty (60) days of becoming aware that the property has been or will be used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement.
- c) Failure to identify project-relevant pre-existing or independently funded intellectual property in Attachment 1 to this Exhibit may result in the property's designation as "intellectual property" that is subject to licenses and royalties, as described in Sections 20 and 21 in Exhibit C - General Terms and Conditions.

2) Access to Property

The extent of Energy Commission and California Public Utilities Commission access to project-relevant pre-existing and independently funded intellectual property is limited to that reasonably necessary to: (a) demonstrate the validity of any premise, postulate, or conclusion referred to or expressed in any product; or (b) establish a baseline for repayment purposes.

Upon the Commission Agreement Manager's request, the Subcontractor will provide the Commission Agreement Manager and any reviewers designated by the Energy Commission or the California Public Utilities Commission with access to review the Subcontractor's project-relevant pre-existing and independently funded intellectual property. If the property has been designated as confidential as specified in Section 18, the Energy Commission will only disclose it under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508.

3) Preservation of Property

The Subcontractor will preserve any project-relevant pre-existing or independently funded intellectual property at its own expense for at least ten (10) years from the Agreement's end date, unless the Subcontractor agrees to a longer retention period.

The Energy Commission and the California Public Utilities Commission will have reasonable access to the project-relevant pre-existing or independently funded property throughout the retention period.

## 11. Intellectual Property

### a. Ownership

- 1) The Subcontractor owns all intellectual property, subject to the licenses described in subsection b.

**“Intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice with Agreement or match funds during or after the Agreement term; (b) any associated proprietary rights to these items, such as patent and copyright; and (c) any upgrades or revisions to these items.

“Works of authorship” does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices.

- 2) The Energy Commission owns all products identified in the Scope of Work, with the exception of products that fall within the definition of “intellectual property.”

**“Product”** means any tangible item specified for delivery to the Energy Commission in the Scope of Work.

### b. Intellectual Property Licenses

- 1) Both the Energy Commission and the California Public Utilities Commission have a no-cost, non-exclusive, transferable, irrevocable, royalty-free, worldwide, perpetual license to use, publish, translate, modify, and reproduce intellectual property for governmental purposes. The licenses are transferable only to load-serving entities for the purpose described below.
- 2) Under limited circumstances, both the Energy Commission and the California Public Utilities Commission may grant load-serving entities a no-cost, non-exclusive, transferable, irrevocable, royalty-free, worldwide, perpetual license to use, publish, translate, modify, and reproduce intellectual property to enhance the entities’ service to EPIC ratepayers. **The intellectual property that may be licensed to load-serving entities is limited to analytical tools and models that can be used to inform distribution planning and decision-making that benefits electric ratepayers.**

**“Load-serving entity”** means a company or other organization that provides electricity to EPIC ratepayers.



The licenses are transferable to third parties only for the purpose of facilitating the load-serving entity's enhancement of service to EPIC ratepayers. Load-serving entities must obtain prior written approval from the Energy Commission or California Public Utilities Commission (whichever agency granted the load-serving entity the license) in order to transfer the license to a third party.

- 3) The Subcontractor has a non-exclusive, non-transferable, irrevocable, worldwide, perpetual license to use, publish, translate, modify, and reproduce written products created for Agreement reporting and management purposes, such as reports and summaries.
- 4) If any intellectual property that is subject to the licenses above has been designated as confidential as specified in Section 18, all license holders will only disclose the intellectual property under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508.

All license holders will ensure that their officers, employees, and subcontractors who have access to the intellectual property are informed of and abide by the disclosure limitations in Section 18 of Exhibit C - General Terms and Conditions.

c. Energy Commission's Rights to Inventions

**"Invention"** means intellectual property that is patentable.

1) March-In Rights

At the Energy Commission's request, the Subcontractor will forfeit and assign to the Energy Commission all rights to any invention (with the exception of U.S. Department of Energy reserved rights) if the Subcontractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the invention. The Energy Commission will have the unfettered right to use and/or dispose of the rights in whatever manner it deems most suitable to help transfer the invention into the marketplace, including but not limited to seeking patent protection or licensing the invention.

2) Notice of Patent

If any patent is issued for an invention, the Subcontractor will send the Commission Agreement Manager written notice of the issuance within three (3) months of the issuance date. The notice must include the patent title, issuance number, and a general description of the invention.

3) Legal Notice

The Subcontractor and all persons and/or entities obtaining an ownership interest in patentable intellectual property must include the following statement within the specification of any United States patent application, and any subsequently issued patent for the invention:

**“This invention was made with State of California support under California Energy Commission grant number EPC-20-038. The Energy Commission has certain rights to this invention.”**

d. Access to and Preservation of Intellectual Property

1) Access to Intellectual Property

Upon the Commission Agreement Manager’s request, the Subcontractor will provide the Commission Agreement Manager and any individuals designated by the Energy Commission or the California Public Utilities Commission with access to the Subcontractor’s intellectual property in order to exercise the license and march-in rights described above, and to determine any royalty payments due under the Agreement.

2) Preservation of Intellectual Property

The Subcontractor will preserve intellectual property at its own expense for at least ten (10) years from the Agreement’s end date, unless the Subcontractor agrees to a longer retention period.

e. Intellectual Property Indemnity

The Subcontractor may not, in supplying work under this Agreement, knowingly infringe or misappropriate any intellectual property right of a third party, and will take reasonable actions to avoid infringement.

The Subcontractor will defend and indemnify MOEV Inc., the Energy Commission and the California Public Utilities Commission from and against any claim, lawsuit, or other proceeding, loss, cost, liability, or expense (including court costs and reasonable fees of attorneys and other professionals) to the extent arising out of: (i) any third party claim that a product infringes any patent, copyright, trade secret, or other intellectual property right of any third party; or (ii) any third party claim arising out of the negligent or other tortious acts or omissions by the Subcontractor or its employees, subcontractors, or agents in connection with or related to the products or the Subcontractor’s performance under this Agreement.

## 12. Royalty Payments to the Commission

“**Sale**,” “**sales**,” and “**sold**” mean the sale, license, lease, or other transfer of intellectual property. Sales Price” means the price at which intellectual property is sold, excluding sales tax.

- a. The Subcontractor will pay the Energy Commission a royalty of one and one-half percent (1.5%) of the sales price of all sales for which the Subcontractor receives a payment, beginning on the Agreement's effective date and extending for ten (10) years from the Agreement's end date.
- b. The Subcontractor will make payments in annual installments due on the first day of March in the calendar year immediately following the year during which the Subcontractor received any payment for sales.
- c. The Subcontractor is not required to make a royalty payment for any calendar year in which payments for sales are less than \$1000. Total royalty payments will be limited to three (3) times the amount of funds paid by the Energy Commission under the Agreement.
- d. If intellectual property was developed in part with match funds during the Agreement term, the royalty payment will be reduced in accordance with the percentage of intellectual property development activities that were funded with match funds. For example, if 10% of the development activities were funded with match funds during the Agreement and payments for sales totaled \$100,000 in one year, the Subcontractor would owe the Energy Commission \$1350 for the year (1.5% of \$100,000 = \$1500; 10% of \$1500 = \$150; \$1500 - \$150 = \$1350).

If the Energy Commission is providing funds to the Subcontractor under this Agreement as a project match partner and Energy Commission funds are used in part to develop intellectual property, the royalty payments will be reduced in accordance with the percentage of intellectual property development activities that were funded with non-Energy Commission funds during the Agreement term. For example, if 80% of the development activities were funded with Subcontractor and/or third party funds during the Agreement and payments for sales totaled \$100,000 in one year, the Subcontractor would owe the Energy Commission \$300 for the year (1.5% of \$100,000 = \$1500; 80% of \$1500 = \$1200; \$1500 - \$1200 = \$300).

- e. The Subcontractor may make an early buyout payment to the Energy Commission without a pre-payment penalty, as an alternative to making annual royalty payments for ten (10) years following the Agreement's end date. The payment must be in a lump sum amount equal to one and a half (1.5) times the amount of funds paid by the Energy Commission under the Agreement and made within five (5) years of the Agreement's end date. The payment amount due under the early buyout option will not be reduced by the percentage of match funds as described above.
- f. The Subcontractor may not make any sale of intellectual property for consideration other than fair market value. Such activity constitutes breach of this Agreement, and will obligate the Subcontractor to repay within sixty (60) days the early buyout amount due. In the event of breach, the Energy Commission may exercise all rights and remedies available to it under law and at equity.
- g. Royalty payments not made within fifteen (15) days of the due date will constitute breach of this Agreement. The payments will become debt obligations of the Subcontractor to the Energy Commission, due upon demand and bearing interest at the maximum interest rate allowed by law.
- h. The Subcontractor will maintain separate accounts within its financial and other records for the purpose of tracking components of sales and royalties due to the Energy Commission under this Agreement.
- i. Payments to the Energy Commission are subject to audit as provided for under the Recordkeeping, Cost Accounting, and Auditing section.
- j. The Subcontractor will include these royalty provisions in its agreements with all subcontractors who develop or assist with the development of intellectual property.

### **13. General Provisions**

a. Governing Law

This Agreement is governed by the laws of the State of California as to interpretation and performance.

b. Independent Capacity

In the performance of this Agreement, the Subcontractor and its agents, subcontractors, and employees will act in an independent capacity and not as officers, employees, or agents of the State of California.

c. Assignment

This Agreement is not assignable or transferable by the Subcontractor either in whole or in part without the consent of the Energy Commission in the form of an amendment.

d. Timeliness

Time is of the essence in this Agreement.

e. Severability

If any provision of this Agreement is unenforceable or held to be unenforceable, all other provisions of this Agreement will remain in full force and effect.

f. Waiver

No waiver of any breach of this Agreement constitutes waiver of any other breach. All remedies in this Agreement will be taken and construed as cumulative, meaning in addition to every other remedy provided in the Agreement or by law.

g. Assurances

The Commission reserves the right to seek further written assurances from the Subcontractor and its team that the work under this Agreement will be performed in accordance with the terms of the Agreement.

h. Change in Business

- 1) The Subcontractor will promptly notify the Energy Commission of the occurrence of any of the following:
  - a) A change of address.
  - b) A change in business name or ownership.
  - c) The existence of any litigation or other legal proceeding affecting the project or Agreement.
  - d) The occurrence of any casualty or other loss to project personnel, equipment, or third parties.
  - e) Receipt of notice of any claim or potential claim against the Subcontractor for patent, copyright, trademark, service mark, and/or trade secret infringement that could affect the Energy Commission's rights.
- 2) The Subcontractor must provide the Commission Agreement Manager with written notice of a planned change or reorganization of the type of business entity under which it does business. A change of business entity or name change requires an amendment assigning or novating the Agreement to the changed entity. If the Energy Commission does not seek to amend this Agreement or enter into a new agreement with the changed or new entity for any reason (including that the Commission is not satisfied that the new entity can perform in the same manner as the Subcontractor), it may terminate this Agreement as provided in the "Termination" section.

i. Access to Sites and Records

Energy Commission and California Public Utilities Commission staff and representatives will have reasonable access to all project sites and to all records related to this Agreement.

j. Prior Dealings, Custom, or Trade Usage

These terms and conditions may not be modified or supplemented by prior dealings, custom, or trade usage.

k. Survival of Terms

Certain provisions will survive the completion or termination date of this Agreement for any reason. The provisions include but are not limited to:

- Legal Statements on Products (included in Section 5, "Products") Payment of Funds (Section 8) in Exhibit C - General Terms and Conditions.
- Recordkeeping, Cost Accounting, and Auditing (Section 11) Equipment (Section 14) in Exhibit C - General Terms and Conditions.
- Termination (Section 16) in Exhibit C - General Terms and Conditions.
- Indemnification (Section 17) in Exhibit C - General Terms and Conditions.
- Pre-Existing and Independently Funded Intellectual Property (Section 19) Intellectual Property (Section 20) in Exhibit C - General Terms and Conditions.
- Royalty Payments to the Commission (Section 21) in Exhibit C - General Terms and Conditions.
- California Taxpayer Access to Publicly Funded Research Act (Section 24) Change in Business in Exhibit C - General Terms and Conditions.
- Access to Sites and Records in Exhibit C - General Terms and Conditions.

#### **14. Certifications and Compliance**

a. Federal, State, and Local Laws

The Subcontractor must obtain all required permits and shall comply with all applicable federal, state and local laws, codes, rules, and regulations for all work performed under the Agreement.

b. Nondiscrimination Statement of Compliance

During the performance of this Agreement, the Subcontractor and its subcontractors will not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition, age, marital status, or denial of family care leave. The Subcontractor and its subcontractors will ensure that the evaluation and treatment of

their employees and applicants for employment are free from such discrimination and harassment.

The Subcontractor and its subcontractors will comply with the provisions of the Fair Employment and Housing Act (Government Code Sections 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 11000 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4.1 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part of it as if set forth in full. The Subcontractor and its subcontractors will give written notice of their obligations under this section to labor organizations with which they have a collective bargaining or other Agreement.

The Subcontractor will include the nondiscrimination and compliance provisions of this section in all subcontracts to perform work under this Agreement.

c. Drug-Free Workplace Certification

By signing this Agreement, the Subcontractor certifies under penalty of perjury under the laws of the State of California that it will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- 1) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited, and specifying actions to be taken against employees for violations as required by Government Code Section 8355(a).
- 2) Establish a Drug-Free Awareness Program as required by Government Code Section 8355(b) to inform employees about all of the following:
  - The dangers of drug abuse in the workplace;
  - The person's or organization's policy of maintaining a drug-free workplace;
  - Any available counseling, rehabilitation, and employee assistance programs; and
  - Penalties that may be imposed upon employees for drug abuse violations.
- 3) Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed project:
  - Will receive a copy of the company's drug-free policy statement; and
  - Will agree to abide by the terms of the company's statement as a condition of employment on the project.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both, and the Subcontractor may be ineligible for any future state awards if the Commission determines that any of the following has occurred: (1) the Subcontractor has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

d. National Labor Relations Board Certification (Not applicable to public entities)

The Subcontractor, by signing this Agreement, swears under penalty of perjury that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Subcontractor within the immediately preceding two year period because of the Subcontractor's failure to comply with an order of a federal court that orders the Subcontractor to comply with an order of the National Labor Relations Board.

e. Child Support Compliance Act (Applicable to California Employers)

For any agreement in excess of \$100,000, the Subcontractor acknowledges that:

- 1) It recognizes the importance of child and family support obligations and will fully comply with all applicable state and federal laws relating to child and family support enforcement, including but not limited to disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and
- 2) To the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

f. Air or Water Pollution Violation

Under state laws, the Subcontractor will not be:

- 1) In violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district;
- 2) Subject to a cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or
- 3) Finally determined to be in violation of provisions of federal law relating to air or water pollution.

g. Americans With Disabilities Act

By signing this Agreement, the Subcontractor assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. Section 12101, et seq.), which prohibits discrimination on the basis of disability, as well as applicable regulations and guidelines issued pursuant to the ADA.



## 15. California Taxpayer Access to Publicly Funded Research Act

- a. As a condition to receiving funding under this Agreement, the Subcontractor agrees to fully comply with the California Taxpayer Access to Publicly Funded Research Act (California Government Code sections 13989 et seq., the "Act") and provisions of this section, which apply to publications describing knowledge, an invention, or technology funded within the scope of this Agreement.
- b. For purposes of complying with the Act and this section of the Agreement, the following definitions shall apply.
  - 1) "Peer-Reviewed Manuscript" means a manuscript after it has been peer reviewed and in the form in which it has been accepted for publication in a scientific journal.
  - 2) "Research Grant" in the Act and "this Agreement" in this section mean this Agreement.
  - 3) "State Agency" in the Act means the Energy Commission.
- c. The Subcontractor shall provide for free public access to any Peer-Reviewed Manuscript developed within the scope of this Agreement.
- d. The Subcontractor shall ensure that any publishing or copyright agreements concerning Peer-Reviewed Manuscripts:
  - 1) Fully comply with California Government Code section 13989.6;
  - 2) Do not conflict with the Energy Commission's rights under this Agreement;
  - 3) Secure for the Energy Commission the rights provided under this Agreement, including the rights to Intellectual Property as specified in Section 20; and
  - 4) Recognize the free public access to the Peer-Reviewed Manuscript.

- e. The Subcontractor shall report to the Energy Commission the final disposition of any Peer-Reviewed Manuscript, including but not limited to if it was published; when it was published; where it was published; and, when the 12-month time period expires, where the Peer-Reviewed Manuscript will be available for open access.
- f. Not later than 12 months after the official date of publication, or sooner if specified in the Schedule of Products, the Subcontractor shall make available to the Energy Commission an electronic version of any Peer-Reviewed Manuscript that is developed within the scope of this Agreement.
- g. The Subcontractor shall make publicly accessible an electronic version of any Peer-Reviewed Manuscript that is developed within the scope of this Agreement, not later than 12 months after the official date of publication, on a repository approved in writing by the Energy Commission, including but not limited to the University of California's eScholarship Repository at the California Digital Library; the California State University's ScholarWorks at the Systemwide Digital Library; or PubMed Central. The Subcontractor shall notify the Energy Commission when the Peer-Reviewed Manuscript is available on an Energy Commission-approved repository.
- h. If the Subcontractor is unable to ensure that its Peer-Reviewed Manuscript is accessible on an Energy Commission-approved, publicly accessible repository, the Subcontractor may comply by providing the manuscript to the Energy Commission not later than 12 months after the official date of publication.
- i. For any publications other than a Peer-Reviewed Manuscript, (herein referred to as "Other Publications") including scientific meeting abstracts, developed within the scope of this Agreement, the Subcontractor shall:
  - 1) Provide an electronic version of the Other Publications to the Energy Commission not later than 12 months after the official date of publication.
  - 2) Ensure that any publishing or copyright agreements concerning Other Publications:
    - i. Do not conflict with the Energy Commission's rights under this Agreement.
    - ii. Secure for the Energy Commission the rights provided under this Agreement, including the rights to Intellectual Property as specified in Section 20 of Exhibit C - General Terms and Conditions.

- j. The Act states that “Grantees are authorized to use grant money for publication costs, including fees charged by a publisher for color and page charges, or fees for digital distribution.” Subcontractor agrees that for purposes of this Agreement, the Subcontractor is only authorized to use funds under this Agreement, including Matching funds, for these purposes if the expenses are included in the Agreement’s Budget and meet the other Agreement requirements for payment, including that the Commission will only reimburse the Subcontractor for expenditures incurred during the Agreement term. If these expenses are not included in the Budget, both parties must agree and amend the Budget to include such expenditures before Subcontractor is authorized to use Agreement funds, either reimbursable expenses or match, for these purposes.
- k. Should a conflict exist between the terms in this Section and other terms of this Agreement, the terms in Section 24 of Exhibit C - General Terms and Conditions prevail.

**Exhibit A  
Scope of Work**

**I. TASK ACRONYM/TERM LISTS**

**A. Task List**

<b>Task #</b>	<b>CPR<sup>1</sup></b>	<b>Task Name</b>
1		General Project Tasks
2		Site Survey, System Engineering Design and Use Case Development
3	X	Equipment Acquisition and Construction Planning
4		Construction, System Deployment, and Testing
5		Demonstration, Validation, Improvement and Maintenance
6		Data Collection and Analysis
7		Community Outreach and Education
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

**B. Acronym/Term List**

<b>Acronym/Term</b>	<b>Meaning</b>
AI	Artificial Intelligence
BEB	Battery Electric Bus
BESS	Battery Energy Storage System
BMS	Battery Management System
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CAPEX	Capital Expenses
CEC	California Energy Commission
CPR	Critical Project Review
DER	Distributed Energy Resources
DR	Demand Response
EV	Electric Vehicle
FCMS	Fleet Charging Managing System
GHG	Greenhouse gas
GVWR	Gross Vehicle Weight Rating
MDHD	Medium Duty and Heavy Duty
ML	Machine Learning
OPEX	Operating Expenses
PV	Solar Photovoltaic

<sup>1</sup> Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

**Exhibit A**  
**Scope of Work**

TAC	Technical Advisory Committee
TOU	Time of Use electricity pricing

**II. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES**

**A. Purpose of Agreement**

The purpose of this Agreement is to fund the demonstration of an integrated Distributed Energy Resources (DER) smart charging platform, and evaluate the potential of efficiently supporting electric vehicle (EV) charging infrastructure for medium-duty and heavy-duty (MDHD) zero-emission transit bus fleets.

**B. Problem/ Solution Statement**

**Problem**

Electrification of large weight-class vehicles such as heavy-duty buses is challenging and costly due to high-power charging needs, demanding duty cycles, and large amounts of energy required. This results in a high cost of electrification to transit fleet operators due to up-front electric infrastructure (CAPEX) and higher operating expenses (OPEX). The costs of both OPEX and CAPEX have proven to be a significant hurdle in transportation electrification broadly, however, these expenses are more pronounced in MDHD applications where higher power requirements are needed. To accelerate electrification of public transport, there needs to be a better understanding of the drivers behind the total cost of operation and solutions to make electrification of these MDHD fleets more economically viable. Also, installing charging infrastructure for heavy duty vehicles in urban locations where space is already at a premium continues to be a challenge. Further, as transportation electrification is accelerated, it becomes even more critical that we continue to decarbonize the electric grid to realize the full benefits of transitioning these fleets to electric.

**Solution**

The Recipient’s solution is an Artificial Intelligence (AI)-driven smart charging platform that creates a behind-the-meter DER control system to achieve the goals of the project. The technology is intended to optimize cost and resiliency, and maximize renewable integration using the Recipient’s AI-based Fleet Charging Managing System (FCMS) by integrating key DERs assets behind the meter that include: Battery Electric Bus (BEBs), chargers, battery storage and solar photovoltaic (PV), for a MDHD fleet electrification application.

Firstly, this technology uses AI based machine learning (ML) to estimate energy consumption for each BEB using as input metering data from EV chargers in combination with telematics based variables such as vehicle weight, driving route and speed, ambient temperature, and grade, in order to optimize energy transfer between the DER assets behind the meter. Fleet vehicles being parked overnight also allow a charging port to be multiplexed and shared by multiple vehicles, thereby reducing operating space and the cost of installing additional charging ports. Secondly, ML prediction based on history of the charging profile with time as well as the history of fleet operations, in combination with real-time data, modifies charging schedules to optimize around Time of Use (TOU) pricing and simultaneously reduces peaks by shifting charging to non-peak time slots so as to minimize utility demand charges - thus lowering the electric bill. Further, the

## **Exhibit A Scope of Work**

system collates charging sessions to maximize the amount of renewable generation being used. Integrating with the key DER assets behind the meter also enables the integrated DER solution to provide grid resiliency using a combination of peak load reduction, and load shifting and shaping to support demand response (DR) needs of the grid. Finally, this demonstration will include the use of AI-driven software to manage the charging ports, vehicles, battery energy storage system (BESS), and renewable generation system, thereby providing an optimum benefit to all participating stakeholders using the DER design and integration.

### **C. Goals and Objectives of the Agreement**

#### **Agreement Goals**

The goals of this Agreement are to:

- Reduce greenhouse gas (GHG) emissions from the bus fleet – GHG emissions will be reduced by replacement of internal combustion engine buses with BEBs in the fleet in combination with using local solar PV generation to provide electricity to the BEBs.
- Maximize the utilization of renewable energy source – By performing AI-based smart management of charging in combination with Solar PV and BESS, the project will demonstrate how to maximize the utilization of solar to fuel the BEBs.
- Lower the overall charging costs - The AI and ML based approaches utilized in this project lower the peak load for charging BEBs, thereby lowering demand charges, and in turn reducing overall charging costs.
- Provide resiliency by demonstrating a smart charging platform that enables quick replicability and scalability for MDHD electric vehicle fleets – The MOEV software will integrate DERs including EV chargers, solar photovoltaic (PV) on-site generation and a battery energy storage system (BESS) using MOEV AI™, to manage these energy assets when the utility requests load curtailment via demand response (DR). This enables the resiliency goals of the project.

Ratepayer Benefits:<sup>2</sup> This Agreement is intended to result in ratepayer benefits including greater electricity reliability and lower costs by deploying the Recipient's smart charging technology combined with the integration of DERs to enable flexible support capability of the grid. The Recipient's innovative AI based ML technology is designed to optimize management of MDHD EV charging to minimize OPEX and maximize the utilization of existing infrastructure, reducing CAPEX. An integrated DER approach using our AI system provides a flexible support capability for the grid.

The Recipient software integrates DERs including solar PV on-site generation and a BESS using Recipient's MOEV AI™, which can effectively manage these energy assets, creating flexibility to shift loads based on utility signals and current grid needs. The demonstration site can respond rapidly to utility signals by relying on its own local generation or storage or even shifting when a vehicle is being charged, resulting in a more resilient and reliable grid. By participating in DR programs, the DER integrated AI solution enables lowering the peak loads for the grid operators, who can then pass on the savings to consumers. Finally, the ability to add greater amounts of renewables, solar in this instance, helps grid operators solve the CAISO reported solar duck

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<sup>2</sup> California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, [http://docs.cpuc.ca.gov/PublishedDocs/WORD\\_PDF/FINAL\\_DECISION/167664.PDF](http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF)).

## Exhibit A Scope of Work

phenomenon thereby further lowering the cost of electricity since solar is now cheaper than most fossil fuel based sources, resulting in cheap yet clean energy for the ratepayers.

Technological Advancement and Breakthroughs: This Agreement is intended to lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's energy goals. In particular, the California renewable portfolio standard requires that 60% of retail sales of electricity in California come from eligible renewable resources by 2020 and 100% come from eligible renewable and zero-carbon resources by 2045. Barriers to achieving these goals include high cost of managing the grid with more renewables, challenges associated with the intermittency of renewables including the added complexity of having a resilient grid that is dynamically controllable. In response to this need, the Recipient proposes a technology development and demonstration project to evaluate cost management, resilience, and renewable integration using the Recipient's MOEV AI™- the Recipient's AI-based FCMS with integrated DERs including EVs, chargers, battery storage and PV, for a MDHD fleet electrification application.

The Recipient combines two key technologies which when demonstrated and deployed together with BEBs will result in substantial breakthrough, as follows:

1) Multiplexing – Multiplexing is a patented technology being commercialized by the Recipient in which a single circuit is connected to multiple charge ports enabling multiple vehicles to be charged simultaneously and dynamically controlled with different levels of power in each vehicle<sup>3,4,5</sup>. This current sharing control is performed via the MOEV Internet Cloud AI software that performs smart EV charging management and is based on the individual mileage needs of the vehicle. This multiplexing approach has on average been shown to deliver 2.8 times more charging sessions and 1.5 times more energy delivered than conventional level 2 EV chargers<sup>6,7</sup> for a quad charger (four outlets per charger) thereby minimizing the need for capacity upgrades and reducing CAPEX both for the utility and the site.

2) AI based peak minimization: the Recipient has developed AI software architecture that utilizes data, both historical and real time, from the EV chargers, from an app used by the driver, from telematics data in the vehicle, and from weather and traffic information in combination with electricity pricing from the utility to first predict energy consumption by each individual EV and then to control when the EV is charged or discharged. This control using AI-based ML is done with the objective to minimize peak load via our smart charge algorithms, resulting in a modified charging profile, thereby minimizing demand charges and reducing OPEX. It is the combination

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<sup>3</sup> R. Gadh, C. Chung, C. Chu, and L. Qiu, "Power Control Apparatus and Methods for Electric Vehicles", US9290104 B2, Aug. 24, 2013. (GRANTED)

<sup>4</sup> R. Gadh, C. Chung, L. Qiu, and C. Chu, "Network Based Management for Multiplexed Electric Vehicle Charging", US9620970B2, Nov. 30, 2011. (GRANTED)

<sup>5</sup> R. Gadh, S. Mal, S. Prabhu, C. Chu, J. Panchal, O. Sheikh, C. Chung, L. He, B. Xiao, and Y. Shi, "Smart Electric Vehicle (EV) Charging and Grid Integration Apparatus and Methods," US9026347B2, Jun. 10, 2010. (GRANTED)

<sup>6</sup> "Next Generation of Storage - Virtual Battery", MOEV CALSEED Project final Report, October, 2019.

<sup>7</sup> "Demonstrating Plug-in Electric Vehicles Smart Charging and Storage Supporting the Grid" Final Project Report, August 2018, <https://ww2.energy.ca.gov/2018publications/CEC-500-2018-020/CEC-500-2018-020.pdf>  
"Next Generation of Storage - Virtual Battery", MOEV CALSEED Project final Report, October, 2019.

## **Exhibit A Scope of Work**

of (1) and (2) that results in the breakthrough in EV charging that helps California to reach its statutory energy goals.

### **Agreement Objectives**

The objectives of this Agreement are to:

- Design and deploy an AI-driven smart charging platform which integrates DERs for charging a BEB Transit Fleet and includes BESS, on-site PV, and electric vehicle chargers.
- Demonstrate and validate project benefits in energy cost savings, GHG reduction, peak load reduction and ensuing demand charge reduction, DR, increase in renewables achieved with AI-based DER approach, and enhanced grid resilience capability.



## Exhibit A Scope of Work

### TASK I GENERAL PROJECT TASKS

#### PRODUCTS

##### Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V)**. All products submitted which will be viewed by the public, must comply with the accessibility requirements of Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. Sec. 794d), and regulations implementing that act as set forth in Part 1194 of Title 36 of the Federal Code of Regulations. All technical tasks should include product(s). Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

##### The Recipient shall:

###### For products that require a draft version, including the Final Report Outline and Final Report

- Submit all draft products to the CAM for review and comment in accordance with the Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product.
- Submit the revised product and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

###### For products that require a final version only

- Submit the product to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

###### For all products

- Submit all data and documents required as products in accordance with the following:

###### Instructions for Submitting Electronic Files and Developing Software:

###### ○ **Electronic File Format**

- Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the California Energy Commission’s (CEC) software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick.

The following describes the accepted formats for electronic data and documents provided to the CEC as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:

## **Exhibit A Scope of Work**

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
- Text documents will be in MS Word file format, version 2007 or later.
- Project management documents will be in Microsoft Project file format, version 2007 or later.
  
- **Software Application Development**

Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:

  - 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 Electronic File Format requirements above must be approved in writing by the CAM. The CAM will consult with the CEC's Information Technology Services Branch to determine whether the exceptions are allowable.

### **MEETINGS**

#### **Subtask 1.2 Kick-off Meeting**

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

#### **The Recipient shall:**

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other CEC staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:

- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and

## **Exhibit A Scope of Work**

- Any other relevant topics.

The technical portion of the meeting will include discussion of the following:

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
  - An updated Project Schedule;
  - Technical products (subtask 1.1);
  - Progress reports (subtask 1.5);
  - Final Report (subtask 1.6);
  - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
  - Any other relevant topics.
- Provide *Kick-off Meeting Presentation* to include but not limited to:
    - Project overview (i.e. project description, goals and objectives, technical tasks, expected benefits, etc.)
    - Project schedule that identifies milestones
    - List of potential risk factors and hurdles, and mitigation strategy
  - Provide an *Updated Project Schedule, Match Funds Status Letter, and Permit Status Letter*, as needed to reflect any changes in the documents.

### **The CAM shall:**

- Designate the date and location of the meeting.
- Send the Recipient a *Kick-off Meeting Agenda*.

### **Recipient Products:**

- Kick-off Meeting Presentation
- Updated Project Schedule (*if applicable*)
- Match Funds Status Letter (subtask 1.7) (*if applicable*)
- Permit Status Letter (subtask 1.8) (*if applicable*)

### **CAM Product:**

- Kick-off Meeting Agenda

### **Subtask 1.3 Critical Project Review (CPR) Meetings**

The goal of this subtask is to determine if the project should continue to receive CEC funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the CEC and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient and may include the CAO and any other individuals selected by the CAM to provide support to the CEC.

CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR meetings generally take place at the CEC, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

## **Exhibit A Scope of Work**

### **The Recipient shall:**

- Prepare and submit a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

### **The CAM shall:**

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* with a list of expected CPR participants in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a schedule for providing a Progress Determination on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

### **Recipient Products:**

- CPR Report(s)

### **CAM Products:**

- CPR Agenda
- Progress Determination

### **Subtask 1.4 Final Meeting**

The goal of this subtask is to complete the closeout of this Agreement.

### **The Recipient shall:**

- Meet with CEC staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
  - Disposition of any procured equipment.
  - The CEC's request for specific "generated" data (not already provided in Agreement products).

## **Exhibit A Scope of Work**

- Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
- "Surviving" Agreement provisions such as repayment provisions and confidential products.
- Final invoicing and release of retention.
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide copies of *All Final Products* on a USB memory stick, organized by the tasks in the Agreement.

### **Products:**

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Final Products

## **REPORTS AND INVOICES**

### **Subtask 1.5 Progress Reports and Invoices**

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

#### **The Recipient shall:**

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
  - Summarize progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions, including a financial report on Match Funds and in-state expenditures.

### **Products:**

- Progress Reports
- Invoices

### **Subtask 1.6 Final Report**

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. When creating the Final Report Outline and the Final Report, the Recipient must use the CEC Style Manual provided by the CAM.

#### **Subtask 1.6.1 Final Report Outline**

#### **The Recipient shall:**

- Prepare a *Final Report Outline* in accordance with the *Energy Commission Style Manual* provided by the CAM.

## **Exhibit A Scope of Work**

### **Recipient Products:**

- Final Report Outline (draft and final)

### **CAM Product:**

- Energy Commission Style Manual
- Comments on Draft Final Report Outline
- Acceptance of Final Report Outline

### **Subtask 1.6.2 Final Report**

#### **The Recipient shall:**

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Energy Commission Style Manual, and Final Report Template provided by the CAM with the following considerations:
  - Ensure that the report includes the following items, in the following order:
    - Cover page (**required**)
    - Credits page on the reverse side of cover with legal disclaimer (**required**)
    - Acknowledgements page (optional)
    - Preface (**required**)
    - Abstract, keywords, and citation page (**required**)
    - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
    - Executive summary (**required**)
    - Body of the report (**required**)
    - References (if applicable)
    - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
    - Bibliography (if applicable)
    - Appendices (if applicable) (Create a separate volume if very large.)
    - Attachments (if applicable)
- Submit a draft of the Executive Summary to the TAC for review and comment.
- Develop and submit a *Summary of TAC Comments* received on the Executive Summary. For each comment received, the recipient will identify in the summary the following:
  - Comments the recipient proposes to incorporate.
  - Comments the recipient does propose to incorporate and an explanation for why.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt.
- Incorporate all CAM comments into the *Final Report*. If the Recipient disagrees with any comment, provide a *Written Responses to Comments* explaining why the comments were not incorporated into the final product.
- Submit the revised *Final Report* electronically with any Written Responses to Comments within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the CAM specifies a longer time period or approves a request for additional time.

#### **Products:**

- Summary of TAC Comments
- Draft Final Report
- Written Responses to Comments (*if applicable*)

## **Exhibit A Scope of Work**

- Final Report

### **CAM Product:**

- Written Comments on the Draft Final Report

### ***MATCH FUNDS, PERMITS, AND SUBCONTRACTS***

#### **Subtask 1.7 Match Funds**

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. The Recipient may only spend match funds during the Agreement term, either concurrently or prior to the use of CEC funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

#### **The Recipient shall:**

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If no match funds were part of the proposal that led to the CEC awarding this Agreement and none have been identified at the time this Agreement starts, then state this in the letter.

If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter:

- A list of the match funds that identifies:
  - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
  - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
  - If different from the solicitation application, provide a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

#### **Products:**

- Match Funds Status Letter

## **Exhibit A Scope of Work**

- Supplemental Match Funds Notification Letter (*if applicable*)
- Match Funds Reduction Notification Letter (*if applicable*)

### **Subtask 1.8 Permits**

The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

#### **The Recipient shall:**

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:
  - A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
  - The schedule the Recipient will follow in applying for and obtaining the permits.

The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.

- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

#### **Products:**

- Permit Status Letter
- Updated List of Permits (*if applicable*)
- Updated Schedule for Acquiring Permits (*if applicable*)
- Copy of Each Approved Permit (*if applicable*)

### **Subtask 1.9 Subcontracts**

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

#### **The Recipient shall:**

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.
- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.



## **Exhibit A Scope of Work**

- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of each executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

### **Products:**

- Subcontracts (*draft if required by the CAM*)

## **TECHNICAL ADVISORY COMMITTEE**

### **Subtask 1.10 Technical Advisory Committee (TAC)**

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
  - Technical area expertise;
  - Knowledge of market applications; or
  - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.
- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;

## **Exhibit A Scope of Work**

- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

### **The Recipient shall:**

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

### **Products:**

- List of Potential TAC Members
- List of TAC Members
- Documentation of TAC Member Commitment

### **Subtask 1.11 TAC Meetings**

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

### **The Recipient shall:**

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

### **The TAC shall:**

- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.

## **Exhibit A Scope of Work**

- Review and provide comments to proposed project performance metrics.
- Review and provide comments to proposed project Draft Technology Transfer Plan.

### **Products:**

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

### **Subtask 1.12 Project Performance Metrics**

The goal of this subtask is to finalize key performance targets for the project based on feedback from the TAC and report on final results in achieving those targets. The performance targets should be a combination of scientific, engineering, techno-economic, and/or programmatic metrics that provide the most significant indicator of the research or technology's potential success.

### **The Recipient shall:**

- Complete and submit the project performance metrics from the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task, to the CAM.
- Present the draft project performance metrics at the first TAC meeting to solicit input and comments from the TAC members.
- Develop and submit a *TAC Performance Metrics Summary* that summarizes comments received from the TAC members on the proposed project performance metrics. The *TAC Performance Metrics Summary* will identify:
  - TAC comments the Recipient proposes to incorporate into the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
  - TAC comments the Recipient does not propose to incorporate with and explanation why.
- Develop and submit a *Project Performance Metrics Results* document describing the extent to which the Recipient met each of the performance metrics in the *Final Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
- Discuss the *Project Performance Metrics Results* at the Final Meeting.

### **Products:**

- TAC Performance Metrics Summary
- Project Performance Metrics Results

## **Exhibit A Scope of Work**

### **III. TECHNICAL TASKS**

#### **TASK 2 SITE SURVEY, SYSTEM ENGINEERING DESIGN AND USE CASE DEVELOPMENT**

The goals of this task are to 1) produce the engineering design of a feasible and efficient DER system to support the BEB charging infrastructure for the transit bus fleets and 2) develop use cases for technology demonstrations. The DERs includes solar panels (PV), BESS and electric vehicle chargers that charge BEBs. This task will be carried out through the following subtasks.

##### **Task 2.1 System Engineering Design and Capacity Planning**

The goal of this task is to design the parameters and configuration of the EV infrastructure composed of a battery storage system, solar PV system, charging stations, and power electronic converters, along with the capacity planning of the battery storage system.

##### **The Recipient shall:**

- Conduct distribution feeder hosting capacity analysis
- Conduct load analysis based on BEB operation and charging behavior
- Conduct power generation analysis for the Solar PV system
- Consider design factors that can contribute to the resilience of charging station infrastructure in terms of safety, robustness, rapid recovery, and adaptability
- Prepare the *System Engineering and Resilience Design Report* which shall include a summary of processes completed for the activities described above

##### **Products:**

- System Engineering and Resilience Design Report

##### **Task 2.2 Characterization of Travel Behaviors and Energy Utilization of the MDHD EVs**

The goal of this task is to understand the travel and energy consumption characteristics of the MDHD EVs being studied in this project via site survey and data analytics. The data includes the 1) key parameters of the MDHD fleet, e.g., fleet sizes, gross vehicle weight rating (GVWR) rating of each vehicle and electrified powertrain parameters, such as rated efficiency, battery size, etc., 2) detailed operation data with specific duty-cycle info that include GPS locations and speed values with regular timestamps, and 3) MDHD fleet operation timetables that specify the routes and schedules of each trip on different weekdays.

##### **The Recipient shall:**

- Model the MDHD fleet and the vehicle specifications using the existing software tool, HEVI-LOAD (previously called HEVI-PRO), developed by Lawrence Berkeley National Laboratory (LBNL) for medium- and heavy-duty electric vehicle charging infrastructure projection
- Quantify the energy consumption per trip by each vehicle using the GPS location data and conduct uncertainty quantification of the trip energy needed with respect to different driving patterns
- Produce a *Fleet Characteristics and Energy Consumption Quantification Report* that summarizes the fleet characteristics and energy consumption quantification of the MDHD EV fleets for different driving patterns

##### **Products:**

- Fleet Characteristics and Energy Consumption Quantification Report

## **Exhibit A Scope of Work**

### **Task 2.3 Charging Demand Forecast for Electrified Transit Fleet Using Data-driven Approaches**

The goal of this task is to estimate the charging demand and load profiles of the MDHD EV fleet under a variety of scenarios. Using the agent-based simulation capability of the HEVI-LOAD tool, being developed by the subcontractor and the historical GPS location data, the Recipient will develop multiple charging scenarios and determine the time-dependent fleet charging load profiles.

#### **The Recipient shall:**

- Process the historical trip statistics and the derived energy consumption values
- Build predictive models to estimate the number of MDHD fleet trips, charging schedules, and energy demands under multiple circumstances that include varying penetration of EVs in fleets
- Determine the corresponding charging load profiles under different scenarios using the agent-based simulation tool
- Produce a *Predictive & Forecasting Models and The Charging Load Profiles Report* on the predictive & forecasting models and the projected charging load profiles under a variety of scenarios

#### **Products:**

- Predictive & Forecasting Models and The Charging Load Profiles Report

### **Task 2.4 DER with EV Package Simulation**

The goal of this task is to conduct DER integration simulation. DER integration makes the existing distribution grid into a smart grid. EVs need significant power. Moreover, California has its own standard and grid code for DERs. Therefore, modeling and simulation studies are needed for proper operation, safety, optimization and planning.

#### **The Recipient shall:**

- Model Battery Management System (BMS) and cell level EV battery chemistry to demonstrate 1) Constant Current vs. Constant Voltage charging-discharging cycles, 2) Aging and temperature effects
- Investigate DER interconnection studies to check under voltage, overloading, protection, and relay coordination of SCE local feeders
- Determine optimum size and location of DER and EV charging stations
- Test and validate design considering DER standards for California, e.g., California Rule 21, IEEE 1547
- Prepare a *DER Simulation Report* containing but not limited to power flow, short circuit, relay coordination, optimum size and location, verification and validation procedure, and ETAP simulation results

#### **Products:**

- DER Simulation Report

### **Task 2.5 Use Case Development**

The goal of this task is to develop use cases for data collection, demonstrations, and performance matrix validations.

## **Exhibit A Scope of Work**

### **The Recipient shall:**

- Develop use cases for each demonstration. The use cases will be categorized into the following 3 areas: Cost management, Resilience and Renewable integration.
- Identify actors, trigger, preconditions, normal flow, alternate flow, exceptions, post-conditions, and success criteria
- Identify baseline data set and use case data set to be collected
- Produce a *Use Cases and Demonstration Plan Report* that describes each case and planned demonstrations.

### **Products:**

- Use Cases and Demonstration Plan Report (draft and final)

### **TASK 3 EQUIPMENT ACQUISITION AND CONSTRUCTION PLANNING**

The goals of this task are to produce a feasible construction plan and to start the process of equipment acquisition.

### **The Recipient shall:**

- Identify and select electric construction subcontractor(s) for the installation of PV, BESS and EV chargers.
- Obtain quotes and begin the acquisition process of selected equipment including PV, BESS and EV chargers, and electric buses.
- Prepare schematic drawings and construction scheduling and submit them for building, construction and electric permits.
- Obtain required permits in a timely manner according to Task 1.8
- Prepare a *Construction Schedule and Planning Report* which will include but are not limited to schematic drawings of the system, construction scheduling, equipment specifics.
- Prepare *CPR Report*

### **Products:**

- Construction Schedule and Planning Report
- CPR Report

### **TASK 4 CONSTRUCTION, SYSTEM DEPLOYMENT, AND TESTING**

The goal of this task is to install, deploy and test the proposed smart charging platform with integration of PV and BESS.

### **The Recipient shall:**

- Work with electric subcontractor(s), GTrans fleet operations, GTrans facility management to begin system deployment.
- Prepare and deploy hosting server(s) and software applications that allow web and database server to bring installed PV, BESS and EV chargers online.
- Test and verify the monitoring and/or control functions of the installed components.
- Test and verify AI based-smart charging algorithm software and BESS operations as new installations are added to the EV charging network.
- Prepare *Construction Progress Reports* in accordance with Task 1.5 to report progress on the installation and commissioning tasks after construction begins.

## Exhibit A Scope of Work

### Products:

- Construction Progress Report

### **TASK 5 DEMONSTRATION, VALIDATION, IMPROVEMENT AND MAINTENANCE**

The goal of this task is to demonstrate, improve, and validate the deployed smart EV charging platform to make sure it is in-line with achieving the proposed performance criteria of this project.

#### **Task 5.1 Optimal Sizing of Charging Stations to Support MDHD Vehicle Electrification**

The goal of this task is to determine the optimal configuration of chargers for the site being studied, including the charger types, power ratings, and the number of plugs per charger. The subcontractor team will develop optimization-based approaches to derive the optimal configuration for the currently proposed demonstration, and after installation, via data collected for scaling up the solution to larger number of BEBs, considering the travel usage patterns and the onsite renewable generation profiles.

#### **The Recipient shall:**

- Develop optimization-based approaches to determine the best charging infrastructure configurations that maximize the charger accessibility to the MDHD fleet and minimize the capital investment in the long term, considering the tariff structures, renewable generation profiles, and the MDHD fleet usage patterns.
- Compare different charging infrastructure configurations and evaluate the cost-effectiveness of deployment plans
- Produce a report, *Optimal Charging Infrastructure Configuration Plans*, on the development of optimal charging infrastructure configuration plans given the MDHD fleet usage patterns charging demand, and renewable generation.

### Products:

- Optimal Charging Infrastructure Configuration Plans Report

#### **Task 5.2 Optimal Operation of High-Power Chargers with Co-located DERs**

The goal of this task is to develop effective control methods and energy management strategies for the high-power chargers being deployed to support the MD/HD EV operations. A number of factors will be considered to determine the optimal charge and DER operation strategies, including the time-of-use energy prices, demand charges, hourly renewable energy generations and forecasts as well as local power grid constraints, such as the circuit capacity values. The developed control methods will be validated using the agent-based simulation capabilities within the HEVI-LOAD tool developed by the subcontractor.

#### **The Recipient shall:**

- Develop charger control methods and inverter control methods in order to minimize the operation cost and maximize the renewable generation for the site
- Extend the existing agent-based simulation capability within the HEVI-LOAD to support a case study for the site being studied in this project, including the detailed vehicle activities simulation, power flow analysis for the local distribution grid, and additional modules for renewable generations and operation cost estimation.
- Validate the charger control and DER management strategies within HEVI-LOAD simulations against the real-world measurement data collected by site operators.

## **Exhibit A**

### **Scope of Work**

- Prepare a *Charger Control and DER Energy Management Report* on the charger control and DER energy management methods developed along with simulation and validation results.

#### **Products:**

- Charger Control and DER Energy Management Report

#### **Task 5.3 Validate Operational Feasibility**

The goal of this task is to ensure the DER package design matches fleet operational duty cycle (DC) characteristics. Every fleet has unique operating characteristics (time of day, seasonality, hours of operation, variation in daily work demand, average distance, speed and payload, kinetic intensity, miles per stop, etc.). For a successful demonstration, the DER package design must support and match fleet operations.

#### **The Recipient shall:**

- Define and document the fleet operating duty cycle:
  - Identify key factors for fleet operations
  - Document duty cycle statistics for key factors
- Compare fleet duty cycle to solution alternatives:
  - Match DER package design to fleet operation
  - Identify areas of concern (AOCs) impacting likelihood of operational success
- Develop an *Operational Feasibility Report* including the following:
  - Fleet Operating Duty Cycle(s)
  - Document AOCs
  - Identify strategies to address AOCs

#### **Products:**

- Operational Feasibility Report

#### **Task 5.4 Demonstration and validation of project benefits**

The goal of this task is to demonstrate and validate the targeted project benefits by examining the system performance criteria proposed in Task 1.12.

#### **The Recipient shall:**

- Continue to collect operational data and perform preliminary data analysis and compare with proposed project performance criteria.
- Determine relevant modifications of ML algorithms in the AI system based on learnings from real-time and historical data gathered to scale up to commercial grade systems.
- Maintain and service components of the EV smart charging platform to uphold normal operation and continuous data collection.
- Host technology demonstration for invited visitors from other transit fleets to showcase the EV smart charging platform deployed in this project.
- Prepare a *Demonstration and Preliminary Project Benefit Validation Report* which will include but is not limited to the preliminary benefit evaluation, prediction of meeting the proposed performance criteria and demonstration outcome.

#### **Products:**

- Demonstration and Preliminary Project Benefit Validation Report



## **Exhibit A Scope of Work**

### **TASK 6 DATA COLLECTION AND ANALYSIS**

The goal of this task is to collect operational data from the project, to analyze that data based on the demonstrations and use cases developed in Task 2.4. and to include the analysis result in the Final Report.

#### **The Recipient shall:**

- Collect baseline data which will include vehicle utilization, charging energy, bus routes, charging schedules, charging power profile, operational cost, energy cost, vehicle models, vehicle battery capacity, electric utility tariff, and TOU pricing.
- Collect 12 months of data based on the use cases and demonstrations which may include but not limited to peak power, duration of active charging, arrival and departure time of the vehicle, energy delivered, PV generation, BESS charging and discharging sessions, and demand charge mitigation.
- Conduct data analysis and provide best practice scenarios for future technology replicability and scalability
- Prepare a *Use Case Data Collection and Analysis Report* that compares project performance and expectations using performance matrix and use case defined.

#### **Products:**

- Use Case Data Collection and Analysis Report

### **TASK 7 COMMUNITY OUTREACH AND EDUCATION**

The goal of this task is to perform engagement and provide outreach and education to the neighborhood community residents about the benefits of electric power mobility – lower pollution, lower cost of electricity, less noise from electric transportation, increased clean energy in the grid, a more reliable electric grid, and reducing climate change.

#### **The Recipient shall:**

- Identify outreach and educational goals, target populations, venues and modes of communication in the transit service area
- Identify and compile a list of Community-Based Organizations (CBOs) and public sector agencies, establish Outreach Contact Database, Outreach/Education Calendar, Coordinate and schedule Outreach Events and create an Outreach/Education Solicitation Matrix
- Adapt educational and public relations materials to the community needs
- Organize events suitable to the community to engage them, learn from them, and educate and inform them of the benefits of the project
- Track and estimate the number of people impacted by the overall project in the immediate term of the project and as the project scales up to full electrification in the future.
- Prepare a *Gardena Community Outreach Report* that presents the results of the
- community-based organization work performed including estimates of the number of people impacted, CBO and Public Sector Outreach Database, Outreach/Education, Solicitation Matrix, Outreach/Education Calendar

#### **Products:**

- Gardena Community Outreach Report

## **Exhibit A Scope of Work**

### **TASK 8 EVALUATION OF PROJECT BENEFITS**

The goal of this task is to report the benefits resulting from this project.

#### **The Recipient shall:**

- Complete the *Initial Project Benefits Questionnaire*. The *Initial Project Benefits Questionnaire* shall be initially completed by the Recipient with 'Kick-off' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Complete the *Annual Survey* by December 15th of each year. The Annual Survey includes but is not limited to the following information:
  - Technology commercialization progress
  - New media and publications
  - Company growth
  - Follow-on funding and awards received
- Complete the *Final Project Benefits Questionnaire*. The *Final Project Benefits Questionnaire* shall be completed by the Recipient with 'Final' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Respond to CAM questions regarding the questionnaire drafts.
- Complete and update the project profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Project Profile on EnergizeInnovation.fund*, including the profile link.
- If the Prime Recipient is an Innovation Partner on the project, complete and update the organizational profile on the CEC's public online project and recipient directory on the [Energize Innovation website \(www.energizeinnovation.fund\)](http://www.energizeinnovation.fund), and provide *Documentation of Organization Profile on EnergizeInnovation.fund*, including the profile link.

#### **Products:**

- Initial Project Benefits Questionnaire
- Annual Survey(s)
- Final Project Benefits Questionnaire
- Documentation of Project Profile on EnergizeInnovation.fund
- Documentation of Organization Profile on EnergizeInnovation.fund

### **TASK 9 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

The goal of this task is to ensure the technological learning that resulted from the demonstration(s) is captured and disseminated to the range of professions that will be responsible for future deployments of this technology or similar technologies.

#### **The Recipient Shall:**

- Develop and submit an *Initial Project Case Study Plan (Draft/Final)* that outlines how the Recipient will document the planning, construction, commissioning, and operation of the technology or system being demonstrated. The *Initial Project Case Study Plan* should include:
  - An outline of the objectives, goals, and activities of the case study.

## **Exhibit A Scope of Work**

- The organization that will be conducting the case study and the plan for conducting it.
- A list of professions and practitioners involved in the technology's deployment.
- Specific activities the recipient will take to ensure the learning that results from the project is disseminated to those professions and practitioners.
- Presentations/webinars/training events to disseminate the results of the case study.
- Present the *Draft Project Case Study Plan* to the TAC for review and comment.
- Develop and submit a *Summary of TAC Comments* that summarizes comments received from the TAC members on the *Draft Project Case Study Plan*. This document will identify:
  - TAC comments the recipient proposes to incorporate into the *Final Technology Transfer Plan*.
  - TAC comments the recipient does not propose to incorporate with and explanation why.
- Submit the *Final Project Case Study Plan* to the CAM for approval.
- Execute the *Final Project Case Study Plan* and develop and submit a *Project Case Study Report (Draft/Final)*
- When directed by the CAM, develop presentation materials for an CEC- sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California CEC.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.

### **Products:**

- Project Case Study Plan (Draft/Final)
- Summary of TAC Comments
- Project Case Study Report (Draft/Final)
- High Quality Digital Photographs

## **IV. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.

# Exhibit IV - CEC Grant Agreement

**ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION AGREEMENTS**  
**Exhibit A-1 - Scope of Work**  
**MOEV, Inc**  
**v. PROJECT SCHEDULE**

**Agreement Term: 6-1-2021 to 11-30-2024**

*Within this Scope of Work, "days" means working days.*

*Changes to due dates must be approved in writing by the CAM, and may require approval by the CEC's Executive Director or his/her designee.*

Task/ Subtask #	Task/Subtask Name	Meeting Name	Product(s)	Due Date
1	General Project Tasks			
1.1	Products			
1.2	Kick-off Meeting	Kick-off Meeting		6/15/2021
			Kick-off Meeting Presentation	3 days prior to Kick-off Meeting
			Updated Project Schedule ( <i>if applicable</i> )	7 days after determination of the need to update the documents
			Match Funds Status Letter (subtask 1.7) ( <i>if applicable</i> )	7/1/2021
			Permit Status Letter (subtask 1.8) ( <i>if applicable</i> )	8/2/2021
			CAM Product	
			Kick-off Meeting Agenda	7 days prior to the kick-off meeting
1.3	CPR Meeting	CPR Meeting #1		1/10/2022
			CPR Report(s)	15 days prior to the CPR meeting
			CAM Products	
			CPR Agenda	5 days prior to the CPR meeting
			Progress Determination	As indicated in the Schedule for Providing a Progress Determination
1.4	Final Meeting	Final Meeting		10/7/2024
			Final Meeting Agreement Summary ( <i>if applicable</i> )	7 days after the final meeting
			Schedule for Completing Agreement Closeout Activities	7 days after the final meeting
			All Final Products	7 days after the final meeting
1.5	Progress Reports and Invoices		Progress Reports	10 days after the first of each month
			Invoices	10 days after the first of each month or quarter
1.6	Final Report			
1.6.1	Final Report Outline		Draft Final Report Outline	2/28/2024
			Final Report Outline	As determined by the CAM
			CAM Product (s)	
			Energy Commission Style Manual	At least 2 months prior to the final report outline due date
			Comments on Draft Final Report Outline	10 days after receipt of the Draft Final Report Outline
			Approval of Final Report Outline	10 days after receipt of the Final Report Outline
1.6.2	Final Report		Summary of TAC Comments	
			Draft Final Report	4/30/2024
			Written Responses to Comments ( <i>if applicable</i> )	
			Final Report	6/28/2024
			CAM Products	
			Written Comments on Draft Final Report	15 days after receipt of the Draft Final Report
1.7	Match Funds		Match Funds Status Letter	2 days prior to the kick-off meeting
			Supplemental Match Funds Notification Letter ( <i>if applicable</i> )	10 days after receipt of additional match funds
			Match Funds Reduction Notification Letter ( <i>if applicable</i> )	10 days after any reduction of match funds
1.8	Permits		Permit Status Letter	2 days prior to the kick-off meeting
			Updated List of Permits ( <i>if applicable</i> )	10 days after determination of the need for a new permit
			Updated Schedule for Acquiring Permits ( <i>if applicable</i> )	10 days after determination of the need for a new permit
			Copy of Each Approved Permit ( <i>if applicable</i> )	7 days after receipt of each permit
1.9	Subcontracts		Draft Subcontracts ( <i>if required by the CAM</i> )	As determined by the CAM
			Final Subcontracts	As determined by the CAM
1.10	Technical Advisory Committee (TAC)		List of Potential TAC Members	2 days prior to the kick-off meeting
			List of TAC Members	7 days after finalization of the TAC
			Documentation of TAC Member Commitment	7 days after receipt of the documentation
1.11	TAC Meetings	TAC Meeting #1		6/6/2022
			Draft TAC Meeting Schedule	20 days after the kickoff meeting
			Final TAC Meeting Schedule	10 days after the first TAC meeting
			Draft TAC Meeting Agendas	20 days prior to each TAC meeting
			TAC Meeting Back-up Materials	20 days prior to each TAC meeting
			Final TAC Meeting Agenda	7 days prior to each TAC meeting
			TAC Meeting Summaries	10 days after each TAC meeting
1.12	Project Performance Metrics		TAC Performance Metrics Summary	10 days after first TAC meeting
			Project Performance Metrics Results	10/15/2024

# Exhibit IV - CEC Grant Agreement

ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION AGREEMENTS  
 Exhibit A-1 - Scope of Work  
 MOEV, Inc  
 V. PROJECT SCHEDULE

Task/ Subtask #	Task/Subtask Name	Meeting Name	Product(s)	Due Date
<b>Technical Tasks</b>				
2	Site Survey, System Engineering Design and Use Case Development			
2.1	System Engineering Design and Capacity Planning		System Engineering and Resilience Design Report	9/10/2021
2.2	Characterization of Travel Behaviors and Energy Utilization of the MDHD Evs		Fleet Characteristics and Energy Consumption Quantification Report	3/15/2022
2.3	Charging Demand Forecast for Electrified Transit Fleet Using Data-driven Approaches		Predictive & Forecasting Models and The Charging Load Profiles Report	5/16/2022
2.4	DER with EV Package Simulation		DER Simulation Report	5/16/2022
2.5	Use Case Development		Draft Use Cases and Demonstration Plan Report	4/15/2022
			Final Use Cases and Demonstration Plan Report	5/16/2022
3	Equipment Acquisition and Construction Planning		Construction Schedule and Planning Report	9/15/2021
			CPR Report	1/21/2022
4	Construction, System Deployment, and Testing		Construction Progress Report	Included with monthly progress reports after construction begins
5	Demonstration, Validation, Improvement and Maintenance			
5.1	Optimal Sizing of Charging Stations to Support MDHD Vehicle Electrification		Optimal Charging Infrastructure Configuration Plans Report	12/15/2023
5.2	Optimal Operation of High-Power Chargers with Co-located DERs		Charger Control and DER Energy Management Report	1/15/2024
5.3	Validate Operational Feasibility		Operational Feasibility Report	11/15/2023
5.4	Demonstration and validation of project benefits		Demonstration and Preliminary Project Benefit Validation Report	1/31/2024
6	Data Collection and Analysis		Use Case Data Collection and Analysis Report	2/15/2024
7	Community Outreach and Education		Gardena Community Outreach Report	2/29/2024
8	Evaluation of Project Benefits		Initial Project Benefits Questionnaire	6/30/2021
			Annual Survey(s)	12/15/2021, 12/15/2022, 12/15/2023
			Final Project Benefits Questionnaire	10/15/2024
			Documentation of Project Profile on EnergizeInnovation.fund	9/16/2024
			Documentation of Organization Profile on EnergizeInnovation.fund	9/16/2024
9	Technology/Knowledge Transfer Activities		Project Case Study Plan (Draft)	9/15/2021
			Project Case Study Plan (Final)	11/15/2021
			Summary of TAC Comments	3/15/2022
			Final Project Case Study Report (Draft)	2/1/2024
			Final Project Case Study Report (Final)	2/15/2024
			High Quality Digital Photographs	2/28/2024

Exhibit IV - CEC Grant Agreement  
**EXHIBIT A, ATTACHMENT A-2**  
**CONTENT AND FORMAT OF PROGRESS REPORTS**

**PROGRESS REPORT for MOEV, Inc.**

**Month, Year**

Recipient Project Manager:  
Commission Agreement Manager:

**What we planned to accomplish this period**

[This is taken directly from the section on “What we expect to accomplish during the next period” from the last progress report.]

**What we actually accomplished this period**

[Concise description of major project activities and accomplishments. Include ratepayer benefits achieved to date ]

**How we are doing compared to our plan**

[Explain the differences, if any, between the planned and the actual accomplishments. Describe what needs to be done, if anything, to get back on track.]

**Significant problems or changes**

[Describe any significant technical or fiscal problems. Request approval for significant changes in work scope, revised milestone due dates, changes in key personnel assigned to the project, or reallocation of budget cost categories. If none, include the following statement: “Progress and expenditures will result in project being completed on time and within budget.”]

**What we expect to accomplish during the next period**

[Concise description of major activities and accomplishments expected. This will be transferred to the next progress report]

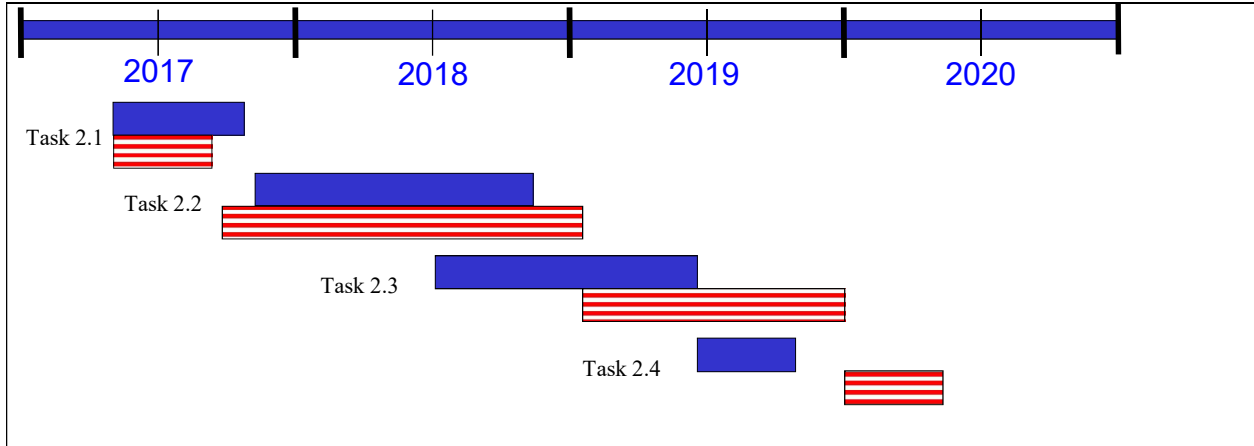
**Status of Milestones and Products:**

[This should be the complete list as contained in the revised scope of work and Exhibit B. Highlight differences between actual and planned. This can be an excel attachment from the Exhibit A Project Schedule with additional “Actual” and “Status (%)”columns.]

Exhibit IV - CEC Grant Agreement  
**EXHIBIT A, ATTACHMENT A-2**  
**CONTENT AND FORMAT OF PROGRESS REPORTS**

Description	Start Date		Due Date		Status (%)
	Planned	Actual	Planned	Actual	
Identify top 3 assessment candidates	4/15/17	4/15/17	5/1/17	5/1/17	On time 100%
Develop test plan	4/20/17	<b>4/10/17</b>	7/7/17	<b>6/10/17</b>	<b>Ahead 100%</b>
Analyze experimental data	5/1/17	<b>6/1/17</b>	1/1/18	<b>2/1/18</b>	<b>Delayed 25%</b>

Exhibit IV - CEC Grant Agreement  
**EXHIBIT A, ATTACHMENT A-2**  
**CONTENT AND FORMAT OF PROGRESS REPORTS**



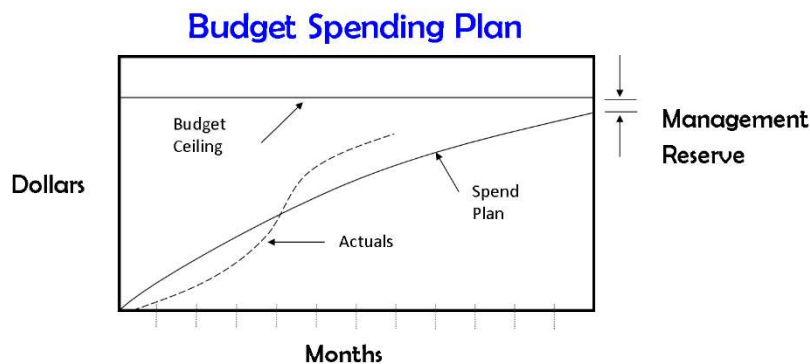
**Overall schedule for the project.**

[Planned is solid blue, actual is red striped. This work flow diagram needs to correlate with the schedule in Exhibit B. This example has been prepared as a Word Picture, but a comparable Excel diagram, Microsoft Project schedule, or Gantt chart is acceptable.]

**Overview of Fiscal Status:** (See invoices for detail.)

[It is useful to track the rate of expenditure of project funds. The most useful way to do this is to compare the actual expenditure rate with the planned expenditure rate. You get the planned rate at the beginning of the project, so it becomes a baseline. If you change course at a critical project review, you should show the original and the modified baseline, and then track against the new one.]

[Report on the status of actual expenditures and progress in relation to the original Spend Plan.]



[Report estimates of Commission and match expenditures at a task level including: total budget amount, estimated amount spent to date, and estimated amount spent since last progress report. If making changes to the planned budget totals since the last progress report, please use the ~~strikethrough~~ format on the old amount and add the new amount using the **bold and underline** format.]



Exhibit IV - CEC Grant Agreement  
**EXHIBIT A, ATTACHMENT A-2**  
**CONTENT AND FORMAT OF PROGRESS REPORTS**

**Overview of Budget Expenditures:**

The Energy Commission Contract Manager may request the expenditures be provided in Table 1. Input the proposed budget from the project narrative in the second column. CAM may modify table as needed. Please note that table is an estimate and only used to help track progress of tasks.

**Table 1: Task breakdown Commission and match expenses to date**  
**Covering Period From Start Date: \_\_\_\_\_ To End Date: \_\_\_\_\_**

Task	Estimated Commission Expenses to Date	Total Anticipated Commission Budget	% Complete
1.0 [insert task title]			
2.0 [insert task title]			
3.0 [insert task title]			
4.0 [insert task title]			
5.0 [insert task title]			
6.0 [insert task title]			
7.0 [insert task title]			
8.0 [insert task title]			

**Photographs:**

[Include photographs where appropriate to document progress. The photos shall be shot with high quality digital photos.]

**Evidence of Progress:**

[Attach evidence of the progress being made (e.g., test data, product mock-ups, field site descriptions, preliminary analyses, meeting minutes) to the progress reports to allow the Commission Agreement Manager to review progress and gauge the quality of research results.]

[The progress report on each project should be approximately 1-2 pages long (plus photographs) and take about 1 hour to prepare for each reporting period.]

**EXHIBIT C**  
**ELECTRIC PROGRAM INVESTMENT CHARGE (EPIC) STANDARD**  
**GRANT TERMS AND CONDITIONS**

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**ATTACHMENT 1: CONFIDENTIAL PRODUCTS AND PROJECT-RELEVANT PRE-EXISTING AND INDEPENDENTLY FUNDED INTELLECTUAL PROPERTY**

## EXHIBIT C

### TERMS AND CONDITIONS

**1. Introduction**

This grant agreement (Agreement) between the California Energy Commission (Energy Commission, or Commission) and the Recipient is funded by the Electric Program Investment Charge (EPIC), an electricity ratepayer surcharge authorized by the California Public Utilities Commission (CPUC).

This Agreement includes: (1) the Agreement signature page (**form CEC-146**); (2) the scope of work (**Exhibit A**); (3) the budget (**Exhibit B**); (4) these terms and conditions (**Exhibit C**); (5) any special terms and conditions that address the unique circumstances of the funded project (**Exhibit D**); (6) a contacts list (**Exhibit E**); (7) all attachments; and (8) all documents incorporated by reference.

All work and expenditure of funds (Commission-reimbursed and/or match share) must occur within the Agreement term specified on the CEC-146 form.

**2. Documents Incorporated by Reference**

The documents below are incorporated by reference into this Agreement. These terms and conditions will govern in the event of a conflict with the documents below, with the exception of the documents in subsections (f) and (g) below. Where this Agreement or California laws and regulations are silent or do not apply, the Energy Commission will use the federal cost principles and acquisition regulations listed below as guidance in determining whether reimbursement of claimed costs is allowable. Documents incorporated by reference include:

**Solicitation Documents (*if award is made through a competitive solicitation*)**

- a. The funding solicitation for the project supported by this Agreement
- b. The Recipient's proposal submitted in response to the solicitation

**CPUC Decision**

- c. Decision 13-11-025 (Decision Addressing Applications of the California Energy Commission, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company for Approval of their Triennial Investment Plans for the Electric Program Investment Charge Program for the Years 2012 through 2014) <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K773/81773445.PDF>

**Federal Cost Principles (*applicable to state and local governments, Indian tribes, institutions of higher education, and nonprofit organizations*)**

- d. 2 Code of Federal Regulations (CFR) Part 200, Subpart E (Sections 200.400 et seq.)

**Federal Acquisition Regulations (*applicable to commercial organizations*)**

- e. 48 CFR, Ch.1, Subchapter E, Part 31, Subpart 31.2: Contracts with Commercial Organizations (supplemented by 48 CFR, Ch. 9, Subchapter E, Part 931, Subpart 931.2 for Department of Energy grants)

**Nondiscrimination**

- f. 2 California Code of Regulations, Section 11099 et seq.: Contractor Nondiscrimination and Compliance

**General Laws**

- g. Any federal, state, or local laws or regulations applicable to the project that are not expressly listed in this Agreement

**3. Standard of Performance**

In performing work under the Agreement, the Recipient, its subcontractors, and their employees are responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures for the type of work performed.

**4. Due Diligence**

The Recipient must take timely actions that, taken collectively, move this project to completion. The Commission Agreement Manager will periodically evaluate the project schedule for completion of Scope of Work tasks. If the Commission Agreement Manager determines that: (1) the Recipient is not diligently completing the tasks in the Scope of Work; or (2) the time remaining in this Agreement is insufficient to complete all project tasks by the Agreement end date, the Commission Agreement Manager may recommend that this Agreement be terminated, and the Commission may terminate this Agreement without prejudice to any of its other remedies.

**5. Products**

- a. **“Products”** are any tangible item specified for delivery to the Energy Commission in the Scope of Work, such as reports and summaries.

- The Recipient will submit all products identified in the Scope of Work to the Commission Agreement Manager, in the manner and form specified in the Scope of Work.
- The Recipient will also submit all products prepared during the invoicing period to the Accounting Office along with the invoice, as specified in subsection (c) of Section 8 (Payment of Funds).

If the Commission Agreement Manager determines that a product is substandard given its description and intended use as described in this Agreement, the Commission Agreement Manager, without prejudice to any of the Commission’s other remedies, may refuse to authorize payment for the product and any subsequent products that rely on or are based upon the product under this Agreement.

- b. Confidential Products

Please see Section 18 (Confidentiality) for instructions regarding confidential products.

- c. Rights in Products

The Energy Commission owns all products identified in the Scope of Work, with the exception of products that fall within the definition of “intellectual property.” The Recipient owns all intellectual property developed under this Agreement (please see the “Intellectual Property” section).

The Recipient has a non-exclusive, non-transferable, irrevocable, worldwide, perpetual license to use, publish, translate, modify, and reproduce products that do not fall within the definition of “intellectual property.”

d. Failure to Submit Products

Failure to submit a product required in the Scope of Work may be considered material noncompliance with the Agreement terms. Without prejudice to any other remedies, noncompliance may result in actions such as the withholding of future payments or awards, or the suspension or termination of the Agreement.

e. Final Report and Payment

The Recipient may only submit a request for the final payment (including any retention) after the final report is completed, submitted to the Commission Agreement Manager, and Energy Research and Development Division management has verified satisfactory completion of work.

f. Legal Statements on Products

- 1) All documents that result from work funded by this Agreement and are released to the public must include the following statement to ensure no Commission endorsement of documents:

**LEGAL NOTICE**

**This document was prepared as a result of work sponsored by the California Energy Commission. It does not necessarily represent the views of the Energy Commission, its employees, or the State of California. Neither the Commission, the State of California, nor the Commission’s employees, contractors, or subcontractors makes any warranty, express or implied, or assumes any legal liability for the information in this document; nor does any party represent that the use of this information will not infringe upon privately owned rights. This document has not been approved or disapproved by the Commission, nor has the Commission passed upon the accuracy of the information in this document.**

- 2) The Recipient will apply copyright notices to all documents prepared for this Agreement that are released to the public (including reports, articles submitted for publication, and all reprints) using the following form or any other form that may be reasonably specified by the Energy Commission.

**“©[Year of first publication of product] [the Copyright Holder’s name]. All Rights Reserved.”**

**6. Amendments**

a. Procedure for Requesting Changes

The Recipient must submit a written request to the Commission Agreement Manager for any change to the Agreement. The request must include:

- A brief summary of the proposed change;

## Exhibit IV - CEC Grant Agreement

- A brief summary of the reason(s) for the change;
- Justification for the change; and
- The revised section(s) of the Agreement, with changes made in underline/ strikethrough format.

### b. Approval of Changes

No amendment or variation of this Agreement shall be valid unless made in writing and signed by both of the parties except for the Commission's unilateral termination rights in Section 16 of these terms. No oral understanding or agreement is binding on any of the parties. Changes to the Agreement must be approved at a Commission business meeting or by the Executive Director (or his/her designee).

The Commission Agreement Manager or Commission Agreement Officer will provide the Recipient with guidance regarding the level of Commission approval required for a proposed change.

### c. Personnel or Subcontractor Changes

All changes below require advance written approval by the Commission Agreement Manager, in addition to the appropriate level of Commission approval as described in subsection (b).

#### 1) Replacement of Personnel, Subcontractors, and Vendors

The Commission Agreement Manager must provide advance written approval of the replacement of any personnel except undergraduate students.

#### 2) Assignment of New Personnel to an Existing Job Classification

If the Recipient or a subcontractor seeks to assign new personnel to a job classification identified in Exhibit B, the Recipient or subcontractor must submit the individual's resume and proposed job classification and rate to the Commission Agreement Manager for approval. The proposed rate may not exceed the maximum rate identified for the job classification. Neither the Recipient nor any subcontractor may use the job classifications or rates of their subcontractors for personnel.

If the individual performs any work prior to the effective date of the amendment documenting the change, the Recipient will bear the expense of the work.

#### 3) Promotion of Existing Personnel (Applies to Recipients and major subcontractors)

Promotion of existing Recipient and major subcontractor personnel to rates higher than those listed for their current classification in Exhibit B will not be approved. If the actual rates (e.g., direct labor rates, fringe benefit rates, and indirect rates) exceed the approved rates in the Budget, the difference may be charged to the agreement as a match share expenditure.

- 4) Addition of job classifications and changes in hours.
- 5) Increased direct operating expenses and rates that exceed the expenses and rates identified in Exhibit B.

**7. Contracting and Procurement Procedures**

This section provides general requirements for agreements entered into between the Recipient and subcontractors for the performance of this Agreement.

a. Contractor's Obligations to Subcontractors

1) The Recipient is responsible for handling all contractual and administrative issues arising out of or related to any subcontracts it enters into for the performance of this Agreement.

2) Nothing contained in this Agreement or otherwise creates any contractual relation between the Commission and any subcontractors, and no subcontract may relieve the Recipient of its responsibilities under this Agreement. The Recipient agrees to be as fully responsible to the Commission for the acts and omissions of its subcontractors or persons directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Recipient.

The Recipient's obligation to pay its subcontractors is an independent obligation from the Commission's obligation to make payments to the Recipient. As a result, the Commission has no obligation to pay or enforce the payment of any funds to any subcontractor.

3) The Recipient is responsible for establishing and maintaining contractual agreements with and reimbursing each subcontractor for work performed in accordance with the terms of this Agreement.

b. Flow-Down Provisions

Subcontracts funded in whole or in part by this Agreement must include language conforming to the provisions below, unless the subcontracts are entered into by the University of California (UC) or the U.S. Department of Energy (DOE) national laboratories. UC may use the terms and conditions negotiated by the Energy Commission with UC for its subcontracts. DOE national laboratories may use the terms and conditions negotiated with DOE (please contact the Commission Grants Officer for these terms).

- Standard of Performance (Section 3)
- Legal Statements on Products (included in Section 5, "Products")
- Travel and Per Diem (Section 9)
- Prevailing Wage (Section 10)
- Recordkeeping, Cost Accounting, and Auditing (Section 11)
- Equipment (Section 14)
- Indemnification (Section 17)
- Confidentiality (Section 18)
- Pre-Existing and Independently Funded Intellectual Property (Section 19)
- Intellectual Property (Section 20)
- Royalty Payments to the Commission (Section 21)
- Access to Sites and Records (included in Section 22, "General Provisions")

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- Nondiscrimination (included in Section 23, “Certifications and Compliance”)
- California Taxpayer Access to Publicly Funded Research Act (Section 24)
- Survival of the following sections:
  - Equipment (Section 14)
  - Recordkeeping, Cost Accounting, and Auditing (Section 11)
  - Pre-Existing and Independently Funded Intellectual Property (Section 19)
  - Intellectual Property (Section 20)
  - Royalty Payments to the Commission (Section 21)
  - Access to Sites and Records (included in Section 22, “General Provisions”)
  - California Taxpayer Access to Publicly Funded Research Act (Section 24)

Subcontracts funded in whole or in part by this Agreement must also include the following:

- A clear and accurate description of the material, products, or services to be procured.
- A detailed budget and timeline.
- Provisions that allow for administrative, contractual, or legal remedies in instances where subcontractors breach contract terms, in addition to sanctions and penalties as may be appropriate.
- Provisions for termination by the Recipient, including termination procedures and the basis for settlement.
- A statement that further assignments will not be made to any third or subsequent tier subcontractor without additional advance written consent of the Commission.

### c. Audits

All subcontracts entered into for the performance of this Agreement are subject to examination and audit by the Energy Commission and/or Bureau of State Audits for a period of three (3) years after payment of the Recipient’s final invoice under this Agreement. The Energy Commission may audit subcontracts that are relevant to the Recipient’s royalty payment obligations (see Section 21) for a period of ten (10) years after the Agreement’s end date.

### d. Copies of Subcontracts

The Recipient must provide a copy of its subcontracts upon request by the Energy Commission.

### e. Conflicting Subcontract Terms

Prior to the execution of this Agreement, the Recipient will notify the Commission Agreement Manager of any known or reasonably foreseeable conflicts between this Agreement and its agreements with any subcontractors (e.g., conflicting intellectual property or payment terms). If the Recipient discovers any such conflicts after the execution of this Agreement, it will notify the Commission Agreement Manager of the conflict within fifteen (15) days of discovery. The Energy Commission may, without prejudice to its other remedies, terminate this Agreement if any conflict impairs or diminishes its value.

### f. Penalties for Noncompliance



Without limiting the Commission's other remedies, failure to comply with the above requirements may result in the termination of this Agreement.

**8. Payment of Funds**

a. Definitions

For purposes of this Section 8, the following terms have the following meaning:

- "Advance Payment" means the Energy Commission pays Recipient prior to the Recipient Incurring or Paying the expense.
- "Incurred Cost" means an expense for which the Recipient has become liable (legally obligated) to pay. Here are examples of incurred costs:
  - The Recipient's staff has completed work during the month but has not been paid by the Recipient. These labor and associated costs (e.g., fringe benefits) are considered Incurred Costs.
  - The Recipient has purchased a piece of equipment **and** received an invoice, bill, or receipt. The Recipient has not yet paid the invoice. The invoice shows the amount to be paid and confirmation of the sale. This is an Incurred Costs.

Incurred costs for equipment DO NOT include purchase orders unless accompanied by an invoice, bill, or receipt that shows the payment amount due to the seller for the equipment.

- "Paid Cost" means an expense for which the Recipient has already made payment.

b. Advance Payments

Recipients can receive Advance Payments only for subcontractors with the U.S. Department of Energy laboratories. Otherwise, Advance Payments are NOT allowed under this Agreement. The Energy Commission in its sole discretion, and not the Recipient, decides if the Commission will make an Advance Payment.

c. Reimbursable Cost Requirements

In addition to any other requirements in this Agreement, the Energy Commission is only obligated to reimburse the Recipient for Incurred and Paid Costs that are (1) incurred during the Agreement Term; (2) invoiced within the required timeframes of this Agreement; (3) made in accordance with the Agreement's Budget; and (4) actual and allowable expenses under this Agreement.

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ALL of the items in the Budget, including without limitation labor rates, fringe benefits rates and indirect costs rates and individually listed items are capped amounts (i.e., maximums), and the Recipient can only bill its ACTUAL amount up to capped amounts listed in the Budget. For example, if the Budget includes an employee's hourly rate of \$50/hour but the employee is only paid \$40/hour, the Recipient can only bill for \$40/hour. Under the same example, if the employee earned \$70/hour but the Budget only lists \$50/hour, the Recipient can only bill for \$50. Another example is if the maximum fringe benefit rate listed in the Budget is 20% but the Recipient's actual fringe benefit rate is only 15%, the Recipient can only bill at 15%. If the actual rates (e.g., direct labor rates, fringe benefit rates, and indirect rates) exceed the approved rates in the Budget, the difference may be charged to the agreement as a match share expenditure.

### d. Recipient's 14-Day Payment Requirement for Incurred Costs

The Recipient shall pay ALL Incurred Costs for which it has invoiced the Energy Commission within 14 calendar days of receiving payment under this Agreement for the Incurred Costs. For example, if the Recipient invoices and then receives payment from the Commission on September 15 for an Incurred Cost of \$10,000, the Recipient shall pay the entire \$10,000 by September 29. This requirement is needed to prevent Recipients from creating long lead times for Incurred Costs (e.g., invoicing and receiving payment from the Commission but not paying for the Incurred Costs for weeks or months).

The Recipient shall only invoice the Commission for Incurred Expenses the Recipient shall pay with 14 calendar days of receiving payment from the Commission. For example, assume the Recipient has an Incurred Cost for a piece of equipment that costs \$300,000 and will pay in three installments of \$100,000 each over three months. The Recipient shall only invoice the Commission for \$100,000 each month. The Recipient shall not invoice for the entire \$300,000 and retain the balance over the three months.

For any Incurred Costs for which the Recipient has received funds from the Energy Commission and does not pay within 14 calendar days, the Recipient shall on the very next business day after the 14 calendar days submit repayment of the unpaid amount back to the Energy Commission. Repaid funds will be placed back into the agreement and will be available to reimburse allowable costs in accordance with this agreement. When making a repayment under this provision, the Recipient shall specify "Repayment of Unspent Funds under Agreement EPC-20-038." Recipient shall remit the repayment to:

California Energy Commission  
Accounting Office  
1516 Ninth Street, MS-2  
Sacramento, CA 95814

This repayment requirement of the Recipient is in addition to any other rights the Energy Commission can enforce relative to this Agreement. Recipient agrees and acknowledges that time is of the essence in paying Incurred Costs and submitting repayments and the Energy Commission can treat the Recipient's breach of either requirement as a material breach. Recipient can contact the Commission Agreement Manager for any questions about the logistics of making repayments.

### e. Payment Requests

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The Recipient may request payment from the Energy Commission at any time during the term of this Agreement but no more frequently than monthly. The final payment request, including retention, MUST be received by the Energy Commission no later than the agreement end date.

Recipient agrees and acknowledges that time is of the essence in submitting the final payment request. The Commission has a limited period of time, set by law, in which it can reimburse funds under this Agreement. Without prejudice to the Commission's other rights, the Recipient risks not receiving any funds, and relieves the Commission of any duty and liability whatsoever to pay, for any payment requests received after the end of the Agreement.

No reimbursement for food or beverages shall be made other than allowable per diem charges.

All Recipient expenditures, reimbursable and match, must occur within the approved term of this Agreement.

f. Invoice Approval and Disputes:

Each request for payment is subject to the Commission Agreement Manager's approval. Payments will be made to the Recipient for undisputed invoices. An undisputed invoice is an invoice submitted by the Recipient for work performed, for which project expenditures and products meet all Agreement conditions, and for which additional evidence is not required to determine its validity.

The invoice will be disputed if all products due for the billing period have not been received and approved, if the invoice is inaccurate, or if it does not comply with the terms of this Agreement. If the invoice is disputed, the Recipient will be notified via a Dispute Notification Form (Std. 209).

g. Recipient's headquarters:

For purposes of payment, the Recipient's headquarters is the location of the Recipient's office where the majority of its employees assigned responsibilities for this Agreement are permanently assigned.

h. Multiple Non-Energy Commission Funding Sources:

No payment will be made for costs identified in recipient invoices that have been or will be reimbursed by another source, including but not limited to an agreement with another government entity.

"Government Entity" means: (1) a state governmental agency; (2) a state college or university; (3) a local government entity or agency, including those created as a Joint Powers Authority; (4) an auxiliary organization of the California State University or a California community college; (5) the federal government; (6) a foundation organized to support the Board of Governors of the California Community Colleges; and (7) an auxiliary organization of the Student Aid Commission established under California Education Code Section 69522.

i. Reduced funding:

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If the Energy Commission does not receive sufficient funds under the Budget Act or from the investor-owned utility administrators of the EPIC program to fully fund the work identified in Exhibit A (Scope of Work), the following will occur:

- a) If the Energy Commission has received a reduced amount of funds for the work, it may: (1) offer an Agreement amendment to the Recipient to reflect the reduced amount; or (2) cancel this Agreement (with no liability occurring to the State).
- b) If the Energy Commission has received no funds for the work identified in Exhibit A: (1) this Agreement will be of no force and effect; (2) the State will have no obligation to pay any funds to the Recipient; and (3) the Recipient will have no obligation to perform any work under this Agreement.

### j. Allowability of Costs

#### a) Allowable Costs

The costs for which the Recipient will be reimbursed under this Agreement include all costs, direct and indirect, incurred in the performance of the work identified in the Scope of Work. Costs must be incurred within the Agreement term. Factors to be considered in determining whether an individual item of cost is allowable include: (i) reasonableness of the item, including necessity of the item for the work; (ii) applicable federal cost principles or acquisition regulations incorporated by reference in Section 2 of this Agreement; and (iii) the terms and conditions of this Agreement.

#### b) Unallowable Costs

Below are examples of unallowable costs. Details concerning the allowability of costs are available from the Energy Commission's Accounting Office.

- a) Profit of the Recipient or fees (this restriction does not apply to subcontractors);
  - b) Contingency costs;
  - c) Imputed costs (e.g., cost of money);
  - d) Fines and penalties;
  - e) Losses;
  - f) Excess profit taxes; and
  - g) Unapproved, increased rates and fees for this Agreement
- c) Except as provided for in this Agreement or applicable California law or regulations, the Recipient will use the federal cost principles and/or acquisition regulations incorporated by reference in Section 2 of this Agreement when determining allowable and unallowable costs. In the event of a conflict, this Agreement takes precedence over the federal cost principles and/or acquisition regulations.

### k. Payment Request Format

Each request for payment will consist of, but not be limited to, the following:

- 1) An invoice that includes a list of Incurred and Paid Costs. Backup documentation is required at the time of invoice submittal, such as time cards, vendor invoices, and proof of payment (e.g., cancelled checks). Unless otherwise specified in Exhibit B or the invoice template, the invoice must include the following:
  - a) Agreement number;

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- b) Date prepared;
  - c) Recipient's Federal tax ID number;
  - d) Billing period;
  - e) Recipient's actual labor expenditures, including hourly unloaded labor rates by individual name and classification, hours worked, and benefits (fully loaded rates may only be used if they are included in the grant budget);
  - f) Non-labor expenses, including fringe benefits, indirect overhead, and general/administrative expenses;
  - g) Operating expenses, including travel, equipment, materials, and other;
  - h) By budget line item (cost component) category, the budgeted amount, amount billed to date, currently billed amount, and balance of funds;
  - i) Match fund expenditures (if applicable);
  - j) Receipts for travel (including departure and return times), equipment, materials, and miscellaneous; and
  - k) Subcontractor invoices that include all items above, for correspondence with the budget (e.g., if the budget lists hourly labor rates, the subcontractor's invoice should include hourly labor rates).
- 2) A progress report that documents evidence of progress, as described in the Scope of Work.
  - 3) Products prepared by the Recipient during the invoicing period, as described in the Scope of Work.

The Commission will accept computer-generated or electronically transmitted invoices without backup documentation provided that the Recipient mails a hard copy the same day.

The Recipient must submit all invoices to the following address:

California Energy Commission  
Accounting Office  
1516 Ninth Street, MS-2  
Sacramento, CA 95814

If the Recipient has not otherwise provided to the Commission documentation showing the Recipient's payment of Incurred Costs, the Recipient shall provide such documentation as soon as possible and not later than three working days from a request from Commission personnel.

I. Certification

The following certification will be included on each payment request form and signed by the Recipient's authorized officer:

***The documents included in this request for payment are true and correct to the best of my knowledge and I, as an agent of [Company Name] have authority to submit this request. I certify that reimbursement for these costs has not and will not be received from any other sources, including but not limited to a government entity contract, subcontract, or other procurement method. For projects considered to be a public work, prevailing wages were paid to eligible***

***workers who provided labor for the work covered by this invoice; the Recipient and all subcontractors have complied with prevailing wage laws.***

m. Fringe Benefit, Indirect Overhead, General and Administrative (G&A), and Facilities and Administration (F&A) Rates

Indirect cost rates must be developed in accordance with generally accepted accounting principles and the applicable federal cost principles or acquisition regulations (see the provisions incorporated by reference in Section 2). If the Recipient has an approved fringe benefits or indirect cost rate (indirect overhead, G&A, or F&A) from its cognizant federal agency, the Recipient may bill at the federal rate up to the budget rate caps if the following conditions are met:

- The Recipient may bill at the federal provisional rate but must adjust annually to reflect its actual final rates for the year in accordance with the Labor, Fringe, and Indirect Invoicing Instructions contained in the budget (Exhibit B).
- The cost pools used to develop the federal rates must be allocable to the Agreement, and the rates must be representative of the portion of costs benefiting the Agreement. For example, if the federal rate is for manufacturing overhead at the Recipient's manufacturing facility and the Agreement is for research and development at the Recipient's research facility, the federal indirect overhead rate would not be applicable to the Agreement.
- The federal rate must be adjusted to exclude any costs that are specifically prohibited in the Agreement.
- The Recipient may only bill up to the Agreement budget rate caps, unless and until an amendment to the budget is approved.

n. Retention

The Energy Commission shall retain 10 percent of any payment request or 10 percent of the total Energy Commission award at the end of the project. The Energy Commission has the sole discretion to decide which of these methods of retention will be used in this Agreement. The Recipient must submit a completed payment request requesting release of the retention within the required timeframe (see part e "Payment Requests" above in this term). The Commission Agreement Manager will review the project file and, when satisfied that the terms of the funding Agreement have been fulfilled, will authorize release of the retention.

Retention may be released upon completion of tasks that are considered separate and distinct (i.e., the task is a stand-alone piece of work and could be completed without the other tasks). Tasks for administration or management of the Agreement and/or subcontractors are not considered separate and distinct tasks. The tasks for which retention may be released prior to the end of the Agreement must be identified in Exhibit B (budget).

When the Commission withholds 10% retention from each invoice, the Recipient can choose to flow down the retention requirement to its subcontractors subject to the following restrictions and any other requirements in this Agreement:

- The Recipient shall not flow down retention requirements to U.S. Department of Energy national laboratory subcontractors.

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- The retention flowed down to subcontractors can only be up to a total of 10% of the amount of Commission funds the subcontractor is to receive. The Recipient is responsible for carrying the retention for its funded portion of the entire Agreement and cannot pass its share of retention to subcontractors. Here are three examples:
  - i. A subcontractor submits an invoice for \$100,000 to the Recipient, and the Recipient in turn submits it to the Commission. The Commission will only pay \$90,000 of the invoice and the Recipient can elect to pay only \$90,000 to the subcontractor.
  - ii. The subcontractor is the U.S. Department of Energy national laboratory and it submits an advance request for \$100,000 to the Recipient, including any other documents required in the Energy Commission's U.S. Department of Energy Terms and Conditions. The Recipient in turn submits the advance requests to the Commission for payment. The Commission will pay the full amount of the advance requests to the Recipient and the Recipient must pay the full amount to the U.S. Department of Energy.
  - iii. The Recipient's submits an invoice for its own staff in the amount of \$20,000. The Commission will only pay \$18,000 to the Recipient, and the Recipient cannot withhold the \$2,000 difference from subcontractor reimbursements.

These requirements apply to all levels of subcontractors (e.g., a subcontractor to a subcontractor).

### **9. Travel and Per Diem**

- a. Travel not listed in the budget requires prior written authorization from the Commission Agreement Manager.
- b. No reimbursement for food or beverages will be made other than for allowable per diem charges.
- c. The Recipient will be reimbursed for authorized travel and per diem up to, but not to exceed, the rates allowed nonrepresented state employees. Current allowable travel reimbursement rates can be obtained from the Commission's web site at [http://www.energy.ca.gov/contracts/TRAVEL\\_PER\\_DIEM.PDF](http://www.energy.ca.gov/contracts/TRAVEL_PER_DIEM.PDF).
- d. Travel expense claims must detail expenses using the allowable rates, and the Recipient must sign and date each travel expense claim before submitting it to the Commission for payment. Expenses must be listed by trip, including dates and times of departure and return. Travel expense claims supporting receipts and expense documentation must be attached to the Recipient's Payment Request. A vehicle license number is required when claiming mileage, parking, or toll charges. Questions regarding allowable travel expenses or per diem should be addressed to the Commission Agreement Manager.

### **10. Prevailing Wage**

- a. Requirement

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Projects funded by the Energy Commission often involve construction, alteration, demolition, installation, repair, or maintenance work over \$1,000. Such projects might be considered “public works” under the California Labor Code (See California Labor Code Section 1720 et seq. and Title 8 California Code of Regulations, Section 16000 et seq.). Public works projects require the payment of prevailing wages. Prevailing wage rates can be significantly higher than non-prevailing wage rates.

### b. Determination of Project’s Status

Only the California Department of Industrial Relations (DIR) and courts of competent jurisdiction may issue legally binding determinations that a particular project is or is not a public work. If the Recipient is unsure whether the project funded by the Agreement is a “public work” as defined in the California Labor Code, it may wish to seek a timely determination from DIR or an appropriate court. As such processes can be time consuming, it may not be possible to obtain a timely determination before the date for performance of the Agreement.

By accepting this grant, the Recipient is fully responsible for complying with all California public works requirements, including but not limited to payment of prevailing wage. As a material term of this grant, the Recipient must either:

- 1) Timely obtain a legally binding determination from DIR or a court of competent jurisdiction before work begins on the project that the proposed project is not a public work; or
- 2) Assume that the project is a public work and ensure that:
  - Prevailing wages are paid unless and until DIR or a court of competent jurisdiction determines that the project is not a public work;
  - The project budget for labor reflects these prevailing wage requirements; and
  - The project complies with all other requirements of prevailing wage law, including but not limited to keeping accurate payroll records and complying with all working hour requirements and apprenticeship obligations.

California Prevailing Wage law provides for substantial damages and financial penalties for failure to pay prevailing wages when such payment is required.

### c. Subcontractors and Flow-down Requirements

The Recipient will ensure that its subcontractors also comply with the public works/prevailing wage requirements above. The Recipient will ensure that all agreements with its subcontractors to perform work related to this Project contain the above terms regarding payment of prevailing wages on public works projects. The Recipient is responsible for any failure of its subcontractors to comply with California prevailing wage and public works laws.

### d. Indemnification and Breach



Any failure of the Recipient or its subcontractors to comply with the above requirements will constitute breach of this Agreement which excuses the Commission's performance of this Agreement at the Commission's option, and will be at the Recipient's sole risk. In such a case, the Commission will refuse payment to the Recipient of any amount under this award and the Commission will be released, at its option, from any further performance of this Agreement or any portion thereof. The Recipient will indemnify the Energy Commission and hold it harmless for any and all financial consequences arising out of or resulting from the failure of the Recipient and/or any of its subcontractors to pay prevailing wages or to otherwise comply with the requirements of prevailing wage law.

e. Budget

The Recipient's budget on public works projects must indicate which job classifications are subject to prevailing wage. For detailed information about prevailing wage and the process to determine if the proposed project is a public work, the Recipient may wish to contact DIR or a qualified labor attorney for guidance.

f. Covered Trades

For public works projects, the Recipient may contact DIR for a list of covered trades and the applicable prevailing wage.

g. Questions

If the Recipient has any questions about this contractual requirement or the wage, record keeping, apprenticeship, or other significant requirements of California prevailing wage law, the Recipient should consult DIR and/or a qualified labor attorney before entering into this Agreement.

h. Certification

The Recipient will certify to the Energy Commission on each payment request form either that: (a) prevailing wages were paid to eligible workers who provided labor for work covered by the payment request and the Recipient and all contractors and subcontractors otherwise complied with all California prevailing wage laws; or (b) the project is not a public work requiring the payment of prevailing wages. In the latter case, the Recipient will provide competent proof of a DIR or court determination that the project is not a public work requiring the payment of prevailing wages.

Prior to the release of any retained funds under this Agreement, the Recipient will submit to the Energy Commission the above-described certificate signed by the Recipient and all contractors and subcontractors performing public works activities on the project. Absent this certificate, the Recipient will have no right to any funds under this Agreement, and Commission will be relieved of any obligation to pay any funds.

**11. Recordkeeping, Cost Accounting, and Auditing**

a. Cost Accounting

The Recipient will keep separate, complete, and correct accounting of the costs involved in completing the project and any match-funded portion of the project. The Commission or its agent will have the right to examine the Recipient's books of accounts at all reasonable times, to the extent necessary to verify the accuracy of the Recipient's reports.

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### b. Accounting Procedures

The Recipient's costs will be determined on the basis of its accounting system procedures and practices employed as of the effective date of this Agreement, provided that the Recipient uses generally accepted accounting principles and cost reimbursement practices. The Recipient's cost accounting practices used in accumulating and reporting costs during the performance of this Agreement will be consistent with the practices used in estimating costs for any proposal to which this Agreement relates; provided that such practices are consistent with the other terms of this Agreement and that such costs may be accumulated and reported in greater detail during performance of this Agreement.

The Recipient's accounting system will distinguish between direct and indirect costs. All costs incurred for the same purpose, in like circumstances, are either direct costs only or indirect costs only with respect to costs incurred under this Agreement.

### c. Audit Rights

The Recipient will maintain books, records, documents, and other evidence, based on the procedures set forth above, sufficient to reflect properly all costs claimed to have been incurred in the performance of this Agreement. The Energy Commission, another state agency, and/or a public accounting firm designated by the Energy Commission may audit the Recipient's accounting records at all reasonable times, with prior notice by the Energy Commission.

It is the intent of the parties that the audits will ordinarily be performed not more frequently than once every twelve (12) months during the performance of the work and once at any time within three (3) years after payment by the Energy Commission of the Recipient's final invoice. However, performance of any such interim audits by the Energy Commission does not preclude further audit. The Energy Commission may audit books, records, documents, and other evidence relevant to the Recipient's royalty payment obligations (see Section 21) for a period of ten (10) years after payment of the Recipient's final invoice.

The Recipient will allow the auditor(s) to access such records during normal business hours, and will allow interviews of any employees who might reasonably have information related to such records. The Recipient will include a similar right of the state to audit records and interview staff in any subcontract related to the performance of this Agreement.

### d. Refund to the Energy Commission

If the Energy Commission determines that any invoiced and paid amounts exceed the actual allowable incurred costs, the Recipient will repay the amounts to the Energy Commission within thirty (30) days of request or as otherwise agreed by the Energy Commission and the Recipient. If the Energy Commission does not receive such repayments, it will be entitled to take actions such as withholding further payments to the Recipient and seeking repayment from the Recipient.

e. Audit Cost

The Recipient will bear its cost of participating in any audit (e.g., mailing or travel expenses). The Energy Commission will bear the cost of conducting the audit unless the audit reveals an error detrimental to the Energy Commission that exceeds more than ten percent (10%) or \$5,000 (whichever is greater) of: (1) the amount audited; or (2) if a royalty audit, the total royalties due in the period audited. The Recipient will pay the refund as specified in subsection (d), and will reimburse the Energy Commission for reasonable costs and expenses incurred by the Commission in conducting the audit.

f. Match or Cost Share

If the budget includes a match share requirement, the Recipient's commitment of resources, as described in this Agreement, is a required expenditure for receipt of Energy Commission funds. The funds will be released only if the required match percentages are expended. The Recipient must maintain accounting records detailing the expenditure of the match (actual cash and in-kind, non-cash services), and report on match share expenditures on its request for payment.

**12. Workers' Compensation Insurance**

- a. The Recipient warrants that it carries Worker's Compensation Insurance for all of its employees who will be engaged in the performance of this Agreement, and agrees to furnish to the Commission Agreement Manager satisfactory evidence of this insurance upon the Commission Agreement Manager's request.
- b. If the Recipient is self-insured for worker's compensation, it warrants that the self-insurance is permissible under the laws of the State of California and agrees to furnish to the Commission Agreement Manager satisfactory evidence of the insurance upon the Commission Agreement Manager's request.

**13. Permits and Clearances**

The Recipient is responsible for ensuring that all necessary permits and environmental documents are prepared and that clearances are obtained from the appropriate agencies.

**14. Equipment**

Title to equipment acquired by the Recipient with grant funds will vest in the Recipient. The Recipient may use the equipment in the project or program for which it was acquired as long as needed, regardless of whether the project or program continues to be supported by grant funds. However, the Recipient may not sell, lease, or encumber the property (i.e., place a legal burden on the property such as a lien) during the Agreement term without the Commission Agreement Manager's prior written approval.

The Recipient may refer to the applicable federal regulations incorporated by reference in this Agreement for guidance regarding additional equipment requirements.

**15. Stop Work**

Energy Commission staff may, at any time by written notice to the Recipient, require the Recipient to stop all or any part of the work tasks in this Agreement. Stop work orders may be issued for reasons such as a project exceeding budget, noncompliance with the standard of performance, out of scope work, project delays, and misrepresentations.

- a. Compliance. Upon receipt of a stop work order, the Recipient must immediately take all necessary steps to comply with the order and to stop the incurrence of costs allocable to the Energy Commission.

- b. Canceling a Stop Work Order. The Recipient may resume the work only upon receipt of written instructions from Energy Commission staff.

**16. Termination**

- a. Purpose

Because the Energy Commission is a state entity and provides funding on behalf of all California ratepayers, it must be able to terminate the Agreement upon the default of the Recipient and to proceed with the work required under the Agreement in any manner it deems proper. The Recipient agrees that upon any of the events triggering the termination of the Agreement by the Energy Commission, the Energy Commission has the right to terminate the Agreement, and it would constitute bad faith of the Recipient to interfere with the immediate termination of the Agreement by the Energy Commission.

- b. With Cause

The Energy Commission may, for cause, terminate this Agreement upon giving five (5) calendar days advance written notice to the Recipient. In this event, the Recipient will use all reasonable efforts to mitigate its expenses and obligations. The Recipient will relinquish possession of equipment purchased for this Agreement with Energy Commission funds to the Commission, or the Recipient may purchase the equipment as provided by the terms of this Agreement, with approval of the Energy Commission.

The term "for cause" includes but is not limited to the following:

- Partial or complete loss of match funds;
- Reorganization to a business entity unsatisfactory to the Energy Commission;
- Retention or hiring of subcontractors, or replacement or addition of personnel, that fail to perform to the standards and requirements of this Agreement;
- The Recipient's inability to pay its debts as they become due and/or the Recipient's default of an obligation that impacts its ability to perform under this Agreement; or
- Significant change in state or Energy Commission policy such that the work or product being funded would not be supported by the Commission.

- c. Without Cause

The Energy Commission may terminate this Agreement without cause upon giving thirty (30) days advance written notice to the Recipient. In this event, the Recipient will use all reasonable efforts to mitigate its expenses and obligations.

**17. Indemnification**

To the extent allowed under California law, the Recipient will indemnify, defend, and hold harmless the state (including the Energy Commission) and state officers, agents, and employees from any and all claims and losses in connection with the performance of this Agreement.

**18. Confidentiality**

a. Identification of Confidential Information

- 1) Prior to the effective date of this Agreement, the Recipient will identify all products (or information contained within products) that it considers to be confidential, in addition to the legal basis for confidentiality, in Attachment 1 to this Exhibit. If the Energy Commission agrees that the information is confidential, it will not disclose it except as provided in subsection (b).
- 2) During the Agreement, if the Recipient develops additional products (or information contained within products) not originally anticipated as confidential, it will follow the procedures for a request for designation of confidential information specified in Title 20 California Code of Regulations (CCR) Section 2505.

The Energy Commission's Executive Director will make the confidentiality determination. Such subsequent determinations may be added to the list of confidential deliverables in the Attachment 1 to this Exhibit. The Energy Commission will not disclose information subject to an application for confidential designation except as provided in subsection (b).

- 3) When submitting products containing confidential information, the Recipient will mark each page of any document containing confidential information as "confidential", and present it in a sealed package to the Contracts, Grants, and Loans Office.

The Commission Agreement Manager may require the Recipient to submit a non-confidential version of the product, if it is feasible to separate the confidential information from the non-confidential information. The Recipient is not required to submit such products in a sealed package.

b. Disclosure of Confidential Information

The Energy Commission will only disclose confidential information under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508. All confidential information that is legally disclosed by the Recipient or any other entity will become a public record and will no longer be subject to the Energy Commission's confidentiality designation.

c. Waiver of Consequential Damages

In no event will the Energy Commission, the California Public Utilities Commission, or the state of California be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory for the disclosure of the Recipient's confidential information, even if the Commission has been advised of the possibility of such damages.

Damages that the Energy Commission, the California Public Utilities Commission, and the state of California will not be responsible for include but are not limited to: lost profit; lost savings or revenue; lost goodwill; lost use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities, or services; downtime; the claims of third parties including customers; and injury to property.

d. Limitations on the Disclosure of Products

- 1) During the Agreement, the Recipient and subcontractors must receive approval from the Commission Agreement Manager prior to disclosing the contents of any draft product to a third party. However, if the Energy Commission makes a public statement about the content of any product provided by the Recipient and the Recipient believes the statement is incorrect, the Recipient may state publicly what it believes is correct.
- 2) Except as provided in Title 20 CCR Sections 2506, 2507, and 2508, the Recipient may not disclose any information provided to it by the Energy Commission for the performance of this Agreement if the information has been designated as confidential or is the subject of a pending application for confidential designation. At the election of the Commission Agreement Manager, the Recipient, its employees, and its subcontractors must execute a confidentiality agreement provided by the Commission Agreement Manager.
- 3) The Recipient will ensure that each of its officers, employees, and subcontractors who are involved in the performance of this Agreement are informed about these disclosure limitations and will abide by them.

**19. *Pre-Existing and Independently Funded Intellectual Property***

a. Ownership

The Energy Commission makes no ownership, license, or royalty claims to pre-existing intellectual property, independently funded intellectual property, or project-relevant pre-existing or independently funded intellectual property. **“Ownership”** means exclusive possession and control of all rights to property, including the right to use and transfer property. Intellectual property licenses and royalties are discussed in Sections 20 and 21.

- 1) **“Pre-existing intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that the Recipient or a third party owned or possessed prior to the effective date of this Agreement and that have not been developed, altered, or reduced to practice with Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

- 2) **“Independently funded intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice by the Recipient or a third party during or after the Agreement term without Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

“Works of authorship” does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices. The Commission owns such products regardless of their funding source.

- 3) **“Project-relevant pre-existing intellectual property”** and **“project-relevant independently funded intellectual property”** mean pre-existing and independently funded intellectual property used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement.

b. Project-Relevant Pre-Existing and Independently Funded Intellectual Property

1) Identification of Property

- a) The Recipient will identify all project-relevant pre-existing intellectual property in Attachment 1 to this Exhibit prior to the effective date of the Agreement, or within sixty (60) days of becoming aware that the property has been or will be used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement. Attachment 1 may be amended (see the “Amendments” section).
- b) The Recipient will identify all project-relevant independently funded intellectual property and the source of funding for the property in Attachment 1 to this Exhibit within sixty (60) days of becoming aware that the property has been or will be used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement.
- c) Failure to identify project-relevant pre-existing or independently funded intellectual property in Attachment 1 to this Exhibit may result in the property’s designation as “intellectual property” that is subject to licenses and royalties, as described in Sections 20 and 21.

2) Access to Property

The extent of Energy Commission and California Public Utilities Commission access to project-relevant pre-existing and independently funded intellectual property is limited to that reasonably necessary to: (a) demonstrate the validity of any premise, postulate, or conclusion referred to or expressed in any product; or (b) establish a baseline for repayment purposes.

Upon the Commission Agreement Manager's request, the Recipient will provide the Commission Agreement Manager and any reviewers designated by the Energy Commission or the California Public Utilities Commission with access to review the Recipient's project-relevant pre-existing and independently funded intellectual property. If the property has been designated as confidential as specified in Section 18, the Energy Commission will only disclose it under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508.

3) Preservation of Property

The Recipient will preserve any project-relevant pre-existing or independently funded intellectual property at its own expense for at least ten (10) years from the Agreement's end date, unless the Recipient agrees to a longer retention period.

The Energy Commission and the California Public Utilities Commission will have reasonable access to the project-relevant pre-existing or independently funded property throughout the retention period.

**20. Intellectual Property**

a. Ownership

1) The Recipient owns all intellectual property, subject to the licenses described in subsection b.

**"Intellectual property"** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice with Agreement or match funds during or after the Agreement term; (b) any associated proprietary rights to these items, such as patent and copyright; and (c) any upgrades or revisions to these items.

"Works of authorship" does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices.

2) The Energy Commission owns all products identified in the Scope of Work, with the exception of products that fall within the definition of "intellectual property."

**"Product"** means any tangible item specified for delivery to the Energy Commission in the Scope of Work.



b. Intellectual Property Licenses

- 1) Both the Energy Commission and the California Public Utilities Commission have a no-cost, non-exclusive, transferable, irrevocable, royalty-free, worldwide, perpetual license to use, publish, translate, modify, and reproduce intellectual property for governmental purposes. The licenses are transferable only to load-serving entities for the purpose described below.
- 2) Under limited circumstances, both the Energy Commission and the California Public Utilities Commission may grant load-serving entities a no-cost, non-exclusive, transferable, irrevocable, royalty-free, worldwide, perpetual license to use, publish, translate, modify, and reproduce intellectual property to enhance the entities' service to EPIC ratepayers. **The intellectual property that may be licensed to load-serving entities is limited to analytical tools and models that can be used to inform distribution planning and decision-making that benefits electric ratepayers.**  
"Load-serving entity" means a company or other organization that provides electricity to EPIC ratepayers.  
The licenses are transferable to third parties only for the purpose of facilitating the load-serving entity's enhancement of service to EPIC ratepayers. Load-serving entities must obtain prior written approval from the Energy Commission or California Public Utilities Commission (whichever agency granted the load-serving entity the license) in order to transfer the license to a third party.
- 3) The Recipient has a non-exclusive, non-transferable, irrevocable, worldwide, perpetual license to use, publish, translate, modify, and reproduce written products created for Agreement reporting and management purposes, such as reports and summaries.
- 4) If any intellectual property that is subject to the licenses above has been designated as confidential as specified in Section 18, all license holders will only disclose the intellectual property under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508.  
All license holders will ensure that their officers, employees, and subcontractors who have access to the intellectual property are informed of and abide by the disclosure limitations in Section 18.

c. Energy Commission's Rights to Inventions

"Invention" means intellectual property that is patentable.

- 1) March-In Rights  
At the Energy Commission's request, the Recipient will forfeit and assign to the Energy Commission all rights to any invention (with the exception of U.S. Department of Energy reserved rights) if the Recipient or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the invention. The Energy Commission will have the unfettered right to use and/or dispose of the rights in whatever manner it deems most suitable to help transfer the invention into the marketplace, including but not limited to seeking patent protection or licensing the invention.
- 2) Notice of Patent

If any patent is issued for an invention, the Recipient will send the Commission Agreement Manager written notice of the issuance within three (3) months of the issuance date. The notice must include the patent title, issuance number, and a general description of the invention.

3) Legal Notice

The Recipient and all persons and/or entities obtaining an ownership interest in patentable intellectual property must include the following statement within the specification of any United States patent application, and any subsequently issued patent for the invention:

**“This invention was made with State of California support under California Energy Commission grant number EPC-20-038. The Energy Commission has certain rights to this invention.”**

d. Access to and Preservation of Intellectual Property

1) Access to Intellectual Property

Upon the Commission Agreement Manager’s request, the Recipient will provide the Commission Agreement Manager and any individuals designated by the Energy Commission or the California Public Utilities Commission with access to the Recipient’s intellectual property in order to exercise the license and march-in rights described above, and to determine any royalty payments due under the Agreement.

2) Preservation of Intellectual Property

The Recipient will preserve intellectual property at its own expense for at least ten (10) years from the Agreement’s end date, unless the Recipient agrees to a longer retention period.

e. Intellectual Property Indemnity

The Recipient may not, in supplying work under this Agreement, knowingly infringe or misappropriate any intellectual property right of a third party, and will take reasonable actions to avoid infringement.

The Recipient will defend and indemnify the Energy Commission and the California Public Utilities Commission from and against any claim, lawsuit, or other proceeding, loss, cost, liability, or expense (including court costs and reasonable fees of attorneys and other professionals) to the extent arising out of: (i) any third party claim that a product infringes any patent, copyright, trade secret, or other intellectual property right of any third party; or (ii) any third party claim arising out of the negligent or other tortious acts or omissions by the Recipient or its employees, subcontractors, or agents in connection with or related to the products or the Recipient’s performance under this Agreement.

**21. Royalty Payments to the Commission**

**“Sale,” “sales,” and “sold”** mean the sale, license, lease, or other transfer of intellectual property. **Sales Price** means the price at which intellectual property is sold, excluding sales tax.

- a. The Recipient will pay the Energy Commission a royalty of one and one-half percent (1.5%) of the sales price of all sales for which the Recipient receives a payment, beginning on the Agreement’s effective date and extending for ten (10) years from the Agreement’s end date.

## Exhibit IV - CEC Grant Agreement

- b. The Recipient will make payments in annual installments due on the first day of March in the calendar year immediately following the year during which the Recipient received any payment for sales.
- c. The Recipient is not required to make a royalty payment for any calendar year in which payments for sales are less than \$1000. Total royalty payments will be limited to three (3) times the amount of funds paid by the Energy Commission under the Agreement.
- d. If intellectual property was developed in part with match funds during the Agreement term, the royalty payment will be reduced in accordance with the percentage of intellectual property development activities that were funded with match funds. For example, if 10% of the development activities were funded with match funds during the Agreement and payments for sales totaled \$100,000 in one year, the Recipient would owe the Energy Commission \$1350 for the year (1.5% of \$100,000 = \$1500; 10% of \$1500 = \$150; \$1500 - \$150 = \$1350).

If the Energy Commission is providing funds to the Recipient under this Agreement as a project match partner and Energy Commission funds are used in part to develop intellectual property, the royalty payments will be reduced in accordance with the percentage of intellectual property development activities that were funded with non-Energy Commission funds during the Agreement term. For example, if 80% of the development activities were funded with Recipient and/or third party funds during the Agreement and payments for sales totaled \$100,000 in one year, the Recipient would owe the Energy Commission \$300 for the year (1.5% of \$100,000 = \$1500; 80% of \$1500 = \$1200; \$1500 - \$1200 = \$300).
- e. The Recipient may make an early buyout payment to the Energy Commission without a pre-payment penalty, as an alternative to making annual royalty payments for ten (10) years following the Agreement's end date. The payment must be in a lump sum amount equal to one and a half (1.5) times the amount of funds paid by the Energy Commission under the Agreement and made within five (5) years of the Agreement's end date. The payment amount due under the early buyout option will not be reduced by the percentage of match funds as described above.
- f. The Recipient may not make any sale of intellectual property for consideration other than fair market value. Such activity constitutes breach of this Agreement, and will obligate the Recipient to repay within sixty (60) days the early buyout amount due. In the event of breach, the Energy Commission may exercise all rights and remedies available to it under law and at equity.
- g. Royalty payments not made within fifteen (15) days of the due date will constitute breach of this Agreement. The payments will become debt obligations of the Recipient to the Energy Commission, due upon demand and bearing interest at the maximum interest rate allowed by law.
- h. The Recipient will maintain separate accounts within its financial and other records for the purpose of tracking components of sales and royalties due to the Energy Commission under this Agreement.
- i. Payments to the Energy Commission are subject to audit as provided for under the Recordkeeping, Cost Accounting, and Auditing section.
- j. The Recipient will include these royalty provisions in its agreements with all subcontractors who develop or assist with the development of intellectual property.

**22. General Provisions**

a. Governing Law

This Agreement is governed by the laws of the State of California as to interpretation and performance.

b. Independent Capacity

In the performance of this Agreement, the Recipient and its agents, subcontractors, and employees will act in an independent capacity and not as officers, employees, or agents of the State of California.

c. Assignment

This Agreement is not assignable or transferable by the Recipient either in whole or in part without the consent of the Energy Commission in the form of an amendment.

d. Timeliness

Time is of the essence in this Agreement.

e. Severability

If any provision of this Agreement is unenforceable or held to be unenforceable, all other provisions of this Agreement will remain in full force and effect.

f. Waiver

No waiver of any breach of this Agreement constitutes waiver of any other breach. All remedies in this Agreement will be taken and construed as cumulative, meaning in addition to every other remedy provided in the Agreement or by law.

g. Assurances

The Commission reserves the right to seek further written assurances from the Recipient and its team that the work under this Agreement will be performed in accordance with the terms of the Agreement.

h. Change in Business

- 1) The Recipient will promptly notify the Energy Commission of the occurrence of any of the following:
  - a) A change of address.
  - b) A change in business name or ownership.
  - c) The existence of any litigation or other legal proceeding affecting the project or Agreement.
  - d) The occurrence of any casualty or other loss to project personnel, equipment, or third parties.
  - e) Receipt of notice of any claim or potential claim against the Recipient for patent, copyright, trademark, service mark, and/or trade secret infringement that could affect the Energy Commission's rights.

2) The Recipient must provide the Commission Agreement Manager with written notice of a planned change or reorganization of the type of business entity under which it does business. A change of business entity or name change requires an amendment assigning or novating the Agreement to the changed entity. If the Energy Commission does not seek to amend this Agreement or enter into a new agreement with the changed or new entity for any reason (including that the Commission is not satisfied that the new entity can perform in the same manner as the Recipient), it may terminate this Agreement as provided in the "Termination" section.

i. Access to Sites and Records

Energy Commission and California Public Utilities Commission staff and representatives will have reasonable access to all project sites and to all records related to this Agreement.

j. Prior Dealings, Custom, or Trade Usage

These terms and conditions may not be modified or supplemented by prior dealings, custom, or trade usage.

k. Survival of Terms

Certain provisions will survive the completion or termination date of this Agreement for any reason. The provisions include but are not limited to:

- Legal Statements on Products (included in Section 5, "Products")
- Payment of Funds (Section 8)
- Recordkeeping, Cost Accounting, and Auditing (Section 11)
- Equipment (Section 14)
- Termination (Section 16)
- Indemnification (Section 17)
- Pre-Existing and Independently Funded Intellectual Property (Section 19)
- Intellectual Property (Section 20)
- Royalty Payments to the Commission (Section 21)
- California Taxpayer Access to Publicly Funded Research Act (Section 24)
- Change in Business (see this section)
- Access to Sites and Records (see this section)

**23. *Certifications and Compliance***

a. Federal, State, and Local Laws

The Recipient must obtain all required permits and shall comply with all applicable federal, state and local laws, codes, rules, and regulations for all work performed under the Agreement.

b. Nondiscrimination Statement of Compliance

During the performance of this Agreement, the Recipient and its subcontractors will not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition, age, marital status, or denial of family care leave. The Recipient and its subcontractors will ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment.

The Recipient and its subcontractors will comply with the provisions of the Fair Employment and Housing Act (Government Code Sections 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 11000 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4.1 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part of it as if set forth in full. The Recipient and its subcontractors will give written notice of their obligations under this section to labor organizations with which they have a collective bargaining or other Agreement.

The Recipient will include the nondiscrimination and compliance provisions of this section in all subcontracts to perform work under this Agreement.

c. Drug-Free Workplace Certification

By signing this Agreement, the Recipient certifies under penalty of perjury under the laws of the State of California that it will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- 1) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited, and specifying actions to be taken against employees for violations as required by Government Code Section 8355(a).
- 2) Establish a Drug-Free Awareness Program as required by Government Code Section 8355(b) to inform employees about all of the following:
  - The dangers of drug abuse in the workplace;
  - The person's or organization's policy of maintaining a drug-free workplace;
  - Any available counseling, rehabilitation, and employee assistance programs; and
  - Penalties that may be imposed upon employees for drug abuse violations.
- 3) Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed project:
  - Will receive a copy of the company's drug-free policy statement; and
  - Will agree to abide by the terms of the company's statement as a condition of employment on the project.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both, and the Recipient may be ineligible for any future state awards if the Commission determines that any of the following has occurred: (1) the Recipient has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

d. National Labor Relations Board Certification (Not applicable to public entities)

The Recipient, by signing this Agreement, swears under penalty of perjury that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Recipient within the immediately preceding two year period because of the Recipient's failure to comply with an order of a federal court that orders the Recipient to comply with an order of the National Labor Relations Board.

e. Child Support Compliance Act (Applicable to California Employers)

For any agreement in excess of \$100,000, the Recipient acknowledges that:

- 1) It recognizes the importance of child and family support obligations and will fully comply with all applicable state and federal laws relating to child and family support enforcement, including but not limited to disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and
- 2) To the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

f. Air or Water Pollution Violation

Under state laws, the Recipient will not be:

- 1) In violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district;
- 2) Subject to a cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or
- 3) Finally determined to be in violation of provisions of federal law relating to air or water pollution.

g. Americans With Disabilities Act

By signing this Agreement, the Recipient assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. Section 12101, et seq.), which prohibits discrimination on the basis of disability, as well as applicable regulations and guidelines issued pursuant to the ADA.

**24. California Taxpayer Access to Publicly Funded Research Act**

- a. As a condition to receiving funding under this Agreement, the Recipient agrees to fully comply with the California Taxpayer Access to Publicly Funded Research Act (California Government Code sections 13989 et seq., the "Act") and provisions of this section, which apply to publications describing knowledge, an invention, or technology funded within the scope of this Agreement.

## Exhibit IV - CEC Grant Agreement

- b. For purposes of complying with the Act and this section of the Agreement, the following definitions shall apply.
  - 1) “Peer-Reviewed Manuscript” means a manuscript after it has been peer reviewed and in the form in which it has been accepted for publication in a scientific journal.
  - 2) “Research Grant” in the Act and “this Agreement” in this section mean this Agreement.
  - 3) “State Agency” in the Act means the Energy Commission.
- c. The Recipient shall provide for free public access to any Peer-Reviewed Manuscript developed within the scope of this Agreement.
- d. The Recipient shall ensure that any publishing or copyright agreements concerning Peer-Reviewed Manuscripts:
  - 1) Fully comply with California Government Code section 13989.6;
  - 2) Do not conflict with the Energy Commission’s rights under this Agreement;
  - 3) Secure for the Energy Commission the rights provided under this Agreement, including the rights to Intellectual Property as specified in Section 20; and
  - 4) Recognize the free public access to the Peer-Reviewed Manuscript.
- e. The Recipient shall report to the Energy Commission the final disposition of any Peer-Reviewed Manuscript, including but not limited to if it was published; when it was published; where it was published; and, when the 12-month time period expires, where the Peer-Reviewed Manuscript will be available for open access.
- f. Not later than 12 months after the official date of publication, or sooner if specified in the Schedule of Products, the Recipient shall make available to the Energy Commission an electronic version of any Peer-Reviewed Manuscript that is developed within the scope of this Agreement.
- g. The Recipient shall make publicly accessible an electronic version of any Peer-Reviewed Manuscript that is developed within the scope of this Agreement, not later than 12 months after the official date of publication, on a repository approved in writing by the Energy Commission, including but not limited to the University of California’s eScholarship Repository at the California Digital Library; the California State University’s ScholarWorks at the Systemwide Digital Library; or PubMed Central. The Recipient shall notify the Energy Commission when the Peer-Reviewed Manuscript is available on an Energy Commission-approved repository.



- h. If the Recipient is unable to ensure that its Peer-Reviewed Manuscript is accessible on an Energy Commission-approved, publicly accessible repository, the Recipient may comply by providing the manuscript to the Energy Commission not later than 12 months after the official date of publication.
- i. For any publications other than a Peer-Reviewed Manuscript, (herein referred to as "Other Publications") including scientific meeting abstracts, developed within the scope of this Agreement, the Recipient shall:
  - 1) Provide an electronic version of the Other Publications to the Energy Commission not later than 12 months after the official date of publication.
  - 2) Ensure that any publishing or copyright agreements concerning Other Publications:
    - i. Do not conflict with the Energy Commission's rights under this Agreement.
    - ii. Secure for the Energy Commission the rights provided under this Agreement, including the rights to Intellectual Property as specified in Section 20.
- j. The Act states that "Grantees are authorized to use grant money for publication costs, including fees charged by a publisher for color and page charges, or fees for digital distribution." Recipient agrees that for purposes of this Agreement, the Recipient is only authorized to use funds under this Agreement, including Matching funds, for these purposes **if the expenses are included in the Agreement's Budget and meet the other Agreement requirements for payment, including that the Commission will only reimburse the Recipient for expenditures incurred during the Agreement term. If these expenses are not included in the Budget, both parties must agree and amend the Budget to include such expenditures before Recipient is authorized to use Agreement funds, either reimbursable expenses or match, for these purposes.**
- k. Should a conflict exist between the terms in this Section 24 and other terms of this Agreement, the terms in this section prevail.

**25. Commission Remedies for Recipient's Non-Compliance**

Without limiting any of its other remedies, the Commission may, for Recipient's noncompliance of any Agreement requirement, withhold future payments, demand and be entitled to repayment of past reimbursements, or suspend or terminate this Agreement. The tasks in the Scope of Work are non-severable, and completion of all of them is material to this Agreement. Thus, the Commission, without limiting its other remedies, is entitled to repayment of all funds paid to Recipient if the Recipient does not timely complete all tasks in the Scope of Work.

26. **Definitions**

- **Agreement Term** means the length of this Agreement, as specified on the Agreement signature page (form CEC-146).
- **Confidential Information** means information that the Recipient has satisfactorily identified as confidential in Attachment 1 to this Exhibit and that the Energy Commission has agreed to designate as confidential under Title 20 California Code of Regulations Section 2505.
- **Data** means any recorded information that relates to the project funded by the Agreement, whether created or collected before or after the Agreement's effective date.
- **Effective Date** means the date on which this Agreement is signed by the last party required to sign, provided that signature occurs after the Agreement has been approved by the Energy Commission at a business meeting or by the Executive Director or his/her designee.
- **EPIC** means the Electric Program Investment Charge, an electricity ratepayer-funded surcharge authorized by the California Public Utilities Commission in December 2011.
- **Equipment** means products, objects, machinery, apparatus, implements, or tools that are purchased or constructed with Energy Commission funds for the project, and that have a useful life of at least one year and an acquisition unit cost of at least \$5,000. "Equipment" includes products, objects, machinery, apparatus, implements, or tools that are composed by over thirty percent (30%) of materials purchased for the project. For purposes of determining depreciated value of equipment used in the Agreement, the project will terminate at the end of the normal useful life of the equipment purchased and/or developed with Energy Commission funds. The Energy Commission may determine the normal useful life of the equipment.
- **Independently Funded Intellectual Property** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice by the Recipient or a third party during or after the Agreement term without Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

"Works of authorship" does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices. The Commission owns such products regardless of their funding source.
- **Intellectual Property** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice with Agreement or match funds during or after the Agreement term; (b) any associated proprietary rights to these items, such as patent and copyright; and (c) any upgrades or revisions to these items.

## Exhibit IV - CEC Grant Agreement

“Works of authorship” does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices.

- **Invention** means intellectual property that is patentable.
- **Load-serving entity** means a company or other organization that provides electricity to EPIC ratepayers.
- **Match Funds** means cash or in-kind (i.e., non-cash) contributions provided by the Recipient or a third party for a project funded by the Energy Commission. If this Agreement resulted from a solicitation, refer to the solicitation’s discussion of match funding for guidelines specific to the project.
- **Materials** means the substances used to construct, or as part of, a finished object, commodity, device, article, or product and that does not meet the definition of Equipment.
- **Ownership** means exclusive possession of all rights to property, including the right to use and transfer property.
- **Pre-existing intellectual property** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that the Recipient or a third party owned or possessed prior to the effective date of this Agreement and that have not been developed, altered, or reduced to practice with Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.
- **Product** means any tangible item specified for delivery to the Energy Commission in the Scope of Work.
- **Project** means the entire effort undertaken and planned by the Recipient and consisting of the work funded by the Energy Commission. The project may coincide with or extend beyond the Agreement term.
- **Project-relevant pre-existing intellectual property and project-relevant independently funded intellectual property** mean pre-existing and independently funded intellectual property used to support a premise, postulate, or conclusion referred to or expressed in any product under this Agreement.
- **Sale, Sales, and Sold** mean the sale, license, lease, or other transfer of intellectual property.
- **Sales Price** means the price at which intellectual property is sold, excluding normal returns and allowances such as sales tax.
- **State** means the state of California and all California state agencies within it, including but not limited to commissions, boards, offices, and departments.

**Exhibit C-1**  
**Confidential Products and Project-Relevant Pre-Existing and Independently Funded Intellectual Property**

**1. Instructions**

Identification of Confidential Information

- **Prior to the effective date of the Agreement**, the Recipient must identify in Section 2 of this attachment any products (or information contained within products) that it considers to be confidential. If the Energy Commission agrees that the information is confidential, it will not disclose it except as provided in Section 19 (Confidentiality) of these terms and conditions.
- **During the Agreement**, if the Recipient develops additional information not originally anticipated as confidential, it must follow the procedures for a request for designation of confidential information specified in Title 20 California Code of Regulations (CCR) Section 2505.

The Energy Commission's Executive Director will make the confidentiality determination. Following this determination, the confidential information may be added to this attachment through a Letter of Agreement (see Section 6 (Amendments) and Attachment 2 (Sample Letter of Agreement)). The Energy Commission will not disclose information subject to an application for confidential designation except as provided in Section 19.

- **When submitting products containing confidential information**, the Recipient must mark each page of any document containing confidential information as "confidential" and present it in a sealed package to the Contracts, Grants, and Loans Office.

The Commission Agreement Manager may require the Recipient to submit a non-confidential version of the product, if it is feasible to separate the confidential information from the non-confidential information.

Identification of Project-Relevant Independently Funded and Pre-Existing Intellectual Property

- The Recipient must identify all project-relevant pre-existing intellectual property and project-relevant independently funded intellectual property in Section 3 of this attachment prior to the effective date of the Agreement, or within sixty (60) days of becoming aware that the property has been or will be used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement. This attachment may be amended by a Letter of Agreement (see Section 6 (Amendments) and Attachment 2 (Sample Letter of Agreement)).
  - **"Project-relevant pre-existing intellectual property" and "project-relevant independently funded intellectual property"** mean pre-existing and independently funded intellectual property used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement.
  - **"Pre-existing intellectual property"** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that the Recipient or a third party owned or possessed prior to the effective date of this Agreement and that have not been developed, altered, or reduced to practice with Energy Commission or match funds; and (b) associated proprietary rights to these items

Exhibit IV - CEC Grant Agreement

- that are obtained without Energy Commission or match funds, such as patent and copyright.
- **“Independently funded intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice by the Recipient or a third party during or after the Agreement term without Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

“Works of authorship” does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices. The Commission owns such products regardless of their funding source.

- **Failure to identify project-relevant pre-existing or independently funded intellectual property** in this attachment may result in the property’s designation as “intellectual property” that is subject to licenses and royalties, as described in Sections 21 (Intellectual Property) and 22 (Royalty Payments to the Commission).

**2. Confidential Products and/or Confidential Information Contained within Products**

The Energy Commission designates the following products (or information contained within products) as confidential, in accordance with Title 20 California Code of Regulations Section 2505(c)(2)(B).

<b>Product name</b>	NONE
<b>Task/subtask number</b>	
<b>Information to be kept confidential</b>	<input type="checkbox"/> Entire product
	<input type="checkbox"/> Selected information within product ( <i>describe below; be as specific as possible</i> ):
<b>Legal basis for confidentiality designation</b>	<input type="checkbox"/> California Public Records Act, located in California Government Code Sections 6250 et seq. ( <i>identify the relevant section(s) and subsections(s) below</i> ):
	<input type="checkbox"/> Other law ( <i>identify below, including the relevant section(s) and subsections(s)</i> ):
<b>Term of confidentiality</b>	MM-DD-YY to MM-DD-YY
<p><b>Trade secrets only</b></p> <p>Answer the following questions if the product/information described above is considered a trade secret (i.e., confidential business information that provides the business with a competitive advantage):</p> <ol style="list-style-type: none"> <li>1. What is the nature of the competitive advantage provided by the product/information?</li> <li>2. How would the competitive advantage be lost by disclosure? (generally describe the value of the product/information and the ease or difficulty with which it may be legitimately acquired or duplicated by others).</li> </ol>	

**3. Project-Relevant Pre-Existing Intellectual Property and Project-Relevant Independently Funded Intellectual Property**

The Recipient has identified the following items as “project-relevant pre-existing intellectual property” and/or “project-relevant independently funded intellectual property,” as defined in Sections 20 (Pre-Existing and Independently Funded Intellectual Property) and 25 (Definitions) of these terms and conditions. The Commission makes no ownership, license, or royalty claims to this property, and may only access it for the purposes described in Section 20.

<b>Name/Title of Intellectual Property</b>	Smart electric vehicle (EV) charging and grid integration apparatus and methods
<b>Type of Intellectual Property</b>	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property <input checked="" type="checkbox"/> Invention <input checked="" type="checkbox"/> Process <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Technique <input checked="" type="checkbox"/> Design <input type="checkbox"/> Work of Authorship <input type="checkbox"/> Drawing <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Data <input type="checkbox"/> Logo <input checked="" type="checkbox"/> Software <input type="checkbox"/> Formula
<b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b>	<input type="checkbox"/> Copyright <input checked="" type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner: Gadh, Rajit; Mal, Siddhartha; Prabhu, Shivanand; Chu, Chi-Cheng; Sheikh, Omar; Chung, Ching-Yen; He, Lei; Xiao, Bingjun; Shi, Yiyu Number and date: 9,026,347   2015-05-05 <i>For pending applications</i> Name of applicant: Application number and date:
<b>Unregistered Intellectual Property</b>	<input type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Trade Secret Name of owner:
<b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b>	The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.

Exhibit IV - CEC Grant Agreement

<b>Name/Title of Intellectual Property</b>	Power control apparatus and methods for electric vehicles
<b>Type of Intellectual Property</b>	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property <input checked="" type="checkbox"/> Invention <input checked="" type="checkbox"/> Process <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Technique <input checked="" type="checkbox"/> Design <input type="checkbox"/> Work of Authorship <input type="checkbox"/> Drawing <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Data <input type="checkbox"/> Logo <input checked="" type="checkbox"/> Software <input type="checkbox"/> Formula
<b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b>	<input type="checkbox"/> Copyright <input checked="" type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner: R Gadh, C Chung, C Chu, L Qiu Number and date: 9,290,104    2016-03-22 <i>For pending applications</i> Name of applicant: Application number and date:
<b>Unregistered Intellectual Property</b>	<input type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Trade Secret Name of owner:
<b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b>	The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.

Exhibit IV - CEC Grant Agreement

<b>Name/Title of Intellectual Property</b>	Network based management for multiplexed electric vehicle charging
<b>Type of Intellectual Property</b>	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property <input checked="" type="checkbox"/> Invention <input checked="" type="checkbox"/> Process <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Technique <input checked="" type="checkbox"/> Design <input type="checkbox"/> Work of Authorship <input type="checkbox"/> Drawing <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Data <input type="checkbox"/> Logo <input checked="" type="checkbox"/> Software <input type="checkbox"/> Formula
<b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b>	<input type="checkbox"/> Copyright <input checked="" type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner: R Gadh, CY Chung, L Qui, C Chu Number and date: 9,620,970 2017-04-11 <i>For pending applications</i> Name of applicant: Application number and date:
<b>Unregistered Intellectual Property</b>	<input type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Trade Secret Name of owner:
<b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b>	The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.



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<p><b>Name/Title of Intellectual Property</b></p>	<p>Artificial Intelligence Based Machine Learning Prediction of arrival/departure times, and start/end of charging of electric vehicle using GPS, routes, traffic, state of charge and telematics data</p>														
<p><b>Type of Intellectual Property</b></p>	<p><input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property  <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Invention</td> <td><input type="checkbox"/> Process</td> </tr> <tr> <td><input checked="" type="checkbox"/> Technology</td> <td><input checked="" type="checkbox"/> Technique</td> </tr> <tr> <td><input checked="" type="checkbox"/> Design</td> <td><input type="checkbox"/> Work of Authorship</td> </tr> <tr> <td><input type="checkbox"/> Drawing</td> <td><input type="checkbox"/> Trademark/ Service mark</td> </tr> <tr> <td><input type="checkbox"/> Data</td> <td><input type="checkbox"/> Logo</td> </tr> <tr> <td><input checked="" type="checkbox"/> Software</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Formula</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Invention	<input type="checkbox"/> Process	<input checked="" type="checkbox"/> Technology	<input checked="" type="checkbox"/> Technique	<input checked="" type="checkbox"/> Design	<input type="checkbox"/> Work of Authorship	<input type="checkbox"/> Drawing	<input type="checkbox"/> Trademark/ Service mark	<input type="checkbox"/> Data	<input type="checkbox"/> Logo	<input checked="" type="checkbox"/> Software		<input type="checkbox"/> Formula	
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<input checked="" type="checkbox"/> Technology	<input checked="" type="checkbox"/> Technique														
<input checked="" type="checkbox"/> Design	<input type="checkbox"/> Work of Authorship														
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<input type="checkbox"/> Formula															
<p><b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b></p>	<p><input type="checkbox"/> Copyright   <input type="checkbox"/> Patent   <input type="checkbox"/> Trademark/ Service mark  Name of owner:  Number and date:  <i>For pending applications</i>  Name of applicant:  Application number and date:</p>														
<p><b>Unregistered Intellectual Property</b></p>	<p><input checked="" type="checkbox"/> Copyright   <input type="checkbox"/> Trademark/ Service mark  <input type="checkbox"/> Trade Secret  Name of owner: MOEV Inc.</p>														
<p><b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b></p>	<p>The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.</p>														

Exhibit IV - CEC Grant Agreement

<p><b>Name/Title of Intellectual Property</b></p>	<p>Dynamic optimization of electric vehicle charging schedules and power levels to perform electric vehicle charging management and control with the objective to reduce energy cost for fleet operations via Operating Expense and Capital Expense minimization</p>
<p><b>Type of Intellectual Property</b></p>	<p><input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property  <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property</p> <p><input checked="" type="checkbox"/> Invention                      <input type="checkbox"/> Process  <input checked="" type="checkbox"/> Technology                      <input checked="" type="checkbox"/> Technique  <input checked="" type="checkbox"/> Design                              <input type="checkbox"/> Work of Authorship  <input type="checkbox"/> Drawing                              <input type="checkbox"/> Trademark/ Service mark  <input type="checkbox"/> Data                                      <input type="checkbox"/> Logo  <input checked="" type="checkbox"/> Software  <input type="checkbox"/> Formula</p>
<p><b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b></p>	<p><input type="checkbox"/> Copyright    <input type="checkbox"/> Patent    <input type="checkbox"/> Trademark/ Service mark</p> <p>Name of owner:</p> <p>Number and date:</p> <p><i>For pending applications</i></p> <p>Name of applicant:</p> <p>Application number and date:</p>
<p><b>Unregistered Intellectual Property</b></p>	<p><input checked="" type="checkbox"/> Copyright    <input type="checkbox"/> Trademark/ Service mark  <input type="checkbox"/> Trade Secret</p> <p>Name of owner: MOEV Inc.</p>
<p><b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b></p>	<p>The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.</p>

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<b>Name/Title of Intellectual Property</b>	Artificial Intelligence based Machine Learning Prediction of Energy Consumption in electric vehicle fleets based on real-time and historical vehicle telematics data, weather, traffic, driving patterns, and driving routes
<b>Type of Intellectual Property</b>	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property <input checked="" type="checkbox"/> Invention <input type="checkbox"/> Process <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Technique <input checked="" type="checkbox"/> Design <input type="checkbox"/> Work of Authorship <input type="checkbox"/> Drawing <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Data <input type="checkbox"/> Logo <input checked="" type="checkbox"/> Software <input type="checkbox"/> Formula
<b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b>	<input type="checkbox"/> Copyright <input type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner:  Number and date: <i>For pending applications</i> Name of applicant: Application number and date:
<b>Unregistered Intellectual Property</b>	<input checked="" type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Trade Secret  Name of owner: MOEV Inc.
<b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b>	The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.

Exhibit IV - CEC Grant Agreement

<b>Name/Title of Intellectual Property</b>	Bi-directional Electric Vehicle charging enabled with integration of Smart Charging (V1G), Vehicle-to-Grid Charging (V2G), solar PV, battery energy storage system, microgrid control and Demand Response
<b>Type of Intellectual Property</b>	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property <input checked="" type="checkbox"/> Invention <input type="checkbox"/> Process <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Technique <input checked="" type="checkbox"/> Design <input type="checkbox"/> Work of Authorship <input type="checkbox"/> Drawing <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Data <input type="checkbox"/> Logo <input checked="" type="checkbox"/> Software <input type="checkbox"/> Formula
<b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b>	<input type="checkbox"/> Copyright <input type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner:  Number and date: <i>For pending applications</i> Name of applicant: Application number and date:
<b>Unregistered Intellectual Property</b>	<input checked="" type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Trade Secret  Name of owner: MOEV Inc.
<b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b>	The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.

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<b>Name/Title of Intellectual Property</b>	Artificial Intelligence based Machine Learning Prediction of Battery State of Charge (SOC) for electric vehicles during driving and when stationary, using historical and live data on telematics and EV charging data
<b>Type of Intellectual Property</b>	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input checked="" type="checkbox"/> Project-relevant independently funded intellectual property <input checked="" type="checkbox"/> Invention <input type="checkbox"/> Process <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Technique <input checked="" type="checkbox"/> Design <input type="checkbox"/> Work of Authorship <input type="checkbox"/> Drawing <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Data <input type="checkbox"/> Logo <input checked="" type="checkbox"/> Software <input type="checkbox"/> Formula
<b>Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)</b>	<input type="checkbox"/> Copyright <input type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner:  Number and date: <i>For pending applications</i> Name of applicant: Application number and date:
<b>Unregistered Intellectual Property</b>	<input checked="" type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input type="checkbox"/> Trade Secret  Name of owner: MOEV Inc.
<b>Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement</b>	The property will be and has been used to integrate electric vehicle charging hardware, electric vehicles, solar panels, battery energy storage, fleets and utility interfaces, and telematics to demonstrate smart charging and bi-directional charging.