



GRANT AMENDMENT REQUEST FORM (GARF)

Original Agreement # PIR-16-004 Amendment # 3

Division	Agreement Manager:	MS-	Phone
ERDD	Amir Ehyai	51	916-327-3094

Recipient's Legal Name	Federal ID #
Mazzetti, Inc.	94-1722463

Revisions: (check all that apply)	Additional Requirements
<input type="checkbox"/> Term Extension New End Date:	Include revised schedule and complete items A, B, C, & F below.
<input type="checkbox"/> Budget Augmentation Amendment Amount: \$ 0	Include revised budget and complete items A, B, C, D, & F below.
<input type="checkbox"/> Budget Reallocation	Include revised budget and complete items A, B, C, & F below.
<input type="checkbox"/> Scope of Work Revision	Include revised scope of work and complete items A, B, C, E, & F below.
<input type="checkbox"/> Change in Project Location or Demonstration Site	Include revised scope of work and complete items A, B, C, E, & F below.
<input checked="" type="checkbox"/> Novation/Name Change of Prime Recipient	Include novation documentation and complete items A, B, C, & F below.
<input type="checkbox"/> Terms and Conditions Modification	Include applicable exhibits with bold/underline/ strikeout and complete items A, B, C, & F below.

A) Business Meeting Information

Business Meeting approval is not required for the following types of Agreements:

Minor amendments delegated to Executive Director per December 2013 Resolution

Proposed Business Meeting Date 4/8/2020 Consent Discussion

Business Meeting Presenter Amir Ehyai Time Needed: n/a

Please select one list serve. Select

Agenda Item Subject and Description:

Mazzetti, Inc.

Proposed resolution approving a Novation amendment for Agreement PIR-16-004 with Advanced Microgrid Solutions, Inc., to replace the Recipient, which withdrew from the project, to Mazzetti, Inc., which is currently a major subcontractor to the project. There are no changes to the Scope of Work. This \$1,216,707 grant funds the demonstration of an efficient, advanced air distribution design approach that will reduce natural gas use at a hospital in Southern California. This will be done through use of indoor air quality sensor technologies. The project is located in a disadvantaged community.

(Natural Gas funding) Contact: Amir Ehyai



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B) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget
Connexx Energy	\$ 21,035
Climatec	\$ 94,699
Enovity, Inc.	\$ 2,000

C) List all key partners: (attach additional sheets as necessary)

Legal Company Name:
Kaiser Foundation Hospitals

D) Budget Information (only include amendment amount information)

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
NG Subaccount, PIERDD	15-16	501.001J	\$51,450.10
			\$

R&D Program Area: EERO: Buildings

TOTAL: \$ 0

Explanation for "Other" selection

Federal Agreement #:

E) California Environmental Quality Act (CEQA) Compliance

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

Yes (skip to question 2)

No (complete the following (PRC 21065 and 14 CCR 15378)):

Section E is not required for this amendment.

2. If Agreement is considered a "Project" under CEQA:

a) Agreement **IS** exempt.

Statutory Exemption. List PRC and/or CCR section number:

Categorical Exemption. List CCR section number:

Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section:

b) Agreement **IS NOT** exempt. (consult with the legal office to determine next steps)

Check all that apply

Initial Study

Negative Declaration

Mitigated Negative Declaration

Environmental Impact Report

Statement of Overriding Considerations



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F) The following items should be attached to this GARF (as applicable)

- | | | |
|---|---|--|
| 1. Exhibit A, Scope of Work | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 2. Exhibit B, Budget Detail | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 3. CEQA Documentation | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 4. Novation Documentation | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 5. CEC 105, Questionnaire for Identifying Conflicts | | <input checked="" type="checkbox"/> Attached |

Agreement Manager

Date

Deputy Director Office Manager

Date

Deputy Director

Date

EXHIBIT A Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Measurement and Verification
3		HVAC System Modifications
4	X	Permitting
5		Implementation and Commissioning
6		Operator Training
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
BAS	Building automation system
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CoC	Contaminants of Concern
CPR	Critical Project Review
IAQ	Indoor Air Quality
IAQP	Indoor Air Quality Procedure
HVAC	Heating, Ventilation, and Air Conditioning
OSHPD	Office of Statewide Health Planning and Development
TAC	Technical Advisory Committee
M&V	Measurement & Verification

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

A. Purpose of Agreement

The purpose of this Agreement is to demonstrate an efficient, advanced air distribution design approach that will reduce natural gas waste through the real time application of indoor air quality sensor technologies, advanced fault detection and diagnostic software, and monitoring-based commissioning. The demonstration will be conducted at the Kaiser Permanente South Bay Medical Center located in a disadvantaged community within the Los Angeles Basin affected by the Aliso Canyon Natural Gas Storage Facility service disruptions.

¹ 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

B. Problem/ Solution Statement

Problem

Hospitals are among the most energy-intensive facilities in the nation and especially large consumers of natural gas in California. Hospitals in California rely on legacy mechanical ventilation methodologies requiring “air changes per hour,” resulting in energy inefficiency from over-ventilation. This uses a tremendous amount of unnecessary natural gas for heating and cooling. Specifically, hospitals are using ~40% more natural gas than is necessary to meet Indoor Air Quality (IAQ) standards for safety and occupant comfort, and have seen very little improvement in overall energy efficiency over the last four decades.

California Code of Regulations Title 24 is recognized worldwide as the gold standard for energy efficiency. Yet some of the largest energy users in the state – such as hospitals – are exempt from Title 24, and the energy saving opportunities in those facilities have been largely out of reach due to prior technology barriers.

Solution

The Recipient will demonstrate efficient and optimal energy management through an advanced, pre-commercial integrated technology platform that offers benefits for both new construction and existing buildings to protect indoor air quality, maintain occupant comfort, and achieve substantial reductions in natural gas consumption. The Recipient will utilize advanced sensor and fault detection technologies to monitor indoor air quality in conjunction with outcomes-based ventilation practices to enable hospitals to meet stringent air quality and safety standards while reducing unnecessary heating and cooling

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Demonstrate an advanced, pre-commercial integrated technology platform that offers efficient and optimal energy management for the hospital sector.
- Achieve substantial, sustainable, and replicable reductions in natural gas consumption, electricity usage, and greenhouse gas emissions.
- Demonstrate the ability to consistently maintain indoor air quality standards and energy reductions without degradation over time.
- Enable rapid adoption of advanced sensor and smart building control technologies by aligning financial incentives for end users with California’s energy efficiency goals.

Agreement Objectives

The objectives of this Agreement are to:

- Achieve 30-50% reduction in on-site natural gas consumption for space conditioning and ventilation in the hospital while maintaining safe indoor air quality.
- Achieve supplemental electricity use reductions of approximately 30%.
- Demonstrate the cost-effectiveness of maintaining IAQ standards through outcomes-based methodology using sensor technologies and “smart” building control systems compared with current practice of volumetric air-changes per hour.

EXHIBIT A Scope of Work

- Publish successful results in industry publications recognized by code-writing bodies for adoption of advanced building efficiency and safety standards in hospitals.

Ratepayer Benefits: This Agreement will result in ratepayer benefits, including greater reliability and lower costs. The demonstration project is estimated to save more than 160,000 therms/year, reduce electricity consumption by more than 11 million kWh per year, and reduce carbon emissions by more than 2,000 metric tons per year. Replicating this Project at all hospitals in the Los Angeles Basin would save more than 50,000,000 therms of natural gas, equal to 6% of the total capacity of the Aliso Canyon natural gas storage facility - providing direct reliability benefits to ratepayers in the LA Basin.

Technological Advancement and Breakthroughs:

This Agreement will lead to technological advancement and breakthroughs that will significantly reduce natural gas use through the utilization of the Indoor Air Quality Procedure (IAQP) approach to preserve indoor environmental quality through use of advanced sensor and smart building control technologies.

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62.1 applies to all commercial buildings in California *with the exception of hospitals*. ASHRAE Standard 62.1 contains metrics for environmental contaminants and ventilation rates based on occupancy and space contamination and provides three approaches to meet the standard: 1) ventilation rates; 2) natural ventilation; and 3) Indoor Air Quality Procedure approach. Under the IAQP approach, Standard 62.1 allows customized ventilation rates to be selected based on anticipated contaminants, and validated once the facility is in service. This procedure provides greater flexibility in ventilation to ensure environmental comfort, health and safety, and has the potential to achieve significant energy savings.

Most every health care facility has a building automation system that regulates temperature and operates the heating, ventilation, and air conditioning (HVAC) equipment. Many of these are vintage systems (pre-2000), and as such function with old firmware chips and sensing devices that are relatively low resolution and have limited programming capability – particularly when compared to what is commercially available today. In this Project, the Recipient will employ modern sensor technologies and enterprise class energy management applications to monitor and store real time information from multiple sources (HVAC/IAQ/Energy) for analysis and fault detection, and to optimize equipment operations through higher order control strategies.

EXHIBIT A

Scope of Work

III. TASK 1 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)**. 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 Energy Commission’s 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 or CD-ROM.

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

- 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.
- Documents intended for public distribution will be in PDF file format.

EXHIBIT A Scope of Work

- The Recipient must also provide the native Microsoft file format.
 - 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 Energy Commission'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 Energy Commission 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;
- 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
- 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;

EXHIBIT A Scope of Work

- Technical products (subtask 1.1);
 - Progress reports and invoices (subtask 1.5);
 - Final Report (subtask 1.6);
 - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
 - Any other relevant topics.
- Provide an *Updated Project Schedule*, *List of Match Funds*, and *List of Permits*, 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:

- Updated Project Schedule (*if applicable*)
- Updated List of Match Funds (*if applicable*)
- Updated List of Permits (*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 Energy Commission 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 Energy Commission 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 Energy Commission.

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 Energy Commission, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

The Recipient shall:

- Prepare 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.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

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Scope of Work

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and 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)
- Task Products (draft and/or final as specified in the task)

CAM Products:

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- 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 Energy Commission 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 state-owned equipment.
 - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
 - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
 - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.

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- “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 *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written 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 Fund 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. The CAM will review the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the 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 *Style Manual* provided by the CAM. (*See Task 1.1 for requirements for draft and final products.*)

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Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

- Style Manual
- Comments on Draft Final Report Outline
- Approval 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, 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)
 - Ensure that the document is written in the third person.
 - Ensure that the Executive Summary is understandable to the lay public.
 - Briefly summarize the completed work. Succinctly describe the project results and whether or not the project goals were accomplished.
 - Identify which specific ratepayers can benefit from the project results and how they can achieve the benefits.
 - If it's necessary to use a technical term in the Executive Summary, provide a brief definition or explanation when the technical term is first used.
 - Follow the Style Guide format requirements for headings, figures/tables, citations, and acronyms/abbreviations.
 - Ensure that the document omits subjective comments and opinions. However, recommendations in the conclusion of the report are allowed.
 - Include a brief description of the project results in the Abstract.
- 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
- Consider incorporating all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product

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- Submit the revised Final Report 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.
- Submit one bound copy of the *Final Report* to the CAM along with *Written Responses to Comments on the Draft Final Report*.

Products:

- Final Report (draft and final)
- Written Responses to Comments on the Draft 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 Energy Commission 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 Energy Commission 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 Energy Commission 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.

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- 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
- 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.

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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.
- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of the 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.

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;
- Utility representatives;
- Air district staff; and

EXHIBIT A

Scope of Work

- 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.

Products:

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

EXHIBIT A Scope of Work

IV. TECHNICAL TASKS

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. **Subtask 1.1 (Products)** describes the procedure for submitting products to the CAM.

TASK 2: MEASUREMENT AND VERIFICATION

The goal of this task is to develop a measurement and verification (M&V) plan and perform pre and post-implementation monitoring.

Subtask 2.1 Measurement and Verification Plan

The goal of this subtask is to develop and implement an M&V plan to demonstrate that energy savings (natural gas and electricity) are achieved and meet IAQ standards for patient and occupant safety.

The Recipient shall:

- Prepare a *Pre and Post-Implementation M&V Plan* to include the specific HVAC system and hospital areas to be measured, the metrics to be evaluated, and the duration/timeline of the measurements.
- Consult with Office of Statewide Health Planning and Development (OSHPD) representatives to establish IAQ control limits to include contaminants of concern (CoC) to be monitored and threshold limits and to obtain comments on the *Pre and Post-Implementation M&V Plan*.
- Prepare *Written Response to Comments on Draft Pre and Post-Implementation M&V Plan*.
- Incorporate OSHPD recommendations in the *Pre and Post-Implementation M&V Plan*.
- Organize and lead a TAC meeting to evaluate the *Pre and Post-Implementation M&V Plan*, CoC to be monitored and IAQ threshold limits.
- Prepare *TAC Meeting Summary* that includes any recommended resolutions of major TAC issues in accordance to Subtask 1.11 (TAC Meetings).

Products:

- Pre and Post-Implementation M&V Plan (draft and final)
- Written Response to Comments on Draft Pre and Post-Implementation M&V Plan
- TAC Meeting Summary

Subtask 2.2 Measurement and Verification Measurements (Pre-Implementation)

The goal of this subtask is to perform measurements according to the M&V plan prepared in Subtask 2.1 prior to implementation of the changes to the HVAC system.

The Recipient shall:

- Perform pre-implementation measurements of the HVAC system according to the M&V plan and prepare a *Pre-Implementation M&V Report* that includes specific HVAC systems and hospital areas measured, the resulting baseline natural gas and electricity measurements, and any comments or changes made to the M&V plan. The pre-implementation measurements will be performed by an independent third party.
- Submit name of independent third party for CAM approval in accordance to Subtask 1.9 (Subcontracts).

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Products:

- Pre-Implementation M&V Report
- Name of Independent Third Party

CAM Product:

- Written Approval of Third Party

Subtask 2.3 Measurement and Verification Measurements (Post-Implementation)

The goal of this subtask is to perform measurements according to the M&V plan after implementation of the changes to the HVAC system.

The Recipient shall:

- Perform post-implementation measurements of the HVAC system according to the M&V plan for a period of at least 12 months after project completion. The post-implementation measurements will be performed by the independent third party approved in Subtask 2.2.
- Perform analytics and calculations of achieved natural gas and electricity savings.
- Prepare a *Post-Implementation M&V Plan Report* that includes the results of all of the following:
 - The post M&V, including specific HVAC systems and hospital areas measured;
 - HVAC set points and analytics needed;
 - Resulting post natural gas and electricity use;
 - Determination of the annual natural gas and electricity savings and other benefits;
 - Discussion of any deviations from the M&V plan (subtask 2.1);
 - Discussion of the economic benefits, such as cost savings and resulting payback or other metric as determined by the demonstration site; and
- Address whether the energy savings and other benefits identified in the Goals and Objectives Section II.C were achieved.

Products:

- Post-Implementation M&V Report

TASK 3: HVAC SYSTEM MODIFICATIONS

The goals of this task are to conduct site visits and collect data required to design the HVAC system modifications, obtain all required permits prior to start of construction, implement the modifications to the HVAC systems, and commission the HVAC system.

Subtask 3.1 Site Visit and Data Collection

The goals of this subtask are to collect data from the existing HVAC systems and operating procedures to inform the required systems modifications and monitoring points to be acquired.

The Recipient shall:

- Perform a site visit of the facility to evaluate the switchgear and electrical systems and HVAC system equipment, distribution and controls.
- Meet with facility operators to discuss current HVAC system operations and electrical systems and review project implementation plan.

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- Collect and record as-built drawings for major mechanical equipment to include air handling units, chillers, boilers, pumps and fans, as well as single line electrical and civil drawings.
- Collect historical natural gas and electric interval data.
- Review the existing building automation system (BAS) sequence of operations and set-points.
- Prepare a *Site Visit and Data Collection Summary Report* that will include a discussion of all of the above Recipient actions.

Products:

- Site Visit and Data Collection Summary Report

Subtask 3.2 HVAC System Modifications Design

The goals of this subtask are to prepare design modifications to the facility's HVAC system and sequence of operations and document the proposed modifications to the HVAC system for Hospital Administration approval.

The Recipient shall:

- Perform calculations for the ventilation rates and indoor air quality metrics for the CoC according to ASHRAE Standard 62.1 – Indoor Air Quality Procedure.
- Document the detailed specific airflow modifications that will be made for the ventilation rates with a list of specific rooms and zones. Include room and system air balance control limits.
- Document proposed modifications to the HVAC system basis of operations and submit to the Hospital Administration for approval.
- Obtain *Written Approval from Hospital Administration on Proposed Modifications to HVAC System Basis of Operations*.
- Document the proposed revised zone schedules, zone control sequences, and any modifications to the HVAC system design.
- Identify BAS monitoring points to include in the IAQ monitoring.
- Incorporate BAS system HVAC set-point changes to the construction documents and according to the M&V plan (subtask 2.1).
- Develop preliminary construction documents with detailed HVAC system design modifications and changes to sequence of operations.
- Develop preliminary construction documents for Energy Monitoring and Management System.
- Organize and lead a TAC meeting to evaluate the HVAC system design modifications and obtain comments and recommendations on the system modifications.
- Prepare *TAC Meeting Summary* that includes any recommended resolutions of major TAC issues in accordance to subtask 1.11 (TAC Meetings).
- Develop the *HVAC System Modifications Basis of Operation and Design Narrative*. This document is intended to provide a clear description of the scope of design work to interested parties including the hospital and OSHPD in advance of developing the design construction documents.
- Develop Construction Documents for HVAC and Energy Monitoring and Management Systems required for permitting.
- Prepare *Summary of Key Construction Elements* highlighting key construction elements for the HVAC and Energy Monitoring and Management Systems.

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Products:

- HVAC System Modifications Basis of Operations and Design Narrative (draft and final)
- Written Approval from Hospital Administration on Proposed Modifications to HVAC System Basis of Operations
- *Summary of Key Construction Elements*
- TAC Meeting Summary

TASK 4: PERMITTING

The goal of this task is to obtain a permit from OSHPD for the modifications to the HVAC system design and changes to the BAS. This Task is in addition to Subtask 1.8 (Permits) and does not replace Subtask 1.8.

The Recipient shall:

- Prepare a *Permit Status Letter* that describes all the activities in this task, documents the permits required to conduct this Agreement, and provide the CAM a copy of each approved permit in accordance with subtask 1.8 (Permits).
- Prepare and submit construction documents to OSHPD for review.
- Respond to comments from OSHPD reviewers.
- Resubmit construction documents for back check with changes based on comments from OSHPD reviewers (as necessary).
- Acquire OSHPD approval of modified HVAC basis of operations and system design.
- Prepare an *OSHPD Comments and Approval Report* that lists OSHPD's comments and documents final approval of the modified HVAC basis of operations and system design.
- Prepare *CPR Report* in accordance with subtask 1.3 (CPR Meetings).
- Participate in a CPR meeting.

Products:

- Permit Status Letter
- *OSHPD Comments and Approval Report*
- CPR Report

TASK 5: IMPLEMENTATION AND COMMISSIONING

The goals of this task are to implement the changes to the HVAC system design based on task 4, commission the HVAC, BAS, and Energy Monitoring and Management systems, and complete third-party post-implementation M&V per subtask 2.3.

The Recipient shall:

- Reset and reprogram HVAC zone airflow rates.
- Perform tests and air balance validation for system and zone airflow rates at low and high flow extremes.
- Perform tests and air balance validation for air pressure relationships (positive and negative) for critical/regulated spaces and low and high airflow rate extremes.
- Implement M&V plan by adding needed HVAC set points and setting up monitoring system and analytics.
- Perform commissioning of re-programmed HVAC system controls and obtain signatory acceptance of facility operations by the hospital.

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- Prepare “as-built” mechanical and electrical drawings to document the final changes to the HVAC system and Energy Monitoring and Management System.
- Perform commissioning and start-up testing of the Energy Monitoring and Management System in satisfaction of OSHPD.
- Prepare an *Implementation and Commissioning Report* which describes all the activities and results from this task and includes the above actions.
- Prepare As-built Mechanical and Electrical Drawings to document the final changes to the HVAC system and Energy Monitoring and Management System.
- Prepare *Testing and Air Balance Reports* which will include results from tests and air balance validation.

Products:

- Testing and Air Balance Reports
- Implementation and Commissioning Report

TASK 6: OPERATOR TRAINING

The goal of this task is to provide training to building and facility operators to ensure that the HVAC system modifications are successfully maintained and operated in a manner that sustains the energy savings and preserves occupant safety.

The Recipient shall:

- Review the *HVAC System Modifications Basis of Operation and Design Narrative* with the building and facility operators.
- Review permitted mechanical and electrical drawings with building and facility operators.
- Develop *HVAC Systems, Modifications, and Operations Manual* for the project and review with building and facility operators. The manual must include, but not be limited to, a description of the HVAC systems, modifications, and operation of the commissioned equipment.
- Provide at least one training to the building and facility operators and summarize results in *Training Memo*.

Products:

- HVAC Systems, Modifications, and Operations Manual
- Training Memo

TASK 7: EVALUATION OF PROJECT BENEFITS

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

The Recipient shall:

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:

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- For Product Development Projects and Project Demonstrations:
 - Published documents, including date, title, and periodical name.
 - Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
 - Greenhouse gas and criteria emissions reductions.
 - Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
 - Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
 - A discussion of project product downloads from websites, and publications in technical journals.
 - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Additional Information for Product Development Projects:
 - Outcome of product development efforts, such copyrights and license agreements.
 - Units sold or projected to be sold in California and outside of California.
 - Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.
 - Investment dollars/follow-on private funding as a result of Energy Commission funding.
 - Patent numbers and applications, along with dates and brief descriptions.
- Additional Information for Product Demonstrations:
 - Outcome of demonstrations and status of technology.
 - Number of similar installations.
 - Jobs created/retained as a result of the Agreement.
- For Information/Tools and Other Research Studies:
 - Outcome of project.
 - Published documents, including date, title, and periodical name.
 - A discussion of policy development. State if the project has been cited in government policy publications or technical journals, or has been used to inform regulatory bodies.
 - The number of website downloads.
 - An estimate of how the project information has affected energy use and cost, or have resulted in other non-energy benefits.
 - An estimate of energy and non-energy benefits.
 - Data on potential job creation, market potential, economic development, and increased state revenue as a result of project.
 - A discussion of project product downloads from websites, and publications in technical journals.
 - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.

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- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

Products:

- Kick-off Meeting Benefits Questionnaire
- Mid-term Benefits Questionnaire
- Final Meeting Benefits Questionnaire

TASK 8: Technology/Knowledge Transfer Activities

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

The Recipient shall:

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare a *Technology/Knowledge Transfer Plan* that includes:
 - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end users, utilities, regulatory agencies, and others.
 - A description of the intended use(s) for and users of the project results.
 - Published documents, including date, title, and periodical name.
 - Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
 - A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
 - The number of website downloads or public requests for project results.
 - Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop(s) on the project.
- 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.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

Products:

- Initial Fact Sheet (draft and final)
- Final Project Fact Sheet (draft and final)
- Presentation Materials (draft and final)
- High Quality Digital Photographs

EXHIBIT A

Scope of Work

- Technology/Knowledge Transfer Plan (draft and final)
- Technology/Knowledge Transfer Report (draft and final)

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

Novation Agreement

This Novation Agreement is made and entered into by Advanced Microgrid Solutions, Inc., (Transferor), a Delaware corporation with an office in San Francisco, California; Mazzetti, Inc., (Transferee) a California corporation located at 220 Montgomery Street, Suite 650, in San Francisco, California; and the State Energy Resources Conservation and Development Commission (Energy Commission), a California State Agency located at 1516 9th Street in Sacramento, California. The Transferor, Transferee, and Energy Commission are collectively referred to in this Novation Agreement as the “Parties.”

The Effective Date of this Novation Agreement is the date the Energy Commission signs it. The Energy Commission shall be the last of the Parties to sign and shall only sign if the Novation Agreement is approved by the Energy Commission at a Commission Business Meeting.

A. Recitals:

- 1) The Energy Commission and the Transferor entered into a Funds-in-Agreement for Research and Development, designated Energy Commission Number PIR-16-004, for a project entitled “Advanced HVAC Technology Demonstration Project to Reduce Natural Gas Use in Hospitals,” hereinafter referred to as the Grant. As used in this document, the Grant refers to the above Funds-in-Agreement, including all modifications and amendments between the Energy Commission and the Transferor before the Effective Date of this Novation Agreement.
- 2) The Transferor and Transferee have requested this Novation Agreement to more efficiently perform the activities set forth in the Grant.

B. In consideration for the mutual promises contained in this Novation Agreement, the Parties agree that as of the Effective Date:

- 1) Transferor hereby assigns, transfers, conveys, and delivers to Transferee all of Transferor’s rights, title, and interest in the Grant. Transferor further agrees to cooperate in transmitting within a reasonable time to Transferee any necessary data, reports, information, dedicated hardware, software, supplies, materials, equipment, or anything else collected, developed, used, or purchased under the Grant, and to perform all other actions necessary to enable Transferee to assume its responsibilities under the Grant pursuant to this Novation Agreement.

Transferor agrees that with its next invoice to the Energy Commission (#10), it shall provide substitute match share for Agreement PIR-16-004 in the amount of fifteen thousand, four hundred and eighty-six dollars (\$15,486).

Transferor further agrees that it shall transfer its remaining reimbursable share balance due from the Energy Commission, in the amount of fifty-one thousand, four hundred and fifty dollars and ten cents (\$51,450.10), to the Transferee.

Novation Agreement

Retention will be held on said remaining balance of \$51,450.10. A total of ten percent (10%) of this amount will be held on each invoice, totaling five thousand, one hundred and forty-five dollars (\$5,145.00).

- 2) Transferor represents that it has, except as provided in item #1 above, fulfilled all obligations, including, but not limited to, delivering products and making any payments, applicable to and binding on Transferor under the Grant as of the Effective Date of this Novation Agreement.
- 3) Transferee hereby accepts such assignment and agrees to assume all of Transferor's rights, duties, liabilities, and obligations in, to, and under the Grant.
- 4) Transferee agrees to be bound to the terms and conditions of the Grant as if Transferee was the original recipient of the Grant.
- 5) The Transferor waives any claims and rights against the Energy Commission that it now has or may have in the future in connection with the Grant.
- 6) The Energy Commission recognizes the Transferee as the Transferor's successor in interest in and to the Grant. The Transferee by this Novation Agreement becomes entitled to all rights, titles, and interests of the Transferor in and to the Grant as if the Transferee were the original party to the Grant. The term "recipient" as used in the Grant, shall refer to the Transferee. Accordingly, all of Transferor's rights, duties, and obligations under the Grant are hereby extinguished. *Nothing in this Novation Agreement shall be construed to relieve or absolve Transferor of liability for any legal cause of action which may have accrued against it for conduct committed by Transferor prior to the date of execution of this Novation Agreement.*
- 7) The Parties agree that they will take those actions reasonably necessary to carry out the matters contemplated by this Novation Agreement or any of its provisions.
- 8) Any and all payments and reimbursements previously made by the Energy Commission to the Transferor, and all other previous actions taken by the Energy Commission under the Grant, shall be considered to have discharged those parts of the Energy Commission's obligations under the Grant. All payments and reimbursements made by the Energy Commission after the Effective Date in the name of or to the Transferor shall have the same force and effect as if made to the Transferee, and shall constitute a complete discharge of the Energy Commission's obligations under the Grant to the extent of the amounts paid or reimbursed.
- 9) The Transferor and the Transferee agree that the Energy Commission is not obligated to pay or reimburse either of them for, or otherwise give effect to, any costs, taxes, or other expenses, or any related increases, directly or indirectly

Novation Agreement

arising out of or resulting from the transfer or this Novation Agreement, other than those that the Energy Commission in the absence of this transfer or Novation Agreement would have been obligated to pay or reimburse under the terms of the Grant.

- 10) The Grant shall remain in full force and effect, except as modified by this Novation Agreement.
- 11) If any term, condition, or provision in this Novation Agreement is found to be invalid, unlawful or unenforceable to any extent, the Parties shall endeavor in good faith to agree to such amendments that will preserve, as far as possible, the intentions expressed in this Novation Agreement. If the Parties fail to agree on such an amendment, such invalid term, condition or provision will be severed from the remaining terms, conditions and provisions, which will continue to be valid and enforceable to the fullest extent permitted by law.
- 12) This Novation Agreement contains the entire agreement of the Parties and supersedes all previous communications, representations, understandings and agreements, either oral or written, between the parties with respect to said subject matter.
- 13) This Novation Agreement may not be amended, except by a writing signed by the Parties.
- 14) This Novation Agreement may be executed in counterparts, each of which so executed will be deemed to be an original and such counterparts together will constitute one and the same agreement.
- 15) This Novation Agreement will be interpreted and construed in accordance with the laws of the State of California and the United States of America, without regard to conflict of law principles. Any and all disputes arising out of this Novation Agreement will be resolved in California. All disputes arising out of this Novation Agreement will be subject to the exclusive jurisdiction of the state and federal courts located in or nearest to Sacramento, California, and each Party hereby consents to the personal jurisdiction and venue thereof. By agreeing to the exclusive jurisdiction of the state and federal courts in California, the Energy Commission does not waive its rights to have any disputes first brought before the Victim Compensation and Government Claims Board, nor does it waive its rights to any other administrative remedies to which it is entitled.
- 16) This Novation Agreement shall be deemed to have been prepared equally by the Parties, and it and its individual provisions shall not be construed or interpreted more favorably for one party on the basis that another party prepared it.

Novation Agreement

Advanced Microgrid Solutions, Inc.

BY: _____
(Name)

(Title)

Signature _____ Date: _____

CALIFORNIA ENERGY COMMISSION

BY: _____
(Name)

(Title)

Signature: _____ Date: _____

Mazzetti, Inc.

BY: _____
(Name)

(Title)

Signature: _____ Date: _____

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: ADVANCED MICROGRID SOLUTIONS, INC. / MAZZETTI, INC

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

RESOLVED, that the CEC approves Amendment 3 from Agreement PIR-16-004 for a novation replacing Advanced Microgrid Solutions, Inc. with Mazzetti, Inc. Advanced Microgrid Solutions, Inc. withdrew from the project and Mazzetti, Inc. is a major subcontractor on the project. There are no changes to the scope of work. This \$1,216,707 grant funds the demonstration of an efficient, advanced air distribution design approach that will reduce natural gas use; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on April 8, 2020.

AYE:

NAY:

ABSENT:

ABSTAIN:

Cody Goldthrite
Secretariat