STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019) CALIFORNIA ENERGY COMMISSION

A) New Agreement # ARV-21-006 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Kate Reid	27	916-237-2536

C) Recipient's Legal Name	Federal ID #
Ontario International Airport Authority	47-5520400

D) Title of Project
ONT MHD ZEV Blueprint

E) Term and Amount

Start Date	End Date	Amount
07 / 15 / 2021	12 / 31 / 2022	$ 200,000

F) Business Meeting Information

☐ ARFVTP agreements $75K and under delegated to Executive Director

Proposed Business Meeting Date 07 / 15 / 2021 ☐ Consent ☒ Discussion

Business Meeting Presenter Kate Reid Time Needed: 5 minutes

Please select one list serve. Altfuels (AB118- ARFVTP

Agenda Item Subject and Description:

ONTARIO INTERNATIONAL AIRPORT AUTHORITY. Proposed resolution approving Agreement ARV-21-006 with Ontario International Airport Authority for a $200,000 grant to develop a blueprint for replacing approximately 300 MD/HD ground support vehicles operating at Ontario International Airport (ONT) with ZEVs and related infrastructure, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program funding). Contact: Kate Reid (Staff Presentation: 5 minutes)

G) 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)):

   Explain why Agreement is not considered a "Project":

   Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because .

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

   a) ☒ Agreement **IS** exempt.

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

   ☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit. 14, § 15306

   ☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

   Explain reason why Agreement is exempt under the above section: Cal. Code Regs, tit. 14, §15306, Information Collection, provides that projects which consist of basic data collection, research and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource are

categorically exempt from the provisions of CEQA. This project consists of developing a planning document for possible, future deployment of zero emission vehicles and related infrastructure equipment. The project will not cause direct physical changes to the environment, and there will be no physical construction. This project involves data collection, technology assessment, public outreach, administrative coordination efforts, planning, and similar activities. Therefore, the proposed project will have no significant effect on the environment and is categorically exempt under section 15306.

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

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

Legal Company Name:	**Budget**
Build Momentum, d.b.a. Momentum	$ 98,500.00
Ricondo & Associates, Inc.	$ 20,000.00
U.S. Dept, of Energy (National Renewable Energy Laboratory)	$ 49,500.00
HNTB Corporation	$ 20,000.00
Energy Mission Control Corporation	$ 12,000.00

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

Legal Company Name:
City of Chino
City of Ontario
City of San Bernardino
Southern California Edison Company

J) Budget Information

Funding Source	**Funding Year of Appropriation**	**Budget List Number**	**Amount**
ARFVTP	FY 19/20	601.118L	$200,000
Funding Source			$
Funding Source			$
Funding Source			$
Funding Source			$

R&D Program Area: Select Program Area TOTAL: $

Explanation for “Other” selection

Reimbursement Contract #: Federal Agreement #:

STATE OF CALIFORNIA

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K) Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Nicole Walker
Address: 1923 E. Avion St.
City, State, Zip: Ontario, CA 91761
Phone: 310-883-5812
E-Mail: nwalker@flyontario.com

2. Recipient's Project Manager

Name: Nicole Walker
Address: 1923 E. Avion St.
City, State, Zip: Ontario, CA 91761
Phone: 310-883-5812
E-Mail: nwalker@flyontario.com

L) Selection Process Used

☒ Competitive Solicitation Solicitation #: GFO-20-601

☐ First Come First Served Solicitation Solicitation #: - -

M) The following items should be attached to this GRF

1.	Exhibit A, Scope of Work		☒ Attached
2.	Exhibit B, Budget Detail		☒ Attached
3.	CEC 105, Questionnaire for Identifying Conflicts		☒ Attached
4.	Recipient Resolution	☒ N/A	☐ Attached
5.	CEQA Documentation	☒ N/A	☐ Attached

Agreement Manager **Date**

Office Manager **Date**

Deputy Director **Date**

Exhibit A
SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Community and Stakeholder Engagement
3		Zero Emission Vehicle (ZEV) Assessment Framework
4		ZEV Technology Assessment for Energy Optimization
5	X	Design Concepts for Airport ZEV Integration
6		Gaps and Opportunities Analysis
7		Financial Models and Low Carbon Fuel Standard (LCFS) Impact
8		Knowledge Transfer
9		Project Fact Sheet
10		Blueprint Production

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Nicole Walker (OIAA)	Build Momentum, d.b.a. Momentum	
2	Michelle Brantley (OIAA)	Momentum	City of Chino City of Ontario County of San Bernardino
3	Michelle Brantley, Keith Owens (OIAA), Aaron Flake (OIAA), Jeffrey Laass (OIAA), Nicole Walker	Ricondo & Associates, Inc.	
4	Michelle Brantley, Keith Owens, Aaron Flake, Nicole Walker	U.S. Department of Energy (National Renewable Energy Laboratory (NREL))	
5	Michelle Brantley, Keith Owens, Aaron Flake, Nicole Walker	HNTB Corporation	Southern California Edison Company
6	Michelle Brantley, Bruce Atlas (OIAA), Mark Thorpe (OIAA), Jeffrey Laass, Nicole Walker	Momentum	

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
7	John Schubert (OIAA)	Energy Mission Control Corporation	
8	Michelle Brantley	Momentum	
9	Aaron Flake	Momentum	
10	Nicole Walker	Momentum	

GLOSSARY

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

Term/ Acronym	Definition
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CBO	Community-Based Organization
CEC	California Energy Commission
Clean Transportation Program	Formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program
CPR	Critical Project Review
DAC	Disadvantaged Community
FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
LAWA	Los Angeles World Airports
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
MHD	Medium- and Heavy-Duty
NREL	National Renewable Energy Laboratory
OIAA	Ontario International Airport Authority
ONT	Ontario International Airport
Recipient	Ontario International Airport Authority
VGI	Vehicle-Grid Integration
ZEV	Zero-Emission Vehicle (This may include on- and off-road vehicles.)

BACKGROUND

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program (formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program). The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies

to help attain the state's climate change policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the Program through January 1, 2024, and specifies that the CEC allocate up to $20 million per year (or up to 20 percent of each fiscal year's funds) in funding for hydrogen station development until at least 100 stations are operational. The Clean Transportation Program has an annual budget of approximately $100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance, and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

The CEC issued GFO-20-601 entitled "Blueprints for Medium- and Heavy-Duty Zero-Emission Vehicle Infrastructure" under the CEC's Clean Transportation Program. To be eligible for funding under GFO-20-601, projects must also be consistent with the CEC's current Clean Transportation Program Investment Plan, updated annually. In response to GFO-20-601, the Recipient submitted Proposal #22, which was proposed for funding in the CEC's Notice of Proposed Awards on April 8, 2021. GFO-20-601 is hereby incorporated by reference into this Agreement in its entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient's Application, the Solicitation shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the terms of the Recipient's Application, the terms of this Agreement shall control.

Problem Statement:

In 2016, ownership, management, and operation of Ontario International Airport (ONT) transferred to the Ontario International Airport Authority (OIAA), away from Los Angeles World Airports (LAWA), which controlled ONT since 1967. Critically, this newfound autonomy is a once in a generation opportunity for the State of California to promote zero-emission vehicle (ZEV) infrastructure adoption at an airport. Due to financial constraints after gaining independence from LAWA, airport modernization planning to date has been primarily focused on laying the groundwork. Only now, in 2021, is ONT entering its next phase of planning and design for the future, and the CEC can help ensure that airport planners and designers include replicable models for MHD ZEV infrastructure from the start. Airport stakeholders such as airlines are slow to adopt new technologies if they perceive a near-term risk, and airport planning does not always include plans for ZEV infrastructure. The proposed ONT medium- and heavy-duty (MHD) ZEV Blueprint will solve this problem by including planning for ZEV adoption from the very start

of airport design and planning.

Goals of the Agreement:

The goal of the Ontario International Airport ZEV Infrastructure Blueprint is to accelerate the adoption and deployment of MHD ZEV infrastructure and equipment throughout the airport grounds and across all airport stakeholders and operators.

Objectives of the Agreement:

Supporting this goal, Ontario International Airport Authority (OIAA) has established the following quantitative and measurable objectives:

- Discover new opportunities and pathways for replicable MHD ZEV deployment at airports and transportation hubs that have potential to fundamentally disrupt airport design, city planning, and the global energy sector. Opportunities and pathways should include both proven and innovative technologies, business models, policies, and partners. Quantitative metrics may include greenhouse gas (GHG) impact analysis, local and regional economic impact analysis, equity and inclusion analysis, design scenario analysis, calculated financial implications for stakeholders, and estimated investment required.
- Engage a broad, inclusive stakeholder network and identify strategic partners to develop a comprehensive and equitable approach to rapidly deploying MHD ZEV infrastructure at the Ontario International Airport. Quantitative metrics may include the number of stakeholders targeted, number of stakeholders engaged on project, stakeholder surveys, and value chain and ecosystem maps.
- Understand the needs of MHD equipment and fleet owners and operators. This will include key equipment related stakeholders such as airlines, freight carriers, design and planning consultants, airport procurement divisions, and equipment manufacturers. Quantitative metrics may include the number of equipment owners and operators assessed, the number of needs identified, technology requirement surveys, refuel/recharge time, and pricing data.
- Identify workforce education and training resources to prepare equipment operators and maintenance technicians for working with MHD ZEVs. Quantitative metrics may include number of existing training programs available, number of available ZEV training modules, and qualifications mapping of existing and new skillsets.
- Influence the ONT planning and design efforts to include MHD ZEV infrastructure deployment strategies and design elements that consider new technologies, business models, policies, realistic timelines, technology vendors, and MHD fleet operators. Quantitative metrics may include technical performance metrics, timelines with contingencies, number of meetings with airport planning and design teams, cost estimates, and energy modeling.
- Develop proactive risk mitigation strategies to overcome challenges and barriers to deployment of ZEV infrastructure at ONT. Risk mitigation strategies should help balance ambitious ZEV and emissions targets, practical planning considerations, continued technical innovation and customer flexibility and choice. Quantitative metrics may include a risk matrix, uncertainty estimates, and dependency assessments.

TASK 1 ADMINISTRATION

Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement. The Commission Agreement Manager (CAM) shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

The Recipient shall:

- Attend a "Kick-Off" meeting with the CAM, the Commission Agreement Officer (CAO), and a representative of the CEC Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
    - Agreement Terms and Conditions
    - Critical Project Review (Task 1.2)
    - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
    - Permit documentation (Task 1.7)
    - Subcontracts needed to carry out project (Task 1.8)
    - The CAM's expectations for accomplishing tasks described in the Scope of Work
    - An updated Schedule of Products and Due Dates
    - Monthly Progress Reports (Task 1.4)
    - Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
    - Final Report (Task 1.5)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

CAM Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for frank discussions between the CEC and the Recipient. The goal of this task is to determine if the project should continue to receive CEC funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

The CAM may schedule CPR meetings as necessary, and meeting costs will be borne by the Recipient.

Meeting participants include the CAM and the Recipient and may include the CAO, the Fuels and Transportation Division (FTD) program lead, other CEC staff and Management as well as other individuals selected by the CAM to provide support to the CEC.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the CEC, but they may take place at another location or remotely.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. Prepare a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.
- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

CAM Products:

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with CEC staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

  This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the CAM. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the CAM.

  The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CAM will determine the appropriate meeting participants.

  The administrative portion of the meeting shall be a discussion with the CAM and the Grants Officer about the following Agreement closeout items:

  - What to do with any equipment purchased with CEC funds (Options)
  - CEC request for specific "generated" data (not already provided in Agreement products)
  - Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
  - "Surviving" Agreement provisions
  - Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Products:

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

Task 1.4 Monthly Progress Reports

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

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the CAM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving the Agreement's goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

- Outline of the Final Report, if requested

- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of CEC funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. 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 such 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 each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
    - Amount of each in-kind contribution, a description, documented market or book value, and its 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 shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the CAM if during the course of the Agreement additional match funds are received.
- Notify the CAM within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

Products:

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

Task 1.7 Identify and Obtain Required Permits

The goal of this task 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. Although the CEC budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
    - A list of the permits that identifies the:
        - Type of permit
        - Name, address and telephone number of the permitting jurisdictions or lead agencies
    - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement 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 the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the CAM.
- As permits are obtained, send a copy of each approved permit to the CAM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required

- A copy of each approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each final approved permit (if applicable)

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures. It will also provide CEC an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the CAM for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Letter describing the subcontracts needed, or stating that no subcontracts are required
- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2 COMMUNITY AND STAKEHOLDER ENGAGEMENT

Input from the community and key stakeholders will be an important part of the Blueprint development process. The goal of this task is to bring together industry participants, airport stakeholders, and community leaders to foster productive and thoughtful dialogue around the deployment of MHD ZEVs and infrastructure. Stakeholder feedback will help develop buy-in, gather information, and provide a feedback loop with external experts. Outreach efforts will include OIAA staff, passenger and cargo airlines, non-airline airport tenants, technology developers, financial partners, equipment vendors, airport planners, government agencies, and the surrounding communities. The outcomes of this Task will inform the work being done within each other Task, and the project team will follow-up with stakeholders as work progresses.

The Recipient shall:

- Prepare a List of Outreach Targets to ensure a diverse stakeholder audience, to include: electric utilities, hydrogen providers, local jurisdictions and planning organizations, financial organizations, regional workplaces, community-based organizations (CBOs), CA Native American Tribes, and local residents in the community. Provide a copy to the CAM.
- Prepare a Community and Stakeholder Engagement Plan to identify the purpose of its engagement with communities and stakeholders and the goals and intended outcomes of the outreach by stakeholder segment. Provide a copy to the CAM.
- Identify opportunities and challenges associated with MHD ZEV infrastructure deployments, including electricity- and hydrogen-based systems.
- Prepare a Community and Stakeholder Engagement Report that includes:
    - Organizations, companies, and stakeholders that received outreach
    - Summary of the outcomes of such outreach (e.g. engaged in dialogue, declined to participate, did not respond)
    - Overview of topics discussed
    - Summary of the key findings aggregated by stakeholder segment
- Provide a copy of the Community Stakeholder and Engagement Report to the CAM.

Products:

- List of Outreach Targets
- Community and Stakeholder Engagement Plan
- Community and Stakeholder Engagement Report

TASK 3 ZEV ASSESSMENT FRAMEWORK

The project team includes airport planners with significant experience planning airport expansions, upgrades, and redevelopments that include energy efficient elements, emissions reductions strategies, and advanced technologies. The goal of this task is to leverage planning activities that are just starting at the airport to develop a ZEV Assessment Framework that will capture all major considerations for implementing ZEV infrastructure at Ontario International Airport. The ZEV Assessment Framework will inform the gaps and opportunities analysis, and it will serve as a checklist to ensure the project team has considered the implications of all potential recommendations or strategies.

The Recipient shall:

- Engage an airport planning organization with significant experience planning airport expansions, upgrades, and redevelopments that include energy efficient elements, emissions reductions strategies, and advanced technologies.
- Conduct an assessment of major planning considerations for deploying ZEV infrastructure like electrical charging stations and hydrogen refueling stations. Specific elements to be considered include:
    - Locations and accessibility for electric charging stations and hydrogen refueling stations.
    - Locations and accessibility for vehicle storage and maintenance facilities.

  - Existing roadways, the compatibility of these roadways with ZEV infrastructure, and requirements for modifying or upgrading roadways.
  - Locations and accessibility for airport structures like terminals and warehouses.
  - Airport logistics, duty cycles of existing and future equipment, and routes and space requirements of existing and future equipment.
- Complete a ZEV Assessment Framework that will capture all major planning considerations for implementing ZEV infrastructure at ONT. This will include:
  - Outputs from the comprehensive planning needs assessment described above.
  - Review from airport stakeholders.
  - A final product that will be used like a "check-list" to ensure the Blueprint has considered major planning elements and implications.
- Provide a copy of the ZEV Assessment Framework to the CAM.

Products:

- ZEV Assessment Framework (draft and final)

TASK 4 ZEV TECHNOLOGY ASSESSMENT FOR ENERGY OPTIMIZATION

The goal of this task will be to evaluate ZEV infrastructure technology solutions and innovations that can address the baseline gaps identified in Task 3, including but not limited to MHD ZEV equipment, charging and refueling stations, and software solutions. As part of this Task, the project team will evaluate the potential energy impacts of ZEV technology adopted by ONT. The team will also consider impacts of ZEV infrastructure and equipment on airport operations. The outcomes from this Task will inform the Gaps and Opportunities Analysis in Task 6 and the Blueprint production.

The Recipient shall:

- Analyze the combination of technologies and systems that offer the best mix of economic, environmental, and technical performance specific to the project/region.
  - Explore innovative MHD charging and hydrogen refueling options to address potential infrastructure barriers. Technology options may include wireless charging, high-powered charging, overhead catenary systems, solar chargers, robotic chargers, mobile chargers/refuelers, curbside, streetlamp, and intersection chargers, or autonomous garages.
  - Explore innovative MHD ZEV equipment, including new designs.
  - Develop a Technology Outlook Presentation that includes information from technology manufacturers and operators in order to raise awareness and enhance educational opportunities for Ontario Airport staff and the project team. Provide a copy to the CAM.
  - Assess appropriate Vehicle-Grid Integration (VGI) standards and open standards-based network communications.
    - Include the ability to support emerging connectors and/or interfaces for heavy-duty vehicles, open standards-based network communications, the inclusion of appropriate VGI standards, and/or other methods for

enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.

- Engage with original equipment manufacturers of MHD vehicles to understand their visions for connectors and interfaces.
- Include how the project integrates energy storage for the electricity grid or uses curtailed or dedicated renewable energy as a source for renewable hydrogen.

- Identify analytical tools, software applications, and data needed to improve future MHD ZEV infrastructure planning activities.
- Assess the potential for energy improvements from MHD ZEV infrastructure.

Products:

- Technology Outlook Presentation

TASK 5 DESIGN CONCEPTS FOR AIRPORT ZEV INTEGRATION

The project team's airport designer will leverage their extensive experience designing Leadership in Energy and Environmental Design (LEED) certified airports and developing energy efficient airport design concepts to help ensure the ONT MHD ZEV Blueprint considers trends and opportunities for airport design. Specifically, the project team will develop a ZEV design concepts recommendation package that will consider the latest best practices and design trends for zero-emission airport design.

The Recipient shall:

- Consider and document airport design concepts that may be applicable to ONT and that consider energy efficiency, carbon mitigation strategies, and advanced technologies.
- Conduct an assessment of major design considerations for deploying ZEV infrastructure like electrical charging stations and hydrogen refueling stations. Specific elements to be considered include:
    - Building and site integration of major ZEV design elements.
    - ZEV infrastructure footprint for form factor requirements.
    - Roadway design and design for accessibility, including concepts for innovative roadway placement and modifications.
    - Terminal and warehouse design concepts.
    - Advanced airport design concepts that consider the future of ZEV integration, including scenarios with near full deployment of ZEV infrastructure and equipment.
- Aggregate results into an Airport Design Concepts Report. Provide a copy to the CAM.
- Assess the potential for energy improvements that may lead to future LEED certification for areas of interest at the airport.
- Complete and submit to the CAM a ZEV Design Concepts Recommendation Package that will capture the design concepts and design recommendations for inclusion of ZEV infrastructure and equipment at ONT. This deliverable will consider:

- Outputs from the comprehensive planning needs assessment and technology review described in previous tasks.
- Review and feedback from airport stakeholders.

Products:

- Airport Design Concepts Report
- ZEV Design Concepts Recommendation Package

[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details]

TASK 6 GAPS AND OPPORTUNITIES ANALYSIS

In order to develop a comprehensive and actionable MHD ZEV Blueprint, OIAA must fully understand the gaps in baseline ZEV infrastructure capabilities and the opportunities for implementing ZEV infrastructure in the future. The goal of this task will be to develop a prioritized set of recommendations that address electric charging and hydrogen refueling infrastructure, MHD vehicle selection, renewable hydrogen production, microgrids, distributed energy resources, fast charging, charging and refueling logistics, economic and business implications, operational implications, and integration with airport expansion and improvement planning, among other areas. This Task will build on outcomes from Task 3, Task 4, and Task 5, and the outcomes from this Task will inform the Blueprint production.

The Recipient shall:

- Aggregate results from the airport planner's ZEV assessment to establish a baseline for gaps and opportunities. Activities will include:
  - Convene OIAA staff and Momentum to review the ZEV Assessment Framework.
  - Establish a baseline for the status for airport ZEV infrastructure needs.
  - Conduct workshops and interviews to identify gaps and opportunities.
- Analyze results from the airport designer's Airport Design Concepts Report to better understand gaps in existing designs and opportunities for future airport designs.
- Aggregate results from the Technology Presentation to evaluate the potential energy impacts of ZEV technology adopted by ONT, as well as the potential innovations that should be considered as part of the Blueprint.
- Identify the actions and milestones needed for implementation of MHD ZEVs and ZEV charging or refueling infrastructure, as follows:
  - Quantitative goals and specific, realistic timelines for installation and implementation of MHD electric vehicle (EV) charging and/or hydrogen refueling infrastructure within the project.
  - Potential sites, maps, and accessibility to travel routes identified for proposed MHD charging and/or refueling.
    - Identify optimal locations for MHD ZEV infrastructure deployment and the rationale for being considered optimal.
    - Assess the existing infrastructure at the Ontario Airport

        - Evaluate MHD vehicle usage and driving patterns in order to maximize and optimize the type and placement of ZEV infrastructure to support the MHD ZEVs.
    - Develop a ZEV Implementation Case Study for one location at the airport, to be selected based on the assessment of existing infrastructure. Provide a copy to the CAM.
- As applicable, identify analytical tools, software applications, and data needed to improve future MHD ZEV infrastructure planning activities.
- Assess the risks and challenges associated with planning and implementation of the required MHD ZEV technologies.
- Identify each task or area of responsibility required of the project partners and stakeholder groups to develop a replicable approach for other fleets transitioning to zero-emission.
- Summarize the types of jobs that will be created for the local community and regional industries.
- Identify goals to reduce greenhouse gas (GHG) emissions, criteria air pollutants, and toxic air contaminants for the region, and the emitters at the local level that would need to be targeted.
- Identify the benefits that would accrue to disadvantaged communities (DACs), low-income communities, priority populations, and/or tribal lands to the maximum extent possible. Address health and safety, access and education, financial benefits, economic development, and consumer protection.
- Develop a Gaps and Opportunities Brief that will summarize initial findings from the gaps and opportunities analysis. This brief will be circulated with key stakeholders to received critical feedback, validation, and buy-in. Provide a copy to the CAM.

Products:

- ZEV Implementation Case Study
- Gaps and Opportunities Brief

TASK 7 FINANCIAL MODELS AND LOW CARBON FUEL STANDARDS IMPACT

The project team will conduct an assessment of financial models that will facilitate the deployment MHD ZEV infrastructure and equipment at ONT. This will include a financial needs assessment and an exploration of existing financial tools, potential financial innovations, and the role of carbon credits, primarily the Low Carbon Fuel Standard (LCFS). As part of Community and Stakeholder Engagement in Task 2, OIAA anticipates engaging financial institutions to ensure education, involvement, and commitment to participate in Blueprint implementation. Financial community engagement will also help identify financial risks and ways for the private sector to fund MHD ZEV infrastructure, including charging and refueling stations.

The Recipient shall:

- Develop a Financial Ecosystem Landscape Presentation that describes the relevant financial organizations that may provide financing to future MHD ZEV infrastructure projects. Provide a copy to the CAM.

- Host a financial stakeholder workshop to engage the financial community, ask and answer questions, and educate airport stakeholders.
- Consider utility rate structures and long-term commitments that may affect OIAA operational costs and MHD ZEV total cost of ownership, whether it is OIAA reselling commodities (electricity, gas or water reformed into hydrogen) or generating power onsite to power EV charging needs.
- Investigate the potential opportunities for leveraging Low Carbon Fuel Standard (LCFS) and Renewable Identification Number credits as revenue streams from hydrogen and electricity generation and distribution.
- Assess facility or equipment leasing that could minimize the capital cost of deploying MHD ZEV infrastructure at ONT.
- Assess electrical and gas utility financing support programs like Southern California Edison's Charge Ready Transport program that provides no cost infrastructure for MHD charging and airport equipment.

Products:

- Financial Ecosystem Landscape Presentation

TASK 8 KNOWLEDGE TRANSFER

As the technical tasks are completed, OIAA will conduct outreach to key stakeholders that can benefit from the blueprint analysis and recommendations – this is critical to ensuring that the OIAA MHD ZEV Blueprint is replicable across other airports, transportation hubs, and city centers. There will be many lessons learned from this effort, and the Blueprint will be designed with knowledge transfer and replicability in mind.

The Recipient shall:

- Develop a List of Knowledge Transfer Outreach Targets that describes the stakeholders, communication outlets, and other avenues for outreach that will be leveraged by the project team. Provide a copy to the CAM.
- Develop a Knowledge Transfer Engagement Plan that will describe the approach and activities to conducting knowledge transfer. Provide a copy to the CAM.
- Present knowledge of how MHD ZEV affect electric utilities, including but not limited to:
    - Effects of MHD ZEV on grid delivery, reliability, and resiliency.
    - Programs from utilities to support the development of MHD ZEV infrastructure, including rebates and preferential tariffs.
    - Opportunities and challenges associated with MHD ZEV infrastructure deployments.
    - Impacts of changed electrical load on grid operations and utility rates.
- Present utility's and other hydrogen providers' plans for hydrogen production and distribution, including but not limited to:
    - Existing or near-term programs managed by utilities to support the development of hydrogen-based MHD ZEV infrastructure for on- and off-road applications.

  - Major private-sector hydrogen producer's efforts including information gained from industry participants such as Linde, Air Liquide, and Praxair.
  - Major private-sector hydrogen production equipment manufacturers' initiatives from organizations such as Nel Hydrogen, Hydrogenics/Cummins, and ITM Power.
- Present opportunities and challenges associated with MHD ZEV infrastructure deployments, including electricity- and hydrogen-based systems, including but not limited to:
  - Information from local jurisdictions and planning organizations involved in the planning and permitting of the infrastructure.
  - Knowledge gained from local building departments to assess the permitting process for the installation of ZEV charging infrastructure and relevant distributed energy resource (DER) technologies.
  - Documentation of actions or steps already adopted by local, state, and federal jurisdictions and the impact of those actions or steps on the development of MHD ZEV infrastructure and the electrification of multimodal transportation.
- Present perspectives from regional workplaces, business owners and operators, regional community-based organizations (CBOs), community leaders, California Native American Tribes, and potentially affected local residents in the planning process and education on the benefits of ZEV transportation, including but not limited to:
  - Concerns from community colleges, CBOs, and community leaders who are developing workforce development strategies that will enable training, education, and readiness for the local community workforce to obtain the requisite knowledge, skills, and ability to develop, support, and maintain the MHD ZEV fleets.
  - Effective approaches of reaching out to the local community, supported by education and outreach materials appropriate for potentially affected residents, in the languages needed for the community, to educate on the planning efforts and potential future impacts.
- Communicate with financial institutions to ensure they are educated, involved, and committed to participating in the implementation of the MHD ZEV infrastructure blueprint.
- Communicate financial opportunities and challenges to MHD ZEV stakeholders and OIAA leadership, including but not limited to:
  - Important aspects from clean energy infrastructure financiers with a history of supporting the development, installation, and operation of renewable energy technologies including DER technologies, microgrids, LD ZEV infrastructure, MHD ZEV infrastructure, and renewable fuels projects.
  - Information on new and innovative financial products and business models including energy-as-a-service, incentive and credit monetization, and third-party ZEV fueling/charging operations.

- Complete a Knowledge Transfer Engagement Report that describes the results, lessons learned, and efficacy of knowledge transfer activities. Provide a copy to the CAM.

Products:

- List of Knowledge Transfer Outreach Targets
- Knowledge Transfer Engagement Plan
- Knowledge Transfer Engagement Report

TASK 9 PROJECT FACT SHEET

The goal of this task is to develop an initial and final project fact sheet that describes the CEC-funded project and the benefits resulting from the project for the public and key decision makers.

The Recipient shall:

- Prepare an Initial Project Fact Sheet at start of the project that describes the project and the expected benefits. Use the format provided by the CAM.
- Prepare a Final Project Fact Sheet at the project's conclusion that describes the project, the actual benefits resulting from the project, and lessons learned from implementing the project. Use the format provided by the CAM.
- Provide at least (6) six High Quality Digital Photographs (minimum resolution of 1300x500 pixels in landscape ratio) from the project.

Products:

- Initial Project Fact Sheet
- Final Project Fact Sheet
- High Quality Digital Photographs

TASK 10 BLUEPRINT

The goal of this task is to formalize the information gathered through the Task 2 Community and Stakeholder Engagement and Task 3 Blueprint Information Assessment into a formal Blueprint that can be shared with key stakeholders.

The Recipient shall:

- Prepare a Blueprint Outline that conveys the intended structure of the Blueprint and the intended goals and outcomes of major sections.
- Integrate findings from the Technical Tasks into the Blueprint Outline
- Complete and submit Draft Blueprint to the CAM
- Incorporate feedback as provided by the CAM
- Prepare Final Blueprint

Products:

- Blueprint Outline
- Draft of Blueprint
- Final Blueprint

RESOLUTION NO: 21-0715-5c

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: ONTARIO INTERNATIONAL AIRPORT AUTHORITY

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

RESOLVED, that the CEC approves Agreement ARV-21-006 with Ontario International Airport Authority for a $200,000 grant to develop a blueprint for replacing approximately 300 MD/HD ground support vehicles operating at Ontario International Airport (ONT) with ZEVs and related infrastructure; 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 CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on July 15, 2021.

AYE:
NAY:
ABSENT:
ABSTAIN:

_____
Liza Lopez
Secretariat