

OVIN Research and Development (R&D) Partnership Fund – Advanced Charging and V2G Stream

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Program Information and Eligibility Requirements

Overview and Benefits

The transition to electric vehicles (EVs) not only plays a pivotal role in our zero-emissions mobility future, but the transition also unlocks opportunities for EVs and their associated infrastructure to shape resilient and sustainable energy management systems, including grid optimization and the integration of renewable energy sources. These opportunities accelerate the need for advanced charging technologies and solutions that can harmonize the demands of EVs with the dynamics of our energy systems as we facilitate the transition to a more sustainable energy landscape and support the growing adoption of EVs. Through the R&D Partnership Fund – Advanced Charging and V2G Stream, Ontario small- and medium- sized enterprises (SMEs) will have an opportunity to lead in this global challenge, contributing to Ontario’s position as a global leader in the EV transition.

The R&D Partnership Fund – Advanced Charging and V2G Stream contributes up to one-third of eligible project costs for approved projects up to a maximum of \$1,000,000, with the remainder contributed by *Applicants* and/or private sector *Partners*.

Project funding can be used towards the technology/product/service validation, testing, piloting, demonstration, commercialization, and deployment of technologies, products and services focused on the advanced charging technologies and vehicle-to-grid (V2G) energy management systems needed for the accelerated transition towards electrification. Technologies should have a demonstrated linkage to a smart mobility use case. This includes technologies in the following Priority Areas:

1. Advanced charging technologies, including wireless charging, high-speed charging, bidirectional charging, dynamic charging, and smart charging.
2. Vehicle-to-Grid (V2G) technologies, including technologies to support interoperability and scalability.
3. Energy demand and grid management systems.
4. Zero-emissions technologies relating to the integration of renewable energy within charging infrastructure.
5. Energy storage and transmission technologies (including battery and hydrogen-focused technologies) relating to energy management and grid capacity.

Examples of vehicle-to-grid (V2G) energy management systems and other advanced charging technologies include:

- Smart Charging and Load Management technologies: technologies that help manage and distribute the load of EVs on the grid to match the grid’s capacity. Examples include time-of-use pricing, off-peak charging, and smart charging software.
- Vehicle-to-Grid (V2G) Technology: that allows bidirectional energy flow between EVs and the grid, enabling EVs to act as mobile energy storage units, mitigating the need for additional infrastructure. Examples include vehicles equipped with bidirectional charging technology that enables electric vehicles (EVs) to discharge energy back into the grid when not in use supporting grid stability and managing fluctuations in energy supply and demand.
- Energy storage technologies: technologies managing fluctuating electricity demand and integrating

intermittent renewable energy sources into the grid. Examples include batteries for grid storage applications, hydrogen storage technologies including compressed hydrogen for grid integration, pumped hydro storage systems for large-scale and long-duration storage, and flywheels for rapid response times.

- Distributed energy resources and technologies (DERs): technologies close to the point of energy consumption, which aim to integrate smaller-scale, localized energy systems as an alternative or complement to the centralized grid. Examples include various technologies such as solar panels, wind turbines, small-scale hydroelectric systems, combined heat and power (CHP) systems, and microgrids that allow for off-grid vehicle charging stations.
- Technologies that support system operability across the grid, vehicle and charging infrastructure, including cybersecurity solutions (e.g. network security and device authentication), connectivity and smart device solutions (e.g. anomaly detection, network management and preventative maintenance), and blockchain solutions (e.g. access management and transaction systems).
- Integration of Renewable Energy: Technologies that integrate more renewable energy sources into the grid to potentially enhance the reliability and sustainability of the grid, such as solar, wind, hydro, and geothermal power technologies.

At project completion, recipients are required to demonstrate their product and/or service developed or advanced with Ontario's support. Please note that any public communications about the project, OVIN, or Ontario funding will require review and approval from OCI prior to release. Sharing information and achievements through showcase events and media communications is encouraged and will be supported.

Benefits to Applicants and Partners	Benefits to Society
<ul style="list-style-type: none"> • Commercialization of Ontario-made technologies • Demonstration of Ontario-made technologies to potential customers • Relationships with researchers to extend company R&D • Marketable solutions and technologies for advanced charging and energy management systems • Public/private partnerships 	<ul style="list-style-type: none"> • Cleaner transportation • Reduced environmental and carbon footprint • Efficiencies and cost-savings relating to energy systems and infrastructure

How Funding Works

OVIN Contribution	Reimbursement of one-third (maximum) of total eligible project costs, up to \$1,000,000, triggered by submission and approval of quarterly reports
Matching Requirement	Two-thirds (minimum) of total eligible project costs (i.e., minimum 2:1 match to OVIN contribution) <ul style="list-style-type: none"> • Contribution match may come from <i>Applicant</i> and/or <i>Partners</i>

	<ul style="list-style-type: none"> Contribution match MUST be in the form of private sector contributions, and be unencumbered from other government grant sources
Example	<p>Total eligible project costs: \$400,000</p> <ul style="list-style-type: none"> Maximum OVIN contribution: \$133,000 Minimum Private Sector contribution: \$267,000
Funding Recipient	OVIN funds flow only to the <i>Applicant</i> . The <i>Applicant</i> is responsible for reimbursing <i>Partners</i> , if applicable.

- Refer to the Eligible Expenditures Guide ([Resource Documents - OVIN - Ontario Vehicle Innovation Network \(ovinhub.ca\)](https://www.ovinhub.ca)) for full details.
- All project activities must be performed within Ontario unless written approval has been obtained from OCI before submission of an application.
- OCI may reimburse expenses incurred after the application approval date. The Funding Agreement must be executed by relevant parties before a project is activated. Until activation is complete, project expenses are incurred at the risk of the participants.
- Collectively, the *Applicant*, *Primary Partner*, and *Secondary Partners* must achieve a 2:1 private sector contribution to the project. The contribution must be unencumbered; that is, it cannot be used to leverage other public funds to pay for a portion of the same activity.
- Contributions from public entities (e.g., municipalities, transit authorities, academic institutions, local electricity distribution companies, government agencies, provincial and federal departments, and grant programs, etc.) do not constitute eligible sources of matching.
- Applicants* and *Partners* will be required to disclose all sources of funding being applied for and/or received for the project.

Eligibility Requirements

Applicant

- SME with fewer than 500 global full-time employees.
- May be an *Applicant* on only one R&D Partnership Fund project at a time.
- Must have registered operations (e.g., R&D, manufacturing, product management, etc.) in Ontario and carry out their project in Ontario.
- Applicants* who have received over \$500,000 of funding from OCI administered programs in their lifetime (excluding TalentEdge) are required to obtain OCI approval before a new application for funding is initiated. Your Business Development Manager can guide you through the process.
- The *Applicant* is a co-signatory to the Funding Agreement.

Primary Partner

A *Primary Partner* is an organization directly participating in the R&D project and whose participation demonstrates "market pull" (e.g., as a customer) for the Applicant's technology.

- The *Primary Partner* may participate in multiple concurrent projects.
- The *Primary Partner* is a co-signatory to the Funding Agreement.

The *Primary Partner* may be:

- SMEs
- National and Multi-National Enterprises (NEs and MNEs)
- Academic institutions (as clients only)
- Local electricity utilities or local distribution companies (LDCs)
- Municipalities
- Transit Authorities
- Crown Corporations
- Indigenous Communities
- Not-For-Profit Organizations representing industry

Secondary Partners

Secondary Partners are additional organizations directly contributing **matching leverage** to the project.

- *Secondary Partners* may participate in multiple concurrent projects
- *Secondary Partners* are co-signatories to the Funding Agreement

Secondary Partners may be:

- SMEs
- NEs and MNEs
- Not-For-Profit Organizations (such as industry associations and Not-For-Profit Organizations with non-public sources of funding)

Other Partners

Other Partners are organizations – such as public entities – providing support to the project, which can be recorded as an "other contribution" but do not contribute to the 2:1 private sector contribution requirement. *Other partners* **do not** co-sign the Funding Agreement.

Project

- One *Applicant* and minimum of one *Primary Partner*.
- An unlimited number of additional *Secondary Partners*, or *Other Partners* can join.
- *Applicant* and *Primary Partner* must have an arm's-length business relationship.
- Project activities are carried out in Ontario.
- Minimum 2:1 contribution match by *Applicants* and/or private sector *Partners*.
- Projects can be up to 24 months in duration.
- This program is not intended for research to prove feasibility or basic technology research. Projects should be at the appropriate Technology Readiness Levels ([Level 3-9](#)).
- Typical project activities include technology/product/service development, validation, testing, piloting, demonstration, commercialization, and deployment of technologies, products and

services focused on the production, transmission and storage of energy needed for the transition to EVs; as well as technologies reducing the impact of EVs on grid capacity, such as grid optimization and other EV related technologies.

- Intellectual Property (IP) arising from a project will be managed by project *Applicant* and *Partners* as OCI does not claim or manage IP rights.
- *Applicant* and *Partners* should demonstrate close collaboration and scalable outcomes with high potential for commercialization, strong commercial pull, competitive advantage, and alignment with intended program benefits.
- Eligible projects **MUST** include demonstration of actual products/services that can be showcased in Ontario at events, on the road, to OCI and its partners, and/or at customer sites.

How To Apply

Reference Documents

The OCI Funding Agreement, the Eligible Expenditures Guide, the EOI Questionnaire, the Full Proposal Questionnaire, the Letter of Support Template, and the Data and Information Sharing Protocol (DISP) documents are available for your perusal here:

[Resource Documents - OVIN - Ontario Vehicle Innovation Network \(ovinhub.ca\)](https://ovinhub.ca)

Application Process

Applications to the OVIN R&D Partnership Fund – Advanced Charging and V2G Stream are accepted during open funding rounds. Deadlines are posted on ovinhub.ca.

The OVIN R&D Partnership Fund – Charging Technologies Stream contains two stages: 1) an Expression of Interest (EOI); and 2) a Full Application. Both stages are developed and submitted using OCI's AccessOCI web portal.

1. To begin the EOI submission process, please complete a client intake form ([Resource Documents - OVIN - Ontario Vehicle Innovation Network \(ovinhub.ca\)](https://ovinhub.ca)). **Please Note: completion of this form does not constitute an application for funding.** An OCI Business Development Manager (BDM) will contact you to discuss the opportunity and assist you with developing your EOI (and eventual application).
2. *Applicants* submit their EOI for internal and external review.
3. *Applicants* whose EOI are selected by the EOI External Review Panel (ERP) will be invited to submit a Full Application to OCI.
4. Your BDM must endorse your application for eligibility and suitability prior to submission.
5. *Applicants* who meet a minimum scoring threshold will be invited to present their proposals in person or by video conference to the ERP.
6. ERP makes funding recommendations to OCI's Internal Review Panel (IRP).
7. IRP, comprised of senior OCI staff, makes the final decision.
8. Successful *Applicants* will be notified by OCI and provided an outline of conditions and additional information necessary to activate the project.

9. *Applicants* who are not selected will be notified by OCI. Feedback on the decision can be provided by their BDM.

Notes on proposal submission:

Applications must be accompanied by a signed Letter of Support (LOS) from contributing Partner organizations, confirming financial commitment to the project, activities, duration, resources as a “Project Contributor/Partner,” and acknowledgement of the requirement to sign the standard OCI Funding Agreement. A template is available as reference; all items listed must be included in your letter.

Applicants should start negotiations with their project *Partner(s)* regarding intellectual property (IP), preferably before submission of the application.

Assessment Process and Criteria

The OVIN R&D Partnership Fund – Advanced Charging and V2G Stream is a discretionary, non-entitlement program with limited funding. OCI will fund qualified projects with potential for the greatest economic benefits and contribution to transportation advancements to Ontario. Not all eligible applications can be funded.

All eligible applications are assessed on their merit and reviewed against program objectives and evaluation criteria.

EOIs and Full Applications are internally reviewed for eligibility, completeness, and financial compliance, prior to evaluation by independent external reviewers with domain and sector expertise. All reviewers are bound by Non-Disclosure Agreements (NDAs). The final funding decision is made by OCI.

Evaluation Criteria

Evaluation criteria include, but are not limited to, the following:

- Clarity of the challenges, significance of the market opportunity, expected economic benefit to the companies and Ontario (e.g., new revenues, job creation/retention, and productivity improvements) and potential benefit/contribution to Ontario’s transportation ecosystem (e.g., infrastructure, systems, and vehicles)
- Technical merit, novelty, and ability of the innovation to address challenges and market opportunities
- Expertise and experience of the team members, clarity of roles and responsibilities, and evidence of collaboration
- Potential impact and outcomes to the automotive and smart mobility sector, social, environmental, and/or other benefits (i.e., leading to globally competitive business and market opportunities)
- Clarity, feasibility and appropriateness of the project plan and budget
- A clear strategy and capacity to bring the results to market and/or implement proposed solutions
- Overall quality and completeness of the application

Project Activation, Funds and Project Reporting

Project Activation

- The *Applicant*, *Primary Partner*, and *Secondary Partners* must execute the OCI Funding Agreement, within 30 days of the announcement of award.
- The executable agreement with schedules specific to the approved proposal will be generated through our online management system and sent to all contracting parties.

Flow of Funds

- OCI funds flow only to the *Applicant*. The *Applicant* is responsible to reimburse *Partners*, if applicable.
- Reimbursements are triggered by the submission, review and approval of claims and reports.
- Reimbursement claims from the *Applicant* to OCI are made when submitting interim and final reports and paid following approval.
- An advance payment of up to 10 per cent, at the sole discretion of OCI, is released upon activation of the project.
- 10 per cent hold-back remitted upon submitted and approved final report.
- Payments are based on the total OVIN award project value.

Project Reporting

A major component of OVIN is the generation and analysis of data and information to support Ontario's automotive and mobility ecosystem (e.g., governments, broader public-sector organizations, industry, post-secondary institutions, transportation authorities, etc.).

OCI will not be collecting, analyzing, or otherwise handling and disseminating data and information considered by applicants to be proprietary, commercially sensitive, or publicly sensitive. OCI will work with applicants to ensure that the collection of information reflects specific project design or business needs and supports their interests. Please refer to DISP for details.

Reporting instructions and templates will be sent to successful parties at the time of reporting. Reports must be received and approved by OCI prior to release of funds for eligible claims.

Notes:

- Applicants **MUST** retain all proof of purchases, receipts, invoices, and other relevant documentation relating to eligible expenses.
- Completion of all required reports is a contractual obligation to receive funding from OCI.

The following project reports will be required:

Interim Progress Report(s)

Quarterly reports (based on OCI's fiscal year starting April 1), including progress, project metrics, data and information requirements, proof of expenditures and partnership contributions, financial attestation, and a request for reimbursement must be submitted by the *Applicant*. The reports are due no later than thirty (30) days following the end of the quarter.

The Report form is accessed directly on the AccessOCI system from the Report Tab.

Final Report

A final report, including progress, project metrics, data, and information requirements, claim form, proof of expenditures and partnership contributions, financial attestation, and a request for reimbursement is required at the end of the project. Forty-five (45) days prior to the scheduled completion date, the *Applicant* and all contributing *Partners* will receive an email notification of the project end date from the AccessOCI system, with a link to the Final Report should the parties wish to begin entering data.

- *Applicants* can request early reporting by emailing the Program Manager.
- On the scheduled project completion date, the *Applicant* and all contributing *Partners* will receive another notification and a link to complete the Final Report from OCI's AccessOCI system.
- *Applicants* and contributing *Partners* must submit their Final Report within thirty (30) days of project completion to be reimbursed for eligible expenses and maintain good financial standing with OCI.

Project Metrics

If a project crosses an OCI fiscal year-end, (March 31), the *Applicant* will be required to complete an annual metrics survey each April for the part of the project that has been completed since the previous March 31. Required metrics reports must be submitted to maintain good financial standing with OCI.

Retrospective Survey

At one, two and three years after project completion, the *Applicant* will be sent a link to complete a retrospective survey to collect data on commercial outcomes from the project. This information is required by OCI for assessment of program impact and continuous improvement.

Project Changes

If required, *Applicants* MUST request project extensions, milestone variances, and/or variances to the OVIN budget exceeding 10 per cent of any budget category value, using the Project Change Request form in the Project Administration tab in their AccessOCI project file. Such requests must be made at the earliest possible opportunity and approved before any planned changes are implemented.

Applicants are encouraged to reach out to their Business Development Manager for further guidance on project change requests.