

GHG Reductions from E-Bikes – Research for Federal Funding

February 22, 2023

- E-bikes have been shown to have high potential to support mode shift away from internal combustion engine (ICE) vehicles as they provide greater range and speed against standard, human-powered bikes. They also provide more options for people with different abilities thereby expanding AT use around the province. Supporting e-bikes through rebates and incentives is a popular and proven way to incentivize their use.
 - Denver's highly successful e-bike rebate program found that new e-bike riders were riding, on average, 42km per week, with users replacing 3.4 car trips each week with bike rides.
- MOTI is proposing a e-bike incentive program that would offer an income-tiered rebate to BC residents. The proposed program budget is \$11.5M in federal and provincial funding (\$6.5M provincial, \$5M federal)
- Four studies referenced below outline the quantified potential GHG reduction impact of e-bikes in CO2 kg per year per person, with an **average reduction of 386.5 kg**.
- The proposed e-bike incentive program for BC is forecasting providing up to approximately 14,000 income-tiered rebates which, according to the methodology in the studies, will **result in approximately 5.4M kg of CO2 reduced annually, or approximately 5,950 tons**.
- Over the lifecycle of the bike (based on a 5-year lifespan of e-bike batteries) the total GHG savings from 14,000 e-bikes could be 35,700 tons. With a \$11.5M program budget, **the cost per ton of CO2 reduced is roughly \$320**.
- Note that given the provincial scope of the project and the rural nature of many BC communities, potential reductions could be higher, as Philips et al (2022) found that CO2 saving capability was higher for residents of rural areas.

Reference studies

Study	GHG emission reduction/bike
Berjisian, E., & Bigazzi, A. (2019). Summarizing the Impacts of Electric Bicycle Adoption on Vehicle Travel, Emissions, and Physical Activity . REACT (Research on Active Transportation) Lab, University of British Columbia.	<ul style="list-style-type: none"> Existing evidence suggests that on average each additional e-bike adoption will reduce around 2,000 vehicle-kilometres travelled per year, yielding a net reduction of 460 kg per year in CO2 emissions and a net increase of 21 minutes per week of physical activity. On average, 44% of e-bike trips replace car trips. Around 39km of driving per week is displaced by the average e-bike adopter.
McQueen, Michael, John MacArthur, and Christopher Cherry. "The E-Bike Potential: Estimating regional e-bike impacts on greenhouse gas emissions." <i>Transportation Research Part D: Transport and Environment</i> 87 (2020): 102482.	<ul style="list-style-type: none"> In Portland, OR, researchers found that a 15% e-bike mode share by PMT could result in a 12% reduction in transportation CO2 emissions, with an average CO2 savings of 225 kg per e-bike per year.
Philips, Ian, Jillian Anable, and Tim Chatterton. "E-bikes and their capability to reduce car CO2 emissions." <i>Transport Policy</i> 116 (2022): 11-23.	<ul style="list-style-type: none"> The e-bike carbon reduction capability across England is 24.4 million UK tonnes CO2 per year considering lifecycle emissions of both cars and e-bikes, if there is no change in the demand for trips currently undertaken by car. For each individual who uses an e-bike to replace car km to their maximum capability, the mean saving is 0.58 UK tonnes (589kg) CO2 p.a. CO2 saving capability per person and per small area are highest (over 750 kg CO2 per person p.a.) for residents of rural areas and the rural urban fringe.

Hiselius, Lena Winslott, and Åse Svensson. "E-bike use in Sweden—CO2 effects due to modal change and municipal promotion strategies." <i>Journal of cleaner production</i> 141 (2017): 818-824.	<ul style="list-style-type: none"> • Researchers surveyed existing e-bike users who on average reduced their transport CO2 emissions by 272 kg p.a.
Average kg CO2 reduced per year pp	386.5

DECISION BRIEFING NOTE

DATE: February 27, 2023
PREPARED FOR: Honourable Rob Fleming
ISSUE: Province-Wide e-Bike Incentive Program
PURPOSE: Approve use of year end funding to develop and implement a new program

RECOMMENDED OPTION:

- **OPTION 1: Approve development of a new \$6.5M e-bike rebate program using \$5M in one-time 2022/23-year end funding and \$1.5M in existing funding.**

BACKGROUND:

E-bikes are a rapidly growing active transportation mode that reduces Greenhouse Gas (GHG) emissions by offering a convenient alternative to motor vehicle trips. E-bikes provide active transportation users with a mode that is faster, more convenient and has longer range with increased accessibility than non-assisted pedal bicycles. The price of e-bikes (typically between \$2,000 and \$7,000) is a barrier to uptake, especially for lower income purchasers. Incentivizing uptake of e-bikes will help support the Clean Transportation Action Plan's (CTAP) vehicle kilometre travelled (VKT) reduction and mode shift goals by helping people use e-bikes instead of internal combustion engine vehicles.

Provincial e-bike rebates for individuals are currently provided through the Ministry of Energy, Mines, and Low-Carbon Innovation (EMLI)'s Scrap-It Transportation Options Program (TOP) with funding from MOTI. The TOP supports CleanBC goals by exchanging a GHG-emitting vehicle for non-EV clean transportation options. The requirement to scrap an existing car means that only a very limited population can access these e-bike rebates. Public and stakeholder feedback on the program has highlighted that TOP is not equitable as lower-income households can rarely afford to donate a used vehicle. The TOP program funding ends on March 31, 2023 and the program will end.

DISCUSSION:

Research shows that the largest opportunity to expand e-bike uptake is within households that cannot afford the initial full cost of the bike. These households would also benefit the most from affordable, convenient transportation such as e-bikes which, once purchased, are low-cost to own and operate. A province-wide income-tiered e-bike rebate program will expand e-bike ownership, increase active transportation use and mode shift, and reduce GHGs. An income-tiered e-bike incentive program is identified as a [s. 13](#) action in the draft People Movement Strategy. [s. 13](#)

Existing best practices and academic research supports the proposed income-tiered, provincial e-bike incentive program detailed in Appendix A. Other jurisdictions who have conducted similar programs have seen significant uptake. The proposed program would be launched using \$5M in one-time funding and \$1.5M from the 2022-23 Active Transportation Program budget. This current funding level would provide approximately 9,000 rebates to British Columbians. Availability is expected to last approximately one year depending on uptake.

[s. 13](#), [s. 17](#)

The University of British Columbia will collect and evaluate baseline and follow-up data as part of the program. The data from the program year will inform any update and will be included in future Treasury Board submissions should the program continue. [s. 13, s. 17](#)

[s. 13, s. 17](#)

Timeline

August - January 2022	February 2023	February 2023	March – May 2023	June 2023	May 2023- May 2024	May 2024
Program options researched and outlined	Program option decision	RFP for final design and delivery partner	Delivery partner completes program design	Program launch	Quarterly reports and one-year data collection	Year One report

GBA+ OR DIVERSITY AND INCLUSION IMPLICATIONS:

Current e-bike users are more likely to be male, older and upper income. This proposed program design ensures that subsidies go to those who would not likely be able to make the purchase otherwise. E-bikes are also an important accessibility tool for people with disabilities, as they widen the range of who can use a bicycle for transportation.

FINANCIAL IMPLICATIONS:

- \$1.5M allocated from the 2022/23 Active Transportation Programs Budget.
- \$5M allocated from year-end funding.

OPTIONS:

1. Approve development of a new \$6.5M e-bike rebate program using \$5M in one-time and \$1.5M in existing funding.

Pros:

[s. 13](#)

Cons:

[s. 13, s. 17](#)

2. s. 13, s. 17

Pros:

s. 13

Cons:

s. 13, s. 17

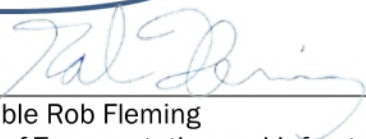
s. 13

s. 13, s. 17

s. 13

s. 13, s. 17

APPROVED (Option1) / NOT APPROVED



Honourable Rob Fleming
Minister of Transportation and Infrastructure

March 16, 2023

Date

Appendices:

1. Program Outline

PREPARED BY:

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Transportation Policy & Programs

REVIEWED BY:

Reg Bawa, Assistant Deputy Minister
Policy, Programs, & Partnerships Division
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Finance & Risk Management Division
Kaye Krishna, Deputy Minister

DATE:

23-Feb-16
23-Feb-22
23-Feb-27

Appendix 1: Program Outline

Objective: Support Clean Transportation Action Plan objectives by supporting active transportation mode shift to e-bikes.

Length: The program will aim to be launched May 2023. s. 13

s. 13

Administration: A Request for Proposals will identify a third-party delivery partner to finalize design and administer the program. This will include the application process, marketing, promotion, and distribution of the provincially funded incentives to qualifying individuals. The delivery partner will be required to demonstrate that they can ensure that the rebate was used towards an e-bike purchase. This will most likely be through a pre-approved post-purchase rebate model.

Eligibility: Incentive recipients will qualify based on income levels. These will be verified through either Notice of Assessment (NOA) or enrolment in equivalent income-qualified program. EMLI uses this model in their CleanBC Go Electric passenger vehicle rebate program and CleanBC Better Homes Income-Qualified Program.

Rebate Amounts: Based on research and stakeholder engagement, the program will distribute income-tiered rebates for e-bikes (ex. \$350, \$800, \$1600). The largest rebates will go to qualifying lower-income individuals or families who will most benefit from e-bike use. A smaller rebate will be available to incent those with higher incomes. Research shows that lower income households are more likely to change their behaviour when provided with a rebate, leading to greater mode shift and less free-ridership. This model was piloted by the District of Saanich pilot program and is the most equitable and efficient rebate design.

Other rebate designs such as proportional rebates tied to purchase price, or a single rebate amount regardless of income, are not as impactful or equitable. This is consistent with EMLI's CleanBC Go Electric passenger vehicle rebate program that uses set rather than proportional rebate amounts. A minimum price for e-bikes will ensure that the rebate amount does not exceed the cost.

Reach: Depending on the funding, the program will provide between 2,000 and 9,000 rebates to individuals after administration and evaluation costs. There will be a focus on providing larger rebates to lower income tiers. See the table below for example distributions based on rebate levels used by Saanich. Final rebate amounts and distribution will be set in consultation with academic and program delivery partners.

Example of possible incentive distribution for program:

(\$6.5M budget):

Rebate amount	# of rebates	Total funding per rebate tier
\$350	4,955	\$ 1,734,250 (29%)
\$800	2,242	\$ 1,794,000 (30%)
\$1600	1,532	\$ 2,451,950 (41%)
Total rebates	8,729	\$ 5,980,000
8% administration costs		\$ 520,000
Total program budget		\$ 6,500,000

s. 13, s. 17

Data Collection and Analysis: The University of British Columbia will collect and evaluate baseline and follow-up data to inform future program expansions. Dr. Alex Bigazzi at UBC, a leading expert in e-bikes and micromobility, will lead the program evaluation. Dr. Bigazzi's research was the basis for the Saanich e-bike program. He is already administering data collection and evaluation for the existing Saanich and Nelson e-bike incentive programs.

Risk Management: In a study of e-bike incentive programs in North America, no significant issues with fraud were identified. During the program design phase, the delivery partner will create a fraud reduction strategy. The strategy will identify and address all significant sources of fraud risk such as reselling. Rebate recipients may be required to declare that they will not re-sell the bike as an accepted term of the agreement.



Agreement# 065OA127210

**PROVINCE OF BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE**

SHARED COST ARRANGEMENT

THIS SHARED COST ARRANGEMENT dated for reference the 27 day of march, 2023.

BETWEEN:

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, represented by the Minister of Transportation and Infrastructure (the "Province")

OF THE FIRST PART

AND: **SCRAP-IT Society (dba SCRAP-IT)**

#105, 3031 Viking Way

Richmond, BC V6V 1W1

(the "Recipient")

OF THE SECOND PART

The Parties to this Agreement agree as follows:

ARTICLE 1 – DEFINITIONS

1.01 In addition to other words and phrases defined herein, in this Agreement, unless the context requires otherwise, the following definitions apply:

- (a) **"Agreement"** means this Shared Cost Arrangement and any and all schedules attached hereto;
- (b) **"Deliverables"** means those Project deliverables, if any, set out in section 2.03 of Schedule "A";
- (c) **"Effective Date"** means the effective date of this Agreement as set out in Schedule "A";
- (d) **"Extension"** means any extension to or renewal of the Term of this Agreement as contemplated by and effected in accordance with section 1.02 of Schedule "A";

- (e) **“Financial Contribution”** means any funds paid or payable by the Province to the Recipient under this Agreement and any allowable expenses associated with its provision of the Services, as more particularly described in Schedule “B”;
- (f) **“FOIPPA”** means the *Freedom of Information and Protection of Privacy Act*;
- (g) **“Incorporated Materials”** means materials already in existence at the beginning of the Term, as well as materials that are created during the Term but not paid for with any portion of the Financial Contribution, that are incorporated or embedded in the Produced Materials by or on behalf of the Recipient, including by a Subcontractor;
- (h) **“Materials”** means, collectively, the Produced Materials and the Province Materials;
- (i) **“Maximum Amount”** means the maximum amount of the Financial Contribution payable by the Province to the Recipient under and in accordance with this Agreement, as set out in Schedule “B”;
- (j) **“Milestones”** means those Project milestones, if any, set out in section 2.03 of Schedule “A”;
- (k) **“Overpayment”** means any portion of the Financial Contribution, plus interest, provided by the Province to the Recipient that is: (i) not expended during the Term; (ii) expended on ineligible or disallowed expenditures pursuant to the terms of this Agreement; (iii) received by the Recipient after its eligibility for receiving the Financial Contribution has expired; (iv) paid based upon fraudulent, misleading or inaccurate information; (v) paid to the Recipient by mistake; or (vi) paid to the Recipient if the Recipient has not complied with the terms and conditions of this Agreement;
- (l) **“Participant”** means any individual who participates in or receives benefit from the Project;
- (m) **“Parties”** means the Province and the Recipient and **“Party”** means either the Province or the Recipient as the context requires;
- (n) **“Personal Information”** means recorded information about an identifiable individual, as defined in FOIPPA;
- (o) **“Produced Materials”** means any and all findings, data, working papers, policies, process documents, reports, surveys, spread sheets, evaluations, analyses, documents, data, software code, databases or other compilations of data, technology, curricula and training or other materials or records, both printed and electronic, whether complete or not, that are produced, received, compiled or otherwise acquired or provided by or on behalf of the Recipient as a direct result of this Agreement, but does not include any Incorporated Materials or Province Materials or any Personal Information contained in the Produced Materials that is required by the Recipient solely for its own administrative purposes;
- (p) **“Program”** means the program that is being supported and/or provided by the Province in relation to which the Financial Contribution is being made available to the Recipient, as may be set out in more detail in Schedule “A”;

- (q) **“Project”** means any project, initiative or other activity to be provided or supported by or on behalf of the Recipient utilizing all or any portion of the Financial Contribution in accordance with this Agreement;
- (r) **“Province Materials”** means any materials, data, or other information or records owned by the Province and/or provided by or on behalf of the Province to the Recipient in relation to this Agreement, including those materials identified in Schedule “I” (if attached);
- (s) **“Reports”** means those reports, if any, identified in section 2.04 of Schedule “A” and/or any other reports reasonably requested by the Province from time to time;
- (t) **“Requirements”** means, collectively, all Deliverables, Reports and/or Milestones required to be provided or met, as the case may be, by the Recipient in relation to its provision of the Services;
- (u) **“Services”** means all of the services and other activities to be provided, and any Requirements to be met, by or on behalf of the Recipient in association with its operation, delivery, performance, provisions, administration and/or support of the Project as more particularly described in Schedule “A”;
- (v) **“Subcontractor”** means a person described in section 14.02; and
- (w) **“Term”** means the duration of this Agreement as set out in Schedule “A”, including any Extension(s) and subject to earlier termination in accordance with this Agreement.

1.02 Where appropriate in the context, the definition of “record” in the *Interpretation Act* is incorporated into this Agreement and “records” will bear a corresponding meaning.

ARTICLE 2 – PROVISION OF SERVICES AND PAYMENT OF FINANCIAL CONTRIBUTION

- 2.01** The Recipient must perform and provide the Services during the Term in accordance with this Agreement.
- 2.02** Subject to the provisions of this Agreement, the Province will provide the Recipient with the Financial Contribution, not exceeding the Maximum Amount, in the amount and manner and at the times set out in Schedule “B”.
- 2.03** Notwithstanding any other provision of this Agreement, the payment of any funds comprising the Financial Contribution by the Province to the Recipient pursuant to this Agreement is subject to:
 - (a) there being sufficient monies available in an appropriation, as defined in the *Financial Administration Act* (“FAA”), to enable the Province, in any fiscal year when any payment of money by the Province to the Recipient falls due pursuant to this Agreement, to make that payment;
 - (b) Treasury Board, as defined in the FAA, not having controlled or limited, pursuant to the FAA, expenditure under any appropriation referred to in subsection (a) of this section; and

- 3.02** All statements contained in any certificate, application, proposal, Report or other document delivered by or on behalf of the Recipient to the Province under this Agreement or in connection with any of the transactions contemplated hereby will be deemed to be representations and warranties by the Recipient under this Agreement.
- 3.03** All representations, warranties, covenants and agreements made herein and all certificates, applications, Reports or other documents delivered by or on behalf of the Recipient are material and have been relied upon by the Province and will continue in full force and effect during the continuation of this Agreement.

ARTICLE 4 – RELATIONSHIP

- 4.01** No partnership, joint venture, agency or other legal entity or relationship will be created by or will be deemed to be created by this Agreement or any actions of the Parties pursuant to this Agreement.
- 4.02** The Recipient will be an independent contractor and not be, nor will it claim or otherwise represent itself to be, the servant, employee, partner or agent of the Province.
- 4.03** The Recipient will not in any manner whatsoever commit or purport to commit the Province to the payment of money to any person, firm or corporation without the prior written consent of the Province.
- 4.04** The Province may, from time to time, give instructions to the Recipient in relation to the carrying out of the Services, and the Recipient will comply with those instructions but will not be subject to the control of the Province regarding the manner in which those instructions are carried out except as specified in this Agreement.

ARTICLE 5 – RECIPIENT'S OBLIGATIONS

- 5.01** The Recipient will:
- (a) provide the Services in accordance with the terms of this Agreement during the Term and to a standard of care, skill and diligence maintained by persons providing, on a commercial basis, services similar to the Services;
 - (b) comply with the payment requirements set out in Schedule "B", including all requirements concerning the appropriate use, application and expenditure of the Financial Contribution provided under this Agreement;
 - (c) comply with all applicable laws and regulations including, without limitation, the *Criminal Records Review Act*;
 - (d) hire and retain only qualified and competent staff and, if approved by the Province, Subcontractors;
 - (e) unless otherwise agreed in writing by the Parties, supply or obtain, at its own cost, all labour, facilities, equipment, materials, licenses and approvals necessary or advisable to carry out the Services;

- (f) comply with the provisions of Schedule "H", if attached, and any instructions from time to time provided by, and co-operate with, the Province with respect to the making of any public announcements regarding the Services and the details of this Agreement;
- (g) acknowledge the Financial Contribution made to the Recipient by the Province in the manner directed by the Province or specified in Schedule "H", if attached, as may be amended by the Province in its sole discretion from time to time;
- (h) comply with the Security Schedule, if attached as Schedule "G", as may be amended by the Province in its sole discretion from time to time;
- (i) comply with the Personal Information and Privacy Schedule, as attached at Schedule "E", as may be amended by the Province in its sole discretion from time to time; and
- (j) comply with the Criminal Records Checks Schedule, if attached as Schedule "F", as may be amended by the Province in its sole discretion from time to time.

5.02 Without limiting the generality of subsection 5.01(c), the Recipient must comply with, and must ensure that any Subcontractors comply with, all applicable occupational health and safety laws in relation to the performance of the Recipient's obligations under this Agreement, including the *Workers Compensation Act* or similar laws of other jurisdictions as applicable.

ARTICLE 6 – RECORDS

6.01 The Recipient will:

- (a) establish and maintain complete and accurate accounting and administrative records with respect to the Financial Contribution and its provision of the Services, in form and content satisfactory to the Province (and in an electronic format whenever possible);
- (b) establish and maintain books of account, invoices, receipts and vouchers for all expenses incurred for its provision of the Services, in form and content satisfactory to the Province (and in an electronic format whenever possible);
- (c) permit the Province, for contract monitoring and audit purposes, at any time or times during normal business hours, to enter any premises used by the Recipient or any Subcontractor to provide the Services or where Materials are kept, in order for the Province to copy or audit, or both, any or all of the books of account and other records (including original supporting documents) referred to in subsections (a) and (b) of this section; and
- (d) record and report statistics and other data in connection with the provision of the Services and the expenditure of the Financial Contribution, as identified in this Agreement or otherwise reasonably requested by the Province from time to time, in form and content satisfactory to the Province (and in an electronic format whenever possible).

6.02 The Recipient must retain, and keep safe and in an organized condition (and in an electronic format whenever possible) all Materials, time records, books of account, invoices, receipts, vouchers and other records relevant to this Agreement until directed by the Province in writing to dispose of or deliver to the Province such information, and the Recipient will dispose of or deliver that information as specified in the direction.

6.03 Upon the Province's request, the Recipient will:

- (a) in a timely manner, fully inform the Province of the work completed and remaining to be done by the Recipient under or in relation to this Agreement; and
- (b) at any time before the seventh anniversary of the end of the Term, permit the Province at all reasonable times to inspect, audit, examine, review and copy any Materials or other records referred to in section 6.01.

6.04 Without limiting the generality of section 14.02, the Recipient will ensure that any Subcontractors comply with all of the obligations set out in sections 6.01 to 6.03, to the extent that they apply to the Services provided by such Subcontractors.

ARTICLE 7 – STATEMENTS AND ACCOUNTING

7.01 Immediately upon the completion of the Term, and in accordance with Schedule A Section 2.04, and at any other time within 3 months of being requested to do so by the Province, but no later than the seventh anniversary of the end of the Term, the Recipient must provide to the Province a statement documenting its expenditure of the Financial Contribution under this Agreement and accounting for any and all Overpayments, in form and content satisfactory to the Province, and:

- (a) if it has audited financial statements prepared annually, provide its most recent audited financial statements, prepared by a recognized accounting firm, and, when available, the audited financial statements for the Recipient's fiscal year(s) covering any portion of the Term of this Agreement; or
- (b) if it does not have audited financial statements prepared annually, at the Province's discretion:
 - (i) have prepared by a recognized accounting firm, and provide, audited financial statements for the Recipient's fiscal year(s) covering any portion of the Term of this Agreement; or
 - (ii) provide to the Province a statement documenting its expenditure of the Financial Contribution under this Agreement, in form and content satisfactory to the Province.

7.02 Unless demanded by the Province earlier, immediately upon the completion of the Term, any Overpayments outstanding and not set-off by the Province in accordance with the provisions of section 2.07 will become a debt owing to the Province by the Recipient and must be repaid to the Province, plus interest at the rate then in effect, as provided for by the FAA's *Interest on Overdue Accounts Receivable Regulation* (the "**Rate**"), within 10 business days. In any event, any Overpayment shall constitute a debt that shall accrue interest at the Rate until paid in full to the Province.

7.03 If an activity funded by the Financial Contribution is not wholly completed by the end of the Term, any portion of the Financial Contribution already provided to the Recipient for that activity that remains unexpended at the end of the Term will be deemed to be an Overpayment.

7.04 For greater certainty, any portion of the Financial Contribution that the Recipient expends on items that, in the opinion of the Province, are not eligible components of an approved activity

funded by the Financial Contribution will be deemed to be an Overpayment to the extent that such portion has already been provided to the Recipient.

7.05 Notwithstanding any other provision in this Article 7, any portion of the Financial Contribution provided to the Recipient under this Agreement and not expended at the end of the Term may, at the sole discretion and direction of the Province, be:

- (a) returned by the Recipient to the Minister of Finance;
- (b) retained by the Recipient as supplemental funding provided for under an amendment to this Agreement; or
- (c) deducted by the Province from any future funding requests submitted by the Recipient and approved by the Province.

ARTICLE 8 – CONFLICT OF INTEREST

8.01 Prior to entering into this Agreement and throughout the Term, the Recipient will disclose to the Province any contract, arrangement, consultant, major shareholder, employee or any other circumstance, whether temporary or ongoing in nature, that could be perceived to be a conflict of interest with respect to the Province or the Recipient's provision of the Services.

8.02 The Recipient will not, during the Term, perform a service for or provide advice to any person or entity where the performance of such service or the provision of the advice may, in the reasonable opinion of the Province, give rise to a conflict of interest between the obligations of the Recipient to the Province under this Agreement and the obligations of the Recipient to such other person or entity.

ARTICLE 9 – CONFIDENTIALITY

9.01 The Recipient will treat, and will cause any Subcontractors to treat, the Materials, this Agreement and any other information which comes to its knowledge as a result of this Agreement as confidential, except where use or disclosure is necessary for the Recipient to fulfil its obligations under this Agreement or as required by law.

ARTICLE 10 – DEFAULT

10.01 Any of the following events will constitute an "Event of Default":

- (a) the Recipient fails to comply with any provision of this Agreement;
- (b) any representation or warranty made by the Recipient under this Agreement is or becomes untrue or incorrect;
- (c) any information, statement, certificate, Report or other document furnished or submitted by or on behalf of the Recipient pursuant to or as a result of this Agreement is or becomes untrue or incorrect;
- (d) the Recipient ceases, in the opinion of the Province, to operate or carry on business in a manner required to support its provision of the Services;

- (e) a change occurs with respect to any one or more of the properties, assets, conditions (financial or otherwise), operations or business of the Recipient which, in the opinion of the Province, materially adversely affects the ability of the Recipient to fulfil its obligations under this Agreement;
- (f) an order is made or a resolution is passed or a petition is filed for the liquidation or winding up of the Recipient;
- (g) the Recipient becomes insolvent (including where its liabilities exceed its assets or it is unable to timely pay its debts as they become due) or commits an act of bankruptcy or makes an assignment for the benefit of its creditors or otherwise acknowledges its insolvency;
- (h) a bankruptcy petition is filed or presented against, or a proposal under the *Bankruptcy and Insolvency Act* (Canada), the *Companies' Creditors Arrangements Act* (Canada) or similar legislation is made by, the Recipient;
- (i) a receiver or receiver-manager of any property of the Recipient is appointed;
- (j) the Recipient permits any sum which is not disputed to be due by it to remain unpaid after legal proceedings have been commenced to enforce payment thereof; or
- (k) the Recipient fails to fully pay any Overpayment to the Province within 10 business days of any written demand therefor by the Province.

ARTICLE 11 – TERMINATION AND SCALING BACK

11.01 Upon the occurrence of any Event of Default or at any time thereafter the Province may, notwithstanding any other provision of this Agreement, at its option, elect to do any one or more of the following:

- (a) immediately terminate this Agreement, in which case the payment of the amount required under section 11.05 will discharge the Province of all liability to the Recipient, or any of its officers, directors, employees, agents, Subcontractors or other third-parties, under this Agreement;
- (b) require the Event of Default be remedied within a time period specified by the Province;
- (c) suspend any payment of the Financial Contribution or any other amount that is due to the Recipient while the Event of Default continues;
- (d) waive the Event of Default; or
- (e) pursue any other remedy available at law or in equity.

11.02 The Province, at its option, may also terminate this Agreement either:

- (a) without cause and for convenience on no less than 60 days' written notice; or
- (b) immediately if the Province determines that any action or inaction of the Recipient places the health or safety of any person receiving the Services at immediate risk

and, in either case, the payment of the amount required under section 11.05 will discharge the Province of all liability to the Recipient under this Agreement.

- 11.03** The Province may also, in its sole discretion and at its option, request a scaling back of the scope of the Services funded under this Agreement.
- 11.04** If the Recipient is unable or unwilling to scale back the scope of Services, the Province at its option may terminate this Agreement in accordance with subsection 11.02 (a), and the payment of the amount required under section 11.05 will discharge the Province of all liability to the Recipient under this Agreement.
- 11.05** Where this Agreement is terminated before 100% completion of the Services (including as such Services may have been scaled back), the Province will pay to the Recipient that portion of the Financial Contribution which is equal to the portion of the Services completed to the satisfaction of the Province prior to termination, less any Overpayment and, regardless of whether there is any Overpayment, less any holdback reasonably calculated by the Province, in its sole discretion, as allowed by section 2.06.

ARTICLE 12 – DISPUTE RESOLUTION

- 12.01** Unless otherwise agreed by the Parties, all disputes arising out of or in connection with this Agreement will be referred to and finally resolved by arbitration by a single arbitrator pursuant to the *Arbitration Act*.
- 12.02** The place of arbitration will be Victoria, British Columbia, unless otherwise agreed by the Parties in writing.

ARTICLE 13 – INDEMNITY AND INSURANCE

- 13.01** The Recipient must indemnify and save harmless the Province and the Province's employees and agents from any loss, claim (including any claim of infringement of third-party intellectual property rights), damage award, action, cause of action, cost or expense that the Province or any of the Province's employees or agents may sustain, incur, suffer or be put to at any time, either before or after this Agreement ends, (each a "**Loss**") to the extent the Loss is directly or indirectly caused or contributed to by:
- (a) any act or omission by the Recipient, or by any of the Recipient's agents, employees, officers, directors or Subcontractors, in connection with this Agreement; or
 - (b) any representation or warranty of the Recipient being or becoming untrue or incorrect.
- 13.02** The Recipient must comply with the Insurance Schedule, if attached at Schedule "D", which may be amended from time to time by the Province in its sole discretion.

ARTICLE 14 – ASSIGNMENT AND SUBCONTRACTING

- 14.01** The Recipient must not, without the prior, written consent of the Province, assign, either directly or indirectly, this Agreement or any right or obligation of the Recipient under this Agreement.
- 14.02** The Recipient must not subcontract any of the Recipient's obligations under this Agreement to any person without the Province's prior written consent, excepting persons listed in the attached

Schedule "C", or otherwise approved by the Province in advance in writing. The Recipient must ensure that:

- (a) any person retained by the Recipient to perform obligations under this Agreement; and
- (b) any person retained by a person described in subsection (a) to perform those obligations fully complies with this Agreement in performing those obligations.

- 14.03** No subcontract, whether consented to or not, entered into by the Recipient will relieve the Recipient from any of its obligations under this Agreement or impose upon the Province any obligation or liability arising from any such subcontract.
- 14.04** Without limiting the generality of section 14.02, the Recipient will ensure that any Subcontractors comply with all of the obligations set out in section 5.01 and schedule "D", to the extent that they apply to the Services provided by such Subcontractors.
- 14.05** This Agreement will be binding upon the Province and its assigns and the Recipient and its successors and permitted assigns.

ARTICLE 15 – OWNERSHIP AND LICENSING

- 15.01** The Province exclusively owns all property and intellectual property rights, including copyright, in the Province Materials and any information, equipment or other property provided by the Province to the Recipient as a result of this Agreement and the Recipient will forthwith deliver any and all such Province Materials, information, equipment or other property to the Province on written notice to the Recipient requesting delivery of the same, whether such a notice is given before, at or after the expiration or sooner termination of this Agreement.
- 15.02** The Parties agree that the ownership of, and any licensed rights associated with, the Produced Materials and any Incorporated Materials shall be as set out in Schedule "I".
- 15.03** The Province hereby grants to the Recipient the limited right to:
- (a) reproduce and display during the Term; and
 - (b) unless otherwise limited by the Province in writing, grant to any third-party beneficiaries of the Financial Contribution the right to reproduce and display during the Term

any Province logos set out in section 3 of Schedule "H", if attached, during the Term and strictly in accordance with the provisions contained in such schedule or as may be communicated to the Recipient by the Province from time to time in writing.

ARTICLE 16 – OTHER FUNDING AND FINANCING

- 16.01** If the Recipient receives funding for or in respect of the Services from any person, firm, corporation or other government or governmental body, then the Recipient will immediately provide the Province with full and complete details thereof and such funding may be deemed by the Province, in its sole discretion, to be an Overpayment which may result in the Province, in its sole discretion, exercising its rights under section 2.07 of this Agreement.

- 16.02** The Recipient agrees to hold the Province harmless and hereby releases the Province from any liability of any kind or nature arising from or connected with the Recipient entering into any financing, including any loan or lease, in relation to its provision of the Services.

ARTICLE 17 – NOTICES

- 17.01** Any legal notice required or permitted to be given under this Agreement and any formal written communications from the Recipient to the Province (not including day to day business communications) must be mailed, personally delivered (including by courier) or faxed to the address or fax number for the Province’s representative(s), as set out in Schedule “A”.
- 17.02** Any legal notice required or permitted to be given under this Agreement and any formal written communications from the Province to the Recipient (not including day to day business communications) must be mailed, personally delivered (including by courier) or faxed to the address or fax number for the Recipient representative(s), as set out in Schedule “A”.
- 17.03** Any written communication contemplated in this Article 17 from either Party will be deemed to have been received by the other Party on the third business day after mailing in British Columbia, on the date of personal delivery if personally delivered, or on the date of transmission if faxed.
- 17.04** A Party shall, upon a change occurring to its address or other details for delivery of notice, formally notify the other Party in writing of such change and, following the receipt of such notice, the new address or other details will, for the purposes of section 17.01 or 17.02 of this Agreement, be deemed to be the delivery details of the Party giving notice.

ARTICLE 18 – NON-WAIVER

- 18.01** No waiver of any term or condition of this Agreement or the satisfaction of a condition or non-performance of an obligation by the Recipient under this Agreement will be effective unless it is in writing and signed by the Province.
- 18.02** Unless otherwise specified in writing, no waiver shall operate as a continuing waiver or a waiver of any other obligation or right under this Agreement.

ARTICLE 19 – ENTIRE AGREEMENT

- 19.01** This Agreement constitutes the entire agreement between the Parties with respect to the subject matter of this Agreement.

ARTICLE 20 – SURVIVAL OF PROVISIONS

- 20.01** Sections 2.04, 2.05, 2.07, 6.01 to 6.04, 7.01 to 7.05, 9.01, 11.05, 12.01, 12.02, 14.03 to 14.05, 15.01 to 15.03, 16.01, 16.02, 20.01, Article 21, any accrued but unpaid payment obligations, any other provisions of this Agreement in favour of the Province and all of the rights and remedies of the Province, either at law or in equity, and any other provisions of this Agreement which, by their terms or nature, are intended to survive the completion of the Services or termination of this Agreement, will survive the expiration or sooner termination of this Agreement.

ARTICLE 21 – MISCELLANEOUS

- 21.01** This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein.
- 21.02** The Schedules to this Agreement are an integral part of this Agreement as if set out at length in the body of this Agreement.
- 21.03** No amendment or modification to this Agreement will be effective unless it is in writing and duly executed by the Parties.
- 21.04** If any provision of this Agreement or the application to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to any other person or circumstance will not be affected or impaired thereby and will be enforceable to the extent permitted by law.
- 21.05** Nothing in this Agreement operates as a consent, permit, approval or authorization by the Government of the Province of British Columbia or any Ministry or Branch thereof to or for anything related to the Services that the Recipient is required to obtain, unless it is expressly stated herein to be such a consent, permit, approval or authorization.
- 21.06** Where the Recipient is a corporation, the Recipient warrants that the signatory has been duly authorized by the Recipient to execute this Agreement without corporate seal on behalf of the Recipient.
- 21.07** In this Agreement, unless the context requires otherwise, words importing the singular include the plural and *vice versa*.
- 21.08** Unless otherwise specified, a reference to a statute by name means the statute of British Columbia by that name, and includes any regulation(s) made thereunder, as such may be amended or replaced from time to time.
- 21.09** Time and the uninterrupted provision of the Services are of the essence of this Agreement. The Recipient will immediately notify the Province in the event that the Recipient is unable to provide the Services for any period during the Term. Notwithstanding any other provision in this Agreement, the Province reserves the right to engage other resources to provide the Services during any such periods and make claim for compensation for related costs against the Recipient.
- 21.10** For the purpose of sections 21.11 and 21.12, an “**Event of Force Majeure**” includes, but is not limited to, acts of God, changes in applicable laws, governmental restrictions or control on imports, exports or foreign exchange, wars (declared or undeclared), acts of terrorism, fires, floods, storms, strikes (including illegal work stoppages or slowdowns), lockouts, labour shortages, freight embargoes and power failures or other cause beyond the reasonable control of a Party, provided always that lack of money, financing or credit will not be and will not be deemed to be an “Event of Force Majeure”.
- 21.11** Neither Party will be liable to the other for any delay, interruption or failure in the performance of their respective obligations if caused by an Event of Force Majeure, in which case the time period for the performance or completion of any such obligation will be automatically extended for the reasonable duration of the Event of Force Majeure.

- 21.12** If an Event of Force Majeure occurs or is likely to occur, then the Party directly affected will notify the other Party forthwith, and will use its reasonable efforts to remove, curtail or contain the cause of the delay, interruption or failure and to resume compliance with its obligations under this Agreement with the least possible delay.
- 21.13** The headings in this Agreement are inserted for convenience only and do not form part of this Agreement.
- 21.14** If there is a conflict between a provision in a Schedule to this Agreement and any other provision of this Agreement, the provision of the Schedule is inoperative to the extent of the conflict unless the Schedule states that it operates despite a conflicting provision of this Agreement.
- 21.15** This Agreement may be executed by the Parties in separate counterparts each of which when so executed and delivered shall be an original, and all such executed counterparts may be delivered by facsimile transmission or emailed in portable document format (PDF) to such email address as may be provided by each Party for such purpose and each such transmission shall be considered an original.

In witness whereof, the Parties hereto have executed this Agreement to be made effective as of the Effective Date.

<p>SIGNED on behalf of His Majesty the King in Right of the Province of British Columbia, by an authorized representative of the Minister of Transportation and Infrastructure:</p> <p></p> <p>_____ Signature</p> <p>Trish Rorison _____ Print Name</p> <p>Executive Director _____ Print Title</p>	<p>SIGNED on behalf of the Recipient by its authorized signatory or signatories:</p> <p></p> <p>_____ Signature(s)</p> <p>Diane Roberts _____ Print Name(s)</p> <p>Chief Executive Officer _____ Print Title(s)</p>
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SCHEDULE “A”

E-bike Incentive Program

ARTICLE 1 - TERM

1.01 Term

Notwithstanding the actual date of execution and delivery of this Agreement, the term of this Agreement (the “**Term**”) commences on March 20, 2023 (the “**Effective Date**”) and ends on March 31, 2024, unless extended in accordance with section 1.02 below or earlier terminated in accordance with its terms.

1.02 Extension

The Term of this Agreement may be renewed for up to two additional one-year periods at the mutual consent of both Parties on the same terms and conditions contained herein, except for this provision as to renewal.

ARTICLE 2 - PROGRAM AND PROJECT DESCRIPTION

2.01 Background and Objectives

The Province of British Columbia (“the Province”) released the CleanBC Roadmap to 2030 in October 2021 to outline additional measures, beyond what is in the CleanBC (2018) plan, to reach its legislated greenhouse gas (GHG) emission reduction targets. The legislated targets, through the Climate Change Accountability Act, are: GHG reductions of 16% by 2025, 40% by 2030, 60% by 2040 and 80% by 2050, relative to a 2007 baseline. In addition, the plan outlined the following goals: a 25% reduction in vehicle kilometres travelled (VKT) by 2030; and an area of focus to assist in meeting the 30% sustainable mode shift goals by 2030.

Encouraging uptake of electric bicycles (“e-bikes”) is identifying with evidence one avenue for supporting mode shift towards active transportation. E-bikes are a rapidly growing active transportation mode that greatly reduces GHG emissions by offering a convenient alternative to motor vehicle trips. E-bikes have been shown to enable mode shift away from motor vehicles as they provide greater speed, convenience, and accessibility than non-assisted pedal bicycles. The Province currently supports e-bikes through the Scrap-It Transportation Options Program (“Scrap-It”), which provides a \$750 rebate if a qualifying internal-combustion engine (ICE) vehicle is scrapped; and through the Specialty Use Vehicle Incentive Program (SUVI), which provides rebates to business license holders and other organizations towards the purchase of a cargo e-bike for business use.

The Province is supporting the development of a new standalone province-wide income-qualified e-bike rebate program to support the goals of the Clean Transportation Action Plan by providing higher-value incentives to lower- to moderate- income households (the “Program”). The Program will improve transportation affordability and contribute to the reduction of GHGs by supporting a reduction in VKTs and mode shift away from ICE vehicles, supporting the Province’s transportation sector commitments articulated in Move. Commute. Connect: B.C.’s Active Transportation Strategy and the Minister of Transportation’s mandate letter.

2.02 Standards of Performance

The Recipient must:

- (a) deliver the Project and perform the Services in furtherance of the Program objectives;
- (b) ensure that all persons employed or retained to perform the Services are qualified and competent to perform them and are properly trained, instructed and supervised;
- (c) perform the Services to a standard of care, skill and diligence maintained by persons providing, on a commercial basis, services similar to the Services; and
- (d) use all reasonable efforts to meet the following performance standards in its provision of the Services:

2.03 Project Services, Deliverables and Milestones

The Ministry's goal with this opportunity is to support the development of a province-wide income qualified e-bike rebate Program. The Program will be complementary to current e-bike rebate Programs offered by the Province or other entities. Rebates issued through this Program are for B.C. residents who are able to provide an acceptable form of income verification.

The successful Proponent will:

- Provide an approved project plan by March 29, 2023
- Design a Program that is designed to be delivered province-wide with support from the Ministry;
- Provide recommendations on appropriate incentive levels;
- Coordinate with the Ministry to leverage existing incentive offers and ensure coordinated Programs are free of confusion;
- Participate in Ministry-led consultations on Program design with key stakeholders, including Indigenous communities;
- Develop Program materials, including Program documentation and outreach materials in languages and formats appropriate for the target groups where applicable;
- Develop Program terms and conditions;
- Develop and maintain a Ministry branded online and hard copy application;
- Identify target markets in partnership with the Ministry and actively recruit participants;
- Provide a central entry point for participants through a Program website;
- Verify applicant and e-bike eligibility;
- Educate participants on (but not limited to) the benefits of e-bikes and best practices for their safe and legal operation;
- Provide ongoing participant support, including assisting with the Program application;
- Ensure access to quality e-bike purchase points by providing lists of local e-bike shops that can also provide maintenance service to Program participants;
- Share info with Ministry or Ministry partners on participation;
- Provide ongoing monitoring and reporting of Program participation and financial status;
- Administer rebate payments to Program participants, and potentially to local e-bike retailers, on behalf of the Ministry;
- Manage relationship, ongoing activities, and Program training with service organizations, municipal partners, and other Program stakeholders (ongoing);

- Cooperate with a third-party as identified by the Ministry for Program evaluation
- Calculate deemed GHG savings per retrofit measure, and annual and lifetime GHG savings attributed to the Program; and
- Assist the Ministry with evaluation of Program participant activities and satisfaction.

The Ministry will:

- Support Program design and provide Program oversight including establishing targets;
- Define participant and e-bike eligibility, including income thresholds;
- Facilitate consultation on Program design with key stakeholders, including First Nations;
- Approve Program terms and conditions;
- Conduct privacy and legal review for the Program;
- Provide provincial branding to the Proponent to be incorporated into Program materials and communications;
- Contribute to evaluation of the Program based on terms agreed upon by the parties;
- Manage, review, resolve, and advise as required escalated operational issues and exceptions; and,
- Delivery method and model will be in accordance with the approved project plan. The method may amended from time to time if agreed in writing by both parties

2.04 Reporting

The Recipient will provide regular updates and Reports to the Province advising of the status of the Project and the provision of the Services and, without limiting the generality of the foregoing, will provide the following Reports in the manner and format indicated, and on or before the deadlines set out, below:

Weekly, monthly, or quarterly status reporting on program progress, as required by the Ministry.

2.05 Project Timeline

Activities	Resource	Completion
PHASE 1 – Funding Agreement & Project Initiation		
Receive Letter from Ministry (acceptance of SCRAP-IT proposal)	D	March 21, 2023
Complete Due Diligence (as/if required)	D	March 27, 2023
Receive Funding Agreement	D	March 31, 2023
The Society executes a Funding Agreement for the delivery of the Electric Bike Rebate Program with the Ministry of Transportation & Infrastructure	D	March 31, 2023
Funding Agreement Signed		March 31, 2023
PHASE 2a – Program Implementation		
Finalize program delivery model (1 or 2) and associated details (income-testing requirements) with MOTI	D	April 1 to April 30

Analysis of program delivery model - modifications required to existing IT platform	D&C	April 1 to April 30
Analysis and confirmation of reporting requirements	D&C	April 1 to April 30
Documentation of detailed business processes and requirements and any process or database modifications	D&C	April 1 to April 30
Modification of application and claim forms to support e-bike programs specific characteristics	C&G	April 1 to April 30
Finalize program policies and procedures	D	April 1 to April 30
Draft initial set of FAQs	D	April 1 to April 30
Commence new website build, confirming branding with MOTI	D	April 1 to April 30
Commence development of custom reporting	G	April 1 to April 30
Website application & claim form development & testing	C&G	April 1 to April 30
Draft Standard Operating Procedures (SOP) for staff	C&N	April 1 to April 30
Staff training session	C&N	April 1 to April 30
Program Implementation Complete		April 30, 2023
Phase 2b – E-Bike Program Database Expansion		
Analysis and Design (expansion of current SQL)	C&G	May 1 to May 15
Add: Expenditure Tracking and Management Feature	C&G	May 1 to May 15
Add: Budget Management and Dashboard Feature	C&G	May 1 to May 15
Add: Reports Design	C&G	May 1 to May 15
Add: QB Integration	C&G	May 1 to May 15
User Acceptance Testing	C&G	May 1 to May 15
Deployment	C&G	May 1 to May 15

Analysis and Design (expansion of current SQL)	C&G	May 1 to May 15
Add: Expenditure Tracking and Management Feature	C&G	May 1 to May 15
Add: Budget Management and Dashboard Feature	C&G	May 1 to May 15
Add: Reports Design	C&G	May 1 to May 15
Add: QB Integration	C&G	May 1 to May 15
User Acceptance Testing	C&G	May 1 to May 15
Deployment	C&G	May 1 to May 15
E-Bike Program Database Expansion Complete		May 15, 2023
PHASE 4a – E-Bike Program Live for Customers		
Website live and applications open for customers	D&C&G	May 31, 2023
E-Bike Program Live for Customers		May 31, 2023
Application and claim processing commence	T&N	June 1, 2023

Customer service commences (emails, calls, other inquiries)	T	June 1 onwards
General day-to-day program management oversight	N	June 1 onwards
PHASE 4b – Marketing & Promotional Campaign		
Program marketing commences	D & LBMG	June 1, 2023
Marketing Commences		June 1, 2023
PHASE 5 - Manage Funds		
Database and internal financial reporting	N&T	ongoing
Internal financial management	W	ongoing
Internal financial management oversight	D&M	ongoing
PHASE 6 - Ministry Reporting (Financial & Program)		
Ad Hoc Reporting - as requested by the Ministry	D/N	As & When
Monthly Reporting (effective June 1, 2023)	N	Monthly
Quarterly Reporting - with certification	D&N	Quarterly
Annual Reporting - with certification	D&N	Annually
Final Reporting - with summary and certification	D	March 30, 2024
Milestone #6 - Final Report		March 30, 2024

ARTICLE 3 – REPRESENTATIVES

3.01 Province's Representative(s)

The representative(s) for the Province and their address(es) for the purposes of providing legal notice to the Province pursuant to Article 17 are as follows:

Trish Rorison
Executive Director
Clean Transportation & Programs Branch

Mailing Address:
PO Box 9850 Stn Prov Govt
Victoria BC V8W 9T5

3.02 Recipient's Representative(s)

The representative(s) for the Recipient and their address(es) and fax number(s) for the purposes of providing legal notice to the Recipient pursuant to Article 17 are as follows:

Diane Roberts
Chief executive Officer
SCRAP-IT Society (dba SCRAP-IT)

#105, 3031 Viking Way
Richmond, BC V6V 1W1

SCHEDULE "B"

FINANCIAL CONTRIBUTION

1. The Province will provide the Financial Contribution to the Recipient, for its satisfactory fulfilment of the Requirements under this Agreement, as follows:
 - (a) upon receipt and approval by the Province of online landing page, intake forms and process, as set out in section 2.03 of Schedule "A", a payment amount of \$468,000 (or 90% of the non incentive costs proposal total), and \$5,980,000 (or \$6.5M minus the non incentive costs proposal total (the "Total Grant Amount") of the funds the Recipient will issue to BC companies as incentives on behalf of the Province);
 - (b) upon receipt and approval by the Province of the final report, as set out in section 2.03 of "Schedule A", a payment amount of \$52,000;
 - (c) further to section 1(a) of "Schedule B", if the maximum contribution of \$5,980,000 (or total grant amount) has not been subscribed to by March 20, 2024, a final contribution will be provided prior to March 31, 2024; and
 - (d) the Province may increase the maximum contribution set out in section 1 (a) and upon this occurring, the Province and the Recipient will negotiate a further payment amount to be allocated towards non incentive costs and incentives and enter into such further agreement.
2. Unless the maximum contribution is increased as set out in 1 (d) of this Schedule "B", in no event will the Financial Contribution payable to the Recipient under this Agreement, exceed, in the aggregate \$6.5M inclusive of the incentives, non-incentive fee costs, and any applicable taxes payable on that amount.
3. If the recipient is unable to issue the Total Grant Amount by March 31, 2024 then the Recipient will return the Overpayments to the Province, unless the term is extended.
4. Upon completion of each of the Requirements specified in section 1 of this Schedule "B" the Recipient must, in order to obtain payment, submit to the Province:
 - (a) a written statement of account, in form and content acceptable to the Province, showing the calculation of all fees and expenses claimed under this Agreement for the period in which this statement is submitted; and
 - (b) a declaration of any amounts owing to the Province under legislation or by agreement, whether or not as a result of this Agreement.

Within 30 days of receiving a written statement of account as described in this section 3, the Province will pay to the Recipient the corresponding fees set out in section 1 of this Schedule "B".

5. If applicable, the Province will pay GST on the Financial Contribution, as long as the Recipient is a GST registrant and the Recipient's statement of account clearly indicates the Recipient's GST registration number as well as the amount of GST being charged.

SCHEDULE “C”

APPROVED SUBCONTRACTORS

The Province is willing to approve certain named subcontractors at the time of entering into the Agreement, the approved subcontractors can be listed here.

Not applicable.

SCHEDULE "D"



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1. The Contractor must, without limiting the Contractor's obligations or liabilities and at the Contractor's own expense, purchase and maintain throughout the Term the following insurances with insurers licensed in Canada in forms and amounts acceptable to the Province:
 - (a) Commercial General Liability in an amount not less than \$2,000,000.00 inclusive per occurrence against bodily injury, personal injury and property damage and including liability assumed under this Agreement and this insurance must
 - (i) include the Province as an additional insured,
 - (ii) be endorsed to provide the Province with 30 days advance written notice of cancellation or material change, and
 - (iii) include a cross liability clause.
 - (b) IF any licensed vehicles are owned, leased, rented or used in the performance of this contract, then Automobile Liability coverage with inclusive limits of not less than \$2,000,000.00 providing third party liability and accident benefits insurance must be provided for all these vehicles.
2. All insurance described in section 1 of this Schedule must:
 - (a) be primary; and
 - (b) not require the sharing of any loss by any insurer of the Province.
3. The Contractor must provide the Province with evidence of all required insurance as follows:
 - (a) within 10 Business Days of commencement of the Services, the Contractor must provide to the Province evidence of all required insurance in the form of a completed Ministry of Transportation and Infrastructure Certificate of Insurance (IM-IT) H0111;
 - (b) if any required insurance policy expires before the end of the Term, the Contractor must provide to the Province within 10 Business Days of the policy's expiration, evidence of a new or renewal policy meeting the requirements of the expired insurance in the form of a completed Province of British Columbia Certificate of Insurance; and
 - (c) despite paragraph (a) or (b) above, if requested by the Province at any time, the Contractor must provide to the Province certified copies of the required insurance policies.
4. The Contractor must obtain, maintain and pay for any additional insurance which the Contractor is required by law to carry, or which the Contractor considers necessary to cover risks not otherwise covered by insurance specified in this Schedule in the Contractor's sole discretion.

Certificate of Insurance is attached.

SCHEDULE "E"

PRIVACY

1.01 Custody and Control of Personal Information

The Parties agree that the Province does not have custody or control, for the purpose of FOIPPA, of any Personal Information collected, used or maintained the Recipient in relation to its provision of the Services.

1.02 Collection and Disclosure

The Recipient:

- (a) will not collect any Personal Information from any individuals in relation to its provision of the Services unless such information relates directly to or is necessary for the Recipient's provision of the Services; and
- (b) must not at any time provide any such Personal Information to the Province.

Privacy Protection Schedule is attached.

SCHEDULE "F"

CRIMINAL RECORDS CHECKS

Not Applicable

Schedule G – Security Schedule

Not Applicable

Schedule "H"

Marketing, Publicity and Communications Guidelines

For the purposes of this Schedule "H", all references to the Recipient shall be deemed to include any of its Subcontractors and, where appropriate, any organization that receives services, benefits or opportunities funded under this Agreement. In addition to any other requirements set forth in this Agreement, unless otherwise directed or approved in writing by the Province:

1. The Recipient will cooperate with the Province in such public announcements, news releases or event opportunities regarding the Recipient's Project or other activities funded under this Agreement (the "**Activities**"), as the Province requests.
2. The Recipient will not provide any media releases, promotional materials or communications in a public forum with respect to the Activities or the details of this Agreement except where the same have been approved in advance by the Province.
3. The Recipient will acknowledge the Financial Contribution made by the Province on any signage, posters, exhibits, pamphlets, brochures, advertising, websites, forms or other publications and promotional materials produced by the Recipient and related to the Activities (collectively, "**Communications**"), as well as at any offices where Participants or organizations receive services, benefits or opportunities funded under this Agreement, in accordance with the following:

All Communications must display the following logo(s) and/or acknowledgement statement ("**Branding**");

*"We gratefully acknowledge the financial support of the Province of British Columbia through the Ministry of **Transportation and Infrastructure**"*

4. All Communications must have prior approval from the Province. To obtain prior approval the Recipient must submit the proposed template for the Communications to the Province identifying the media channel and duration of the proposed Communications.
5. Any urgent media deadlines for the Communications should be flagged when requests for approvals are submitted.
6. At any office or location where the Activities take place, the Recipient will display the signage provided by the Province or may, if pre-approved by the Province, provide and display locally produced signage acknowledging the Province's involvement with and/or support of the Activities.
7. The Recipient will ensure that, where possible, cheques or deposit statements provided to Participants or organizations receiving financial assistance from the Recipient in relation to the Activities are provided to the Participants and organizations together with an insert pre-approved by the Province bearing the Branding.

8. Any and all use by the Recipient of any Provincial logos set out in the Branding will be in the form provided, and will comply with the graphic standards and any conditions communicated, by the Province to the Recipient from time to time.

9. The Province is and shall remain the owner of all right, title and interest in and to any Province logos set out in the Branding, and any goodwill associated with the use of such Province logos by the Recipient will ensure entirely to the Province. Any proprietary rights not specifically granted to the Recipient under this Agreement remain with the Province including, without limitation, copyright and trade-mark protection.

Schedule “I”

Materials

1.0 Produced Materials

(a) The Produced Materials and any Incorporated Materials, received or acquired by the Province as a result of the Services will be the exclusive property of the Province. At any times prior to the expiration or sooner termination of this Agreement, the Province may give written notice to the recipient requesting delivery of all or part of the Produced Materials or Incorporated Materials in which case the Recipient will comply with such request. The copyright in the Incorporated Materials and Produced Materials will belong exclusively to the Province.

***For all IM-IT contracts where no fieldwork**

Contracts/Leases/Agreements/Permits Number, Location and Description:

Brokers' Reference No.

Award or Effective Date

(yyyy/mm/dd)

INSURED Name

Business Address

BROKER Name

Business Address

Type of Insurance	Company and Policy Number	Policy Dates yyyy/mm/dd		Limits of Liability / Amounts
		Effective	Expiry	
Commercial General Liability (including Non-Owned Automobile Liability)				Bodily Injury and Property Damage
				\$ _____ Inclusive
				\$ _____ Aggregate
				\$ _____ Deductible
				\$ _____ SIR
Additional Insureds:				
Automobile Liability				Bodily Injury and Property Damage
				\$ _____ Inclusive
Umbrella/Excess Liability				\$ _____ Limits
				excess of \$ _____ General Liability
				excess of \$ _____ Automobile
<input type="checkbox"/> Builders Risk				\$ _____ Site
<input type="checkbox"/> Installation Floater				\$ _____ Other Location
<input type="checkbox"/> Other:				\$ _____ Transit
Equipment Insurance				\$ _____ Limit
Professional Liability Errors and Omissions				\$ _____ Each Claim
				\$ _____ Aggregate
				\$ _____ Deductible
<input type="checkbox"/> Protection & Indemnity				\$ _____ Limit
<input type="checkbox"/> Hull & Machinery				\$ _____ Limit
<input type="checkbox"/> Builders Risk (Vessels)				\$ _____ Limit
<input type="checkbox"/> Ship Repairers' Liability				\$ _____ Limit
Other:				\$ _____ Limit

The undersigned certifies the undersigned has reviewed the policies of insurance described above and Page 2 of this certificate and further certify that those policies have been issued to the insured named above and are in full force and effect and comply with the insurance requirements set out in the agreement / contract / lease / permit identified above, including the requirements set out on Page 2 of this certificate.

Signature of person authorized to sign on behalf of Insurers
certifying Page 1 and Page 2 of this Certificate

Print or Type Name

Date (yyyy/mm/dd)

ADDITIONAL CONDITIONS ARE SHOWN ON PAGE 2 OF THIS CERTIFICATE OF INSURANCE

Notwithstanding any other terms, conditions or exclusions elsewhere in the insurance policy(s), it is understood and agreed that the insurance policy(s) are extended to include insurance conditions as follows:

**CONDITIONS APPLICABLE TO:
COMMERCIAL GENERAL LIABILITY**

1. Additional Insured Clause

His Majesty the King in right of the Province of British Columbia as represented by the Minister of Transportation and Infrastructure, together with the employees, agents, and servants of the Minister, hereinafter referred to as an Additional Insured.

2. Extension of Coverage

Such liability insurance shall also include all liability arising out of blanket written contractual, contingent employers liability, non-owned automobile liability, and liability assumed by the Contractor in connection with and applicable to the contract.

3. Cross Liability

The insurance as is afforded by this policy shall apply in the same manner and to the same extent as though a separate policy had been issued to each Insured. Any breach of a condition of the policy by any Insured shall not affect the protection given by this policy to any other Insured. The inclusion herein of more than one Insured shall not operate to increase the limit of liability under this policy.

4. Exclusions Not Permitted

Claims arising out of the legal liability imposed upon the Insured at common law and extended by Statute for bodily injury or death to employees of the Insured. However, exclusions applicable to liability imposed upon or assumed by the Insured under any Workers' Compensation Statutes or for assessment by any Workers' Compensation Board will be allowed.

**CONDITIONS APPLICABLE TO:
PROPERTY TYPE OF INSURANCE POLICIES
(WHERE IT IS A REQUIREMENT OF THE CONTRACT,
AGREEMENT, LEASE OR PERMIT)**

5. Loss Payable Clause

His Majesty the King in right of the Province of British Columbia as represented by the Minister of Transportation and Infrastructure.

Issuance of this certificate shall not limit or restrict the right of the Ministry of Transportation and Infrastructure to request any time certified copies of any insurance policy(s).

6. Waiver of Subrogation

In the event of any physical loss or damage to the work or Contractor's equipment, the settlement or payment of the subsequent claim shall be made without the right of subrogation against His Majesty the King in right of the Province of British Columbia as represented by the Minister of Transportation and Infrastructure or any of the employees, servants or agents of the Minister.

**CONDITIONS APPLICABLE TO:
ALL POLICIES EXCEPT AUTOMOBILE LIABILITY INSURANCE
ISSUED BY I.C.B.C. AND PROFESSIONAL LIABILITY (E&O)
INSURANCE**

7. Cancellation

This policy shall not be cancelled, removed, reduced, materially changed or altered without thirty (30) days prior notice in writing by Registered Mail to:

**CORPORATE INSURANCE AND SECURITIES MANAGER
MINISTRY OF TRANSPORTATION & INFRASTRUCTURE
PO BOX 9850 STN PROV GOVT
VICTORIA BC V8W 9T5**

or

Ministry Representative, as noted in the contract.

**CONDITION APPLICABLE TO:
PROFESSIONAL LIABILITY / ERRORS AND OMISSIONS
INSURANCE**

8. Cancellation

The required insurance shall not be cancelled, or endorsed to reduce limits of liability, without thirty (30) days notice in writing by Registered Mail to: The Corporate Insurance and Securities Manager, Ministry of Transportation and Infrastructure, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5. Notification of the policy being endorsed to restrict coverage mid-term, must be provided in writing by Registered Mail to the same address, no later than the effective date of such change.

SCHEDULE "E"

PRIVACY PROTECTION SCHEDULE

Definitions

1. In this Schedule,

- (a) **"Act"** means the *Freedom of Information and Protection of Privacy Act* including any regulation made under it;
- (b) **"contact information"** means information to enable an individual at a place of business to be contacted and includes the name, position name or title, business telephone number, business address, business email or business fax number of the individual;
- (c) **"personal information"** means recorded information about an identifiable individual, other than contact information, collected or created by the Contractor as a result of the Agreement or any previous agreement between the Province and the Contractor dealing with the same subject matter as the Agreement;
- (d) **"privacy course"** means the Province's online privacy and information sharing training course or another course approved by the Province; and
- (e) **"public body"** means "public body" as defined in the Act;
- (f) **"third party request for disclosure"** means a subpoena, warrant, order, demand or request from an authority inside or outside of Canada for the unauthorized disclosure of personal information to which the Act applies;
- (g) **"service provider"** means a person retained under a contract to perform services for a public body; and
- (h) **"unauthorized disclosure of personal information"** means disclosure of, production of or the provision of access to personal information to which the Act applies, if that disclosure, production or access is not authorized by the Act.

Purpose

2. The purpose of this Schedule is to:

- (a) enable the Province to comply with the Province's statutory obligations under the Act with respect to personal information; and
- (b) ensure that, as a service provider, the Contractor is aware of and complies with the Contractor's statutory obligations under the Act with respect to personal information.

Acknowledgements

3. The Contractor acknowledges and agrees that
 - (a) it is a service provider and, as such, the requirements and restrictions established by Part 3 of the Act apply to the Contractor in respect of personal information;
 - (b) unless the Agreement otherwise specifies, all personal information in the custody of the Contractor is and remains under the control of the Province; and
 - (c) unless the Agreement otherwise specifies or the Province otherwise directs in writing, the Contractor may only collect, use, disclose or store personal information that relates directly to and is necessary for the performance of the Contractor's obligations, or the exercise of the Contractor's rights, under the Agreement.

Collection of Personal Information

4. Unless the Agreement otherwise specifies or the Province otherwise directs in writing, the Contractor may only collect or create personal information that relates directly to and is necessary for the performance of the Contractor's obligations, or the exercise of the Contractor's rights, under the Agreement.
5. The Contractor must collect personal information directly from the individual the information is about unless:
 - (a) the Province provides personal information to the Contractor;
 - (b) the Agreement otherwise specifies; or
 - (c) the Province otherwise directs in writing.
6. Where the Contractor collects personal information directly from the individual the information is about, the Contractor must tell that individual:
 - (a) the purpose for collecting it;
 - (b) the legal authority for collecting it; and
 - (c) the contact information of the individual designated by the Province to answer questions about the Contractor's collection of personal information.

Privacy Training

7. The Contractor must ensure that each individual who will provide services under the Agreement that involve the access, collection or creation of personal information will complete, at the Contractor's expense, the privacy course prior to that individual providing those services.
8. The requirement in section 7 will only apply to individuals who have not previously completed the privacy course.

Accuracy of Personal Information

9. The Contractor must make every reasonable effort to ensure the accuracy and completeness of any personal information to be used by the Contractor or the Province to make a decision that directly affects the individual the information is about.

Requests for Access to Information

10. If the Contractor receives a request for access to information from a person other than the Province, the Contractor must promptly advise the person to make the request to the Province unless the Agreement expressly requires the Contractor to provide such access. If the Province has advised the Contractor of the name or title and contact information of an official of the Province to whom such requests are to be made, the Contractor must also promptly provide that official's name or title and contact information to the person making the request.

Correction of Personal Information

11. Within 5 Business Days of receiving a written direction from the Province to correct or annotate any personal information, the Contractor must annotate or correct the information in accordance with the direction.
12. When issuing a written direction under section 11, the Province must advise the Contractor of the date the correction request was received by the Province in order that the Contractor may comply with section 13.
13. Within 5 Business Days of correcting or annotating any personal information under section 11, the Contractor must provide the corrected or annotated information to any party to whom, within one year prior to the date the correction request was received by the Province, the Contractor disclosed the information being corrected or annotated.
14. If the Contractor receives a request for correction of personal information from a person other than the Province, the Contractor must promptly advise the person to make the request to the Province and, if the Province has advised the Contractor of the name or title and contact information of an official of the Province to whom such requests are to be made, the Contractor must also promptly provide that official's name or title and contact information to the person making the request.

Protection of Personal Information

15. Without limiting any other provision of the Agreement, the Contractor must protect personal information by making reasonable security arrangements against such risks as unauthorized access, collection, use, disclosure or disposal, including without limitation by ensuring that the integrity of the personal information is preserved. Without limiting the general nature of the foregoing sentence, the Contractor will ensure that all personal information is securely segregated from any information under the control of the Contractor or third parties to prevent unintended mixing of personal information with other information or access to personal information by unauthorized persons and to enable personal information to be identified and separated from the information of the Contractor or third parties.

Storage of and Access to Personal Information

16. The Contractor must comply with the requirements under the Act concerning storage of personal information outside of Canada, including, if required by the Province, by supporting the Province with completion of such assessments as may be required by law.
17. The Contractor must not change the location where personal information is stored without receiving prior authorization of the Province in writing.
18. Without limiting any other provision of the Agreement, the Contractor will implement and maintain an access log documenting all access to personal information, including a list of all persons that access any personal information. The Contractor will provide a copy of the access log to the Province upon request.

Retention of Personal Information

19. Unless the Agreement otherwise specifies, the Contractor must retain personal information until directed by the Province in writing to dispose of it or deliver it as specified in the direction.

Use of Personal Information

20. Unless the Province otherwise directs in writing, the Contractor may only use personal information if that use is for the performance of the Contractor's obligations, or the exercise of the Contractor's rights, under the Agreement. For clarity, unless the Agreement otherwise specifies or the Province otherwise directs in writing, the Contractor must not anonymize, aggregate or otherwise alter or modify personal information, including by converting personal information into non-personal information, or analyze personal information (whether by manual or automated means) for any purpose, including for the purpose of developing insights, conclusions or other information from personal information.

Metadata

21. Where the Contractor has or generates metadata as a result of services provided to the Province, where that metadata is personal information, the Contractor will:
 - (a) not use it or disclose it to any other party except where the Agreement otherwise specifies; and
 - (b) remove or destroy individual identifiers, if practicable.

Disclosure of Personal Information

22. Unless the Province otherwise directs in writing, the Contractor may only disclose personal information to any person other than the Province if the disclosure is for the performance of the Contractor's obligations, or the exercise of the Contractor's rights, under the Agreement.
23. If in relation to personal information, the Contractor:
 - (a) receives a third-party request for disclosure;
 - (b) receives a request to disclose, produce or provide access that the Contractor knows or has reason to suspect is for the purpose of responding to a third-party request for disclosure; or
 - (c) has reason to suspect that an unauthorized disclosure of personal information has occurred

in response to a third-party request for disclosure,
subject to section 24, the Contractor must immediately notify the Province.

24. If the Contractor receives a third-party request described in section 23(a) or (b) but is unable to notify the Province as required by section 23, the Contractor must instead:
- (a) use its best efforts to direct the party making the third-party request to the Province;
 - (b) provide the Province with reasonable assistance to contest the third-party request; and
 - (c) take reasonable steps to challenge the third party-request, including by presenting evidence with respect to:
 - (i) the control of personal information by the Province as a public body under the Act;
 - (ii) the application of the Act to the Contractor as a service provider to the Province;
 - (iii) the conflict between the Act and the third-party request; and
 - (iv) the potential for the Contractor to be liable for an offence under the Act as a result of complying with the third-party request.

Notice of Unauthorized Disclosure

25. In addition to any obligation the Contractor may have to provide the notification contemplated by section 30.5 of the Act, if the Contractor knows that there has been an unauthorized disclosure of personal information, the Contractor must immediately notify the Province.

Compliance with the Act and Directions

26. The Contractor must in relation to personal information comply with:
- (a) the requirements of the Act applicable to the Contractor as a service provider, including any regulation made under the Act and the terms of this Schedule; and
 - (b) any direction given by the Province under this Schedule.
27. The Contractor acknowledges that it is familiar with the requirements of the Act governing personal information that are applicable to it as a service provider.
28. The Contractor will provide the Province with such information as may be reasonably requested by the Province to assist the Province in confirming the Contractor's compliance with this Schedule.

Notice of Non-Compliance

29. If for any reason the Contractor does not comply, or anticipates that it will be unable to comply in any respect, with any provision in this Schedule, the Contractor must promptly notify the Province of the particulars of the non-compliance or anticipated non-compliance and what steps it proposes to take to address, or prevent recurrence of, the non-compliance or anticipated non-compliance.

Termination of Agreement

30. In addition to any other rights of termination which the Province may have under the Agreement or otherwise at law, the Province may, subject to any provisions in the Agreement establishing mandatory cure periods for defaults by the Contractor, terminate the Agreement by giving written notice of such termination to the Contractor, upon any failure of the Contractor to comply with this Schedule in a material respect.

Interpretation

31. In this Schedule, references to sections by number are to sections of this Schedule unless otherwise specified in this Schedule.
32. Any reference to "Contractor" in this Schedule includes any subcontractor or agent retained by the Contractor to perform obligations under the Agreement and the Contractor must ensure that any such subcontractors and agents comply with the requirements of the Act applicable to them.
33. The obligations of the Contractor in this Schedule will survive the termination of the Agreement.
34. If a provision of the Agreement (including any direction given by the Province under this Schedule) conflicts with a requirement of the Act, including any regulation made under the Act, the conflicting provision of the Agreement (or direction) will be inoperative to the extent of the conflict.
35. The Contractor must comply with the provisions of this Schedule despite any conflicting provision of the Agreement or the law of any jurisdiction outside Canada.
36. Nothing in this Schedule requires the Contractor to contravene the law of any jurisdiction outside Canada unless such contravention is required to comply with the Act.

THIS AGREEMENT dated for reference the 23 day of May, 2023;

BETWEEN:

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA,
represented by the

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
Clean Transportation & Programs Branch
5D-940 Blanshard Street
PO Box 9850
Victoria, BC V8W 9T5

(the “Province”)

OF THE FIRST PART

AND:

THE UNIVERSITY OF BRITISH COLUMBIA
Research on Active Transportation (REACT) Lab
2029 - 6250 Applied Science Lane
Vancouver, British Columbia Canada V6T 1Z4

(the “University”)

OF THE SECOND PART

WHEREAS

- A. The University is undertaking a research project entitled “Equity Impacts of Income-Dependent E-bike Purchase Incentives.” (the “**Research Project**”) A summary of the Research Project is attached at Schedule “A” to this Agreement.
- B. By this Agreement, the Province is providing non-monetary services to the University to assist with the Research Project. The extent of the Province’s services are set forth in Schedule “B” to this Agreement.

IN CONSIDERATION of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

SECTION 1—DEFINITIONS

1.01 Where used in this Agreement:

- (a) “Intellectual Property” means intangible (non-physical) property which includes scientific or scholarly

discoveries, copyright, computer software, moral rights related to copyrighted materials, trademarks, official marks, domain names, patents, industrial designs, literary, artistic, musical or visual works and know-how;

- (b) “Material” means all findings, data, reports, documents, records and material, (both printed and electronic, including but not limited to, on hard disk or diskettes), whether complete or otherwise, that have been produced, received, compiled or acquired by the University, or provided by or on behalf of the Province to, the University as a direct result of this Agreement, but does not include property owned by the University;
- (c) “Non-Commercial” means not being able to profit financially at any time from the Material under this Agreement between the Province and University, in the use of the Material by the following non-commercial users and their employees: government ministries, agencies, boards and commissions; educational institutions (such as public school boards, public post-secondary institutions, community and technical institutes); and non-profit organizations (such as public libraries, charities, and other organizations created for the promotion of educational, health or social services purposes);
- (d) “Personal Information” means recorded information, not including business contact information, about an identifiable individual;
- (e) “Principal Investigator” means the individual identified by the University as the person primarily responsible for the Research Project;
- (f) “Research Project” means the research project described in Schedule A;
- (g) “Services” means the services provided by the Province to the University as and described in Schedule B;
- (h) “Term” means the period commencing on the start date and expiring on the end date of the Agreement stipulated in the Schedule A.

SECTION 2—APPOINTMENT

2.01 [INTENTIONALLY DELETED]

SECTION 3—SERVICES

- 3.01 Subject to the provisions of this Agreement, the Province will provide to the University, the Services set forth in Schedule “B” to this Agreement (“Province’s Services”).
- 3.02 Notwithstanding any other provision of this Agreement, the Province’s Services is subject to resource availability with such determination being in the sole discretion of the Province.

SECTION 4—REPRESENTATIONS AND WARRANTIES

- 4.01 Subject to paragraph 4.04 (Disclaimer), the University represents and warrants to the Province that:
 - (a) all information, statements, documents and reports furnished or submitted by it to the Province in connection with this Agreement are true and correct;
 - (b) it has no knowledge of any fact that materially adversely affects, or so far as it can foresee, might materially adversely affect, its properties, assets, condition (financial or otherwise), business or operations or its ability

to fulfill its obligations under this Agreement; and

(c) it is not in breach of, or in default under, any law, statute or regulation of Canada or of the Province of British Columbia applicable to or binding on it or its operations.

4.02 All statements contained in any certificate, application, proposal or other document delivered by or on behalf of the University to the Province under this Agreement or in connection with any of the transactions contemplated hereby will be deemed to be representations and warranties by the University under this Agreement.

4.03 All representations, warranties, covenants and agreements made herein and all certificates, applications or other documents delivered by or on behalf of the University are material and will have been relied upon by the Province and will continue in full force and effect during the continuation of this Agreement.

4.04 **Disclaimer.** The University makes no representations or warranties, either express or implied, regarding data or other results arising from the Research Project. The University specifically disclaims any implied warranty of non-infringement or merchantability or fitness for a particular purpose and the University will, in no event, be liable for any loss of profits, be they direct, consequential, incidental, or special or other similar damages arising from any defect, error or failure to perform, even if the University has been advised of the possibility of such damages. The Province acknowledges that the Research Project is of an experimental and exploratory nature, that no particular results can be guaranteed, and that the Province has been advised by the University to undertake its own due diligence with respect to all matters arising from this Agreement.

SECTION 5—RELATIONSHIP

5.01 No partnership, joint venture, agency or other legal entity will be created by or will be deemed to be created by this Agreement or any actions of the parties pursuant to this Agreement.

5.02 Each party will be an independent contractor and not the servant, employee or agent of the other party.

5.03 The University will not in any manner whatsoever commit or purport to commit the Province to the payment of money to any person, firm or corporation.

5.04 The Province may, from time to time, give reasonable instructions to the University in relation to the carrying out of the Research Project, and the University will comply with those instructions but will not be subject to the control of the Province regarding the manner in which those instructions are carried out except as specified in this Agreement. Notwithstanding the foregoing, all changes to the scope and direction of the Agreement will be made with mutual agreement between the parties.

SECTION 6—UNIVERSITY'S OBLIGATIONS

6.01 The University will:

(a) carry out the Research Project in accordance with the terms of this Agreement during the Term stated in Schedule "A" of this Agreement;

(b) comply with all applicable laws;

(c) hire and retain only qualified staff;

(d) unless agreed otherwise supply, at its own cost, all labour, materials and approvals necessary to carry out the Research Project;

(e) co-operate with the Province in making such public announcements regarding the Research Project and the details of this Agreement as the Province requests; and

SECTION 7—PROVINCE’S OBLIGATIONS

7.01 The Province will provide to the University the Services set out in Schedule “B” to this Agreement.

SECTION 8—RECORDS

8.01 The University will:

- (a) permit the Province, for contract monitoring and audit purposes, at all reasonable times, upon reasonable notice, to enter any premises used by the University to conduct the Research Project or keep any documents or records pertaining to the Research Project, in order for the Province to inspect, audit, examine, review and copy any findings, data, specifications, drawings, working papers, reports, surveys, spread sheets, evaluations, documents, databases and other Material, (both printed and electronic, including, but not limited to, on hard disk or diskettes), whether complete or not, that are produced, received or otherwise acquired by the University as a result of this Agreement.

8.02 The parties agree that the Province does not have control, for the purpose of the *Freedom of Information and Protection of Privacy Act*, of the records held by the University.

SECTION 9—CONFLICT OF INTEREST

9.01 The University must not knowingly allow its research personnel involved in performing the Research Project, to provide any services to any person in circumstances that could give rise to a conflict of interest between their duties to that person and their duties to the Province under this Agreement.

SECTION 10—CONFIDENTIALITY

10.01 The University will treat as confidential all information or material which are clearly marked as confidential or proprietary when first disclosed (“Confidential Information”) by the Province and supplied to or obtained by the University, or any subcontractor, under this Agreement and will not, without the prior written consent of the Province, except as required by applicable law, permit its disclosure except to the extent that such disclosure is necessary to enable the University to fulfill its obligations under this Agreement. Confidential Information may also include information furnished during discussions or oral presentations if it is conspicuously identified as proprietary at the time and then transcribed or confirmed in writing within thirty (30) days, specifically describing what portions of such information is considered to be proprietary or confidential. However, the University is under no obligation to maintain the confidentiality of Confidential Information which the University can show:

- (a) is or subsequently becomes generally available to the public through no act or fault of the University;
- (b) was in the possession of the University prior to its disclosure by the Province to the University;
- (c) was lawfully acquired by the University from a third party who was not under an obligation of confidentiality to the Province; or
- (d) is required by an order of a legal process to disclose, provided that the University gives the Province prompt and reasonable notification of such requirement prior to disclosure; or
- (e) was independently developed by employees, agents or consultants of the University who had no knowledge of or access to the Province’s information as evidenced by the University’s records.

10.02 The University will ensure that any of its employees, faculty, agents, Principal Investigator and contractors engaged in the Research Project will enter into non-disclosure agreements between the individual and the University which incorporates and binds them to the confidentiality provisions in section 10.01.

SECTION 11—DEFAULT

11.01 Any of the following events will constitute an Event of Default, namely:

- (a) the University fails to comply with any material provision of this Agreement;
- (b) subject to paragraph 4.04, any representation or warranty made by the University in accepting this Agreement is untrue or incorrect; or
- (c) any information, statement, certificate, report or other document furnished or submitted by or on behalf of the University pursuant to or as a result of this Agreement is untrue or incorrect.

SECTION 12—TERMINATION

12.01 Either party may terminate this Agreement for any reason by giving at least thirty (30) days prior written notice to the other.

12.02 Upon the occurrence of any Event of Default and at any time thereafter the Province may, notwithstanding any other provision of this Agreement, at its option, elect to do any one or more of the following:

- (a) immediately terminate this Agreement;
- (b) require the Event of Default be remedied within a time period specified by the Province;
- (c) waive the Event of Default; and
- (d) pursue any other remedy available at law or in equity.

12.03 The Province may also, at its option, terminate this Agreement immediately if the Province determines that the University's failure to comply places the health or safety of any person conducting the Research Project at immediate risk.

SECTION 13—INDEMNITY

13.01 The University will indemnify and save harmless the Province, its officers, directors, employees and agents from and against any and all losses, claims, damages, actions, causes of action, costs and expenses that the Province may sustain, incur, suffer, or be put to at any time, either before or after the expiration or termination of this Agreement, where the same are based upon, arise out of or occur, directly or indirectly, by reason of any act or omission of the University or its Board of Governors, directors, officers, employees, faculty, contractors, students or agents pursuant to this Agreement.

SECTION 14—ASSIGNMENT AND SUBCONTRACTING

14.01 The University will not, without the prior, written consent of the Province:

- (a) assign, either directly or indirectly, this Agreement or any right of the University under this Agreement; or
- (b) subcontract any obligation of the University under this Agreement.

14.02 No subcontract entered into by the University will relieve the University from any of its obligations under this Agreement or impose upon the Province any obligation or liability arising from any such subcontract.

14.03 This Agreement will be binding upon the Province and its assigns and the University, the University's successors and permitted assigns.

SECTION 15—OWNERSHIP AND PUBLICATION OF RESULTS AND INTELLECTUAL PROPERTY

- 15.01 Any equipment, machinery, data or other property, provided by the Province to the University for the conduct of the Research Project under this Agreement will:
- (a) be the exclusive property of the Province; and
 - (b) forthwith be delivered by the University to the Province on written notice to the University requesting delivery of the same at the Province's costs, whether such a notice is given before, upon, or after the expiration or sooner termination of this Agreement.
- 15.02 The Province acknowledges and agrees that the University owns all right, title and interest in the Material produced under this Agreement and Intellectual Property arising from the Research Project under this Agreement.
- 15.03 The University hereby grants the Province a perpetual non-exclusive, irrevocable, world-wide, fully paid up and royalty-free license to use, make, copy, distribute, translate, practice, and reproduce the Material produced under this Agreement and Intellectual Property arising under this Agreement for scientific, educational, public good and other Non-Commercial uses. In addition, the University grants the Province the additional rights to incorporate all or portions of the Material produced under this Agreement in any reports created by the Province and to further develop the Research Project reports provided that the content of the Research Project reports is not materially modified without the written approval of the University. Upon the Province's request, the University will deliver documents satisfactory to the Province that waive in the Province's favour any moral rights to Research Project reports, as defined in "Schedule A", which the University's employees or contractors may have in said Research Project reports.
- 15.04 The University and its employees will not be restricted from presenting publications at symposia, national or regional professional meetings, or from publishing in journals or other publications, accounts of the work pertaining to this Agreement. Publications, conference presentations, symposia and all other dissemination of material pertaining to the work of this Agreement will recognize the Ministry of Transportation and Infrastructure.

SECTION 16—OTHER FUNDING

- 16.01 The University will ensure that if the University's research personnel, involved in performing the Research Project, receives funding for or in respect of the Research Project from any person, firm, corporation or other government or government body, then the University will immediately provide the Province with details thereof.

SECTION 17—NOTICES

- 17.01 Any written communication from the University to the Province must be mailed, personally delivered, faxed, or electronically transmitted to the following address:
- Kate Berniaz*
Director, Climate/Active Transportation
Kate.Berniaz@gov.bc.ca
- 17.02 Any written communication from the Province to the University must be mailed, personally delivered, faxed or electronically transmitted to the following address:
- Dr. Alex Bigazzi*
Associate Professor, Dept. of Civil Engineering
abigazzi@civil.ubc.ca
- 17.03 Any written communication from either party will be deemed to have been received by the other party on the fifth business day after mailing in British Columbia; on the date of personal delivery if personally delivered or on the date of transmission if sent by email.

- 17.04 Either party may, from time to time, notify the other party in writing of a change of address and, following the receipt of such notice, the new address will, for the purposes of paragraph 17.01 or 17.02 of this Agreement, be deemed to be the mailing address of the party giving notice.

SECTION 18—NON-WAIVER

- 18.01 No term or condition of this Agreement and no breach by the University of any such term or condition will be deemed to have been waived unless such waiver is in writing signed by the Province and the University.
- 18.02 The written waiver by the Province or any breach by the University of any term or condition of this Agreement will not be deemed to be a waiver of any other provision of any subsequent breach of the same or any other provision of this Agreement.

SECTION 19—ENTIRE AGREEMENT

- 19.01 This Agreement including the Schedules constitutes the entire agreement between the parties with respect to the subject matter of this Agreement.

SECTION 20—SURVIVAL OF PROVISIONS

- 20.01 All of the provisions of this Agreement in favour of the Province including, without limitation, paragraphs 3.02, 8.01, 8.02, 10.01, 13.01, 14.01, 14.02, 14.03, 15.01, 15.03, 15.04, and all of the rights and remedies of the parties, either at law or in equity, will survive any expiration or sooner termination of this Agreement.

SECTION 21—MISCELLANEOUS

- 21.01 This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia.
- 21.02 The Schedules to this Agreement are an integral part of this Agreement as if set out at length in the body of this Agreement.
- 21.03 No amendment or modification to this Agreement will be effective unless it is in writing and duly executed by the parties.
- 21.04 If any provision of this Agreement or the application to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to any other person or circumstance will not be affected or impaired thereby and will be enforceable to the extent permitted by law.
- 21.05 Nothing in this Agreement operates as a consent, permit, approval or authorization by the Government of the Province of British Columbia or any Ministry or Branch thereof to or for anything related to the Research Project that by statute, the University is required to obtain unless it is expressly stated herein to be such a consent, permit, approval or authorization.
- 21.06 This Agreement may be executed by the parties in separate counterparts each of which when so executed and delivered shall be an original, and all such counterparts may be delivered by facsimile transmission and such transmission shall be considered an original.
- 21.07 Time is of the essence of this Agreement.
- 21.08 For the purpose of paragraphs 21.09 and 21.10, an “Event of Force Majeure” includes, but is not limited to, acts of God, changes in the laws of Canada, governmental restrictions or control on imports, exports or foreign exchange, wars (declared or undeclared), fires, floods, storms, strikes (including illegal work stoppages or slowdowns), lockouts, labour shortages, freight embargoes and power failures or other cause beyond the

reasonable control of a party, provided always that lack of money, financing or credit will not be and will not be deemed to be an "Event of Force Majeure".

21.09 Neither party will be liable to the other for any delay, interruption or failure in the performance of their respective obligations if caused by an Event of Force Majeure, in which case the time period for the performance or completion of any such obligation will be automatically extended for the duration of the Event of Force Majeure.

21.10 If an Event of Force Majeure occurs or is likely to occur, then the party directly affected will notify the other party forthwith, and will use its reasonable efforts to remove, curtail or contain the cause of the delay, interruption or failure and to resume with the least possible delay compliance with its obligations under this Agreement.

The parties hereto have executed this Agreement the day and year as set out above.

SIGNED AND DELIVERED by the University or
an Authorized Representative of the University)
)
)
)
)
)

Alexander Bigazzi


Print Name of University Authorized Representative)
)
)
)
)
)


(Signature)

SIGNED AND DELIVERED on behalf of the Province
by an Authorized Representative of the Province

Kate Berniaz

Print Name of Authorized Representative


(Signature)

SCHEDULE A—RESEARCH PROJECT AND TERM

1. Notwithstanding the date of execution of this Agreement, the term of this Agreement will start on April 1, 2023 and end on April 1, 2025.
2. Research Project Details:

Background and Project Description

Electric bicycles (e-bikes) are a rapidly growing mode of transportation with the potential to displace driving and so reduce greenhouse gas (GHG) emissions from transportation (Bigazzi and Berjisan, 2019; Mason et al., 2015; McQueen et al., 2020). The potential emissions benefits have led to the advancement of e-bike promotion programs and policies as a climate action strategy by Canadian governments (Aono and Bigazzi, 2019; Edge et al., 2020). E-bike promotion can also have a range of other benefits related to physical activity, traffic congestion, travel costs, and more (Berjisan and Bigazzi, 2019; McQueen et al., 2019). Some climate-oriented e-bike incentive programs incorporate an equity dimension to program design – such as income-dependent purchase rebates (Aono et al., 2019). In addition to consideration of the distribution of program benefits, income-conditional incentives can improve program effectiveness because lower-income households are expected to be more price-sensitive (Bigazzi and Berjisan, 2021).

To date, we have little empirical evidence of the real-world impacts of e-bike incentive programs. Some studies are starting to emerge from incentive programs in northern Europe, focussed on quantifying the program's external benefits (Anderson and Hong, 2022; Sundfør and Fyhri, 2022). Less attention has been given to the internal costs and benefits for e-bike adopters (e.g., access, activity participation, travel costs), and how those impacts vary among individuals. We know that the effects of e-bike adoption on travel behaviour are highly heterogeneous and contextual (Bigazzi and Wong, 2020; Bourne et al., 2020; Jones et al., 2016). We do not yet know how income-dependent e-bike incentives intersect with existing transportation inequities, and hence how they may serve to enhance (or undercut) equity goals for transportation systems.

This project aims to develop new understanding of the equity impacts of income-dependent e-bike purchase incentives. Key questions this project aims to answer include:

- 1) How do income-dependent incentives change e-bike purchase decisions for different segments of the population?
- 2) Do lower-income e-bike purchasers experience unique benefits or obstacles from access to an e-bike (for example, related to infrastructure, housing type, activity patterns, schedule constraints, etc.)? What barriers exist to further utilization of purchased e-bikes and benefits from the incentive program, particularly for disadvantaged travellers?
- 3) Are there equity implications of income-dependent e-bike incentives beyond preferential benefits for lower-income travellers? For example, do the benefits intersect with other equity-deserving sub-sets of the population?

The proposed research will study the equity impacts of E-bike purchase incentive programs (EBPIP), with a focus on the internal costs and benefits for e-bike adopters. The researchers are partnering with the BC Ministry of Transportation and Infrastructure.

BC MoTI is developing a Province-wide, income-qualified EBPIP that aims to support active transportation, help make transportation more affordable for households facing the greatest financial hardship, and help contribute to the Province's GHG reduction goals. The program will use income tiers, similar to the Saanich program, with a total of around 6500 to 9000 rebates, depending on the final distribution across tiers.

Project Team

The research team is comprised of 2 research investigators.

The Principal Investigator (PI), Dr. Alex Bigazzi, is an Associate Professor in the Department of Civil Engineering at the University of British Columbia (UBC), and an Associate Member of the UBC School of Community and Regional Planning. He has expertise in both urban cycling and emissions associated with transportation systems. Dr. Bigazzi

recently led several research projects on e-bikes, including a 206 collaborative research project with the City of Victoria that laid the groundwork for the Saanich e-bike purchase incentive program (Aono et al., 2019). Other recent work investigated e-bike adoption (Aono and Bigazzi, 2019; Bigazzi and Berjisian, 2021, 2019; Bigazzi and Wong, 2020) and the GHG impacts of travel mode shift (Bigazzi, 2019). The graduate research assistants (GRA) in Dr. Bigazzi's REACT (REsearch on Active Transportation) Lab (www.reactlab.civil.ubc.ca) are well-trained in the data collection and analysis tools and techniques required for the proposed research project.

The PI is joined by co-investigator (CI) Dr. Meghan Winters. Dr. Winters is a Professor in the Faculty of Health Sciences at Simon Fraser University, and holds a CIHR/PHAC Applied Public Health Chair (Gender and Sex in Healthy Cities). She leads the Cities, Health, and Active Transportation Research Lab (www.chatrlab.ca) with a program of research that focuses on ways that cities can play a role in promoting mobility, health, social connections, and safety amongst people of all ages and abilities. To highlight projects relevant to the proposed work, Dr. Winters is the co-lead of Mobilizing Justice project's 'Transportation Modes' group, and as part of this she leads an ongoing study on the impacts of the equity programs of Vancouver's bike share (Mobi by Shaw Go's). She also leads "Building CapaCITY/É for Sustainable Transportation", a \$3M CIHR team implementation science team grant (2022-2028) that coalesces a team of 50+ researchers, city planners, and community partners from Canada and Australia with an overall goal to catalyze the implementation of sustainable transportation interventions to support health, mobility, and equity outcomes in cities. Her studies employ diverse methodological approaches including natural experiments, administrative data linkages, population-based surveys, quantitative and qualitative data collection (intercept surveys, personal-activity sensors, focus groups, interviews), observational studies, and spatial analysis.

Evaluation and Analysis Plan

This project builds and expands on the PI's recent work evaluating the GHG impacts of e-bike purchase incentives through modal shift, with a reorientation to evaluate internal and distributional impacts. The study design must work within a number of ethical and privacy constraints, particularly the inability to tie purchase incentives to study participation. These constraints require opt-in study recruitment and preclude a randomized control study design. Instead, we will implement a quasi-experimental study design recruiting two comparison groups for the purchase incentive recipients from the overlapping geographic population. These contrasts with the comparison groups will allow investigation of the distinct effects of e-bike (versus conventional bicycle) purchases, and incentivized (versus non-incentivized) purchases. The recruitment groups are illustrated in Figure 1. Incentive recipients will be recruited through program contacts, and the comparison groups through online advertisements. Informed by past research, the target sample size is 50% of incentive recipients. Given the planned program sizes, this will yield a program sample of approximately 4000. An equal sample size is planned for the comparison group, for a target total study sample of 8000.

The study will use a three-wave panel survey design to examine short-term (3-month) and long-term (12-month) changes in behaviour over time. Recruitment will happen as close as possible to the bicycle purchase, which is constrained by the EBPIP delivery model (i.e., point-of-sale versus pre-registration distribution of incentives). Wave 1 will thus be a quasi-"before" measurement, requiring retrospective reporting of pre-purchase behaviour. Wave 2 will occur at 3 months after purchase, and Wave 3 at 12 months after purchase. Based on past research (Bigazzi et al., 2022), we expect 50% retention at Wave 2, and 40% retention of Wave 1 at Wave 3. As we expect all available e-bike incentives to be taken up (Bigazzi and Berjisian, 2021), there will likely be many people interested in e-bike purchasing who do not receive a purchase incentive. If the program delivery model allows it, these people will be included in the study recruitment to observe subsequent purchase decisions at Wave 2 and Wave 3. Given the wide geographic scope of study (the entire Province of BC), the study will use mostly online survey instruments, with options for telephone-based participation including interpretation.

Each wave of data collection will record information about: bicycle purchase decisions, personal and household characteristics (location, socio-demographics, household composition, bicycle and vehicle ownership, etc.), and travel behaviour and activity participation. To minimize respondent burden, travel and activity data will be self-reported. In the study design phase (Task 1 below), a decision will be made as to whether to implement an opt-in smartphone-based location tracking sub-sample for more direct measurement of travel and activity locations. Smartphone tracking has worked well in past studies where e-bikes were loaned with required study participation (Andersson et al., 2021; Shankari et al., 2021), but presents more of a challenge for a purchase subsidy program where study participation is optional. Smartphone tracking involves technical and privacy risks that might not be justified by enhanced data precision –

particularly if this method introduces response bias against already marginalized groups. This is one of the ways community engagement during Task 1 will be used to inform the final study design.

In addition to the closed-form survey instrument which will be used to measure changes over the 3 survey waves, open-ended questions will be added to Wave 2 or 3 to record experiential and perceptual data with unconstrained response options. Closed-form instruments restrict the dimensions of inquiry, which facilitates rigorous statistical analysis but can over-simplify respondent perceptions and experiences, relying on the researchers' a priori conceptualization of key issues (Poulenez-Donovan and Ulberg, 1994). Open-ended survey questions provide a means to avoid these limitations and efficiently collect unconstrained text data (Schuman and Presser, 1979), which can be analyzed using quantitative and qualitative techniques (O'Cathain and Thomas, 2004). Open text data will be collected with survey prompts addressing perceptions of access, barriers, burdens, and well-being.

Several types of data analysis will be used to accomplish the research objectives. Panel data regression models will be used to investigate the determinants of quantified behavioural and cost outcomes such as mobility, activity participation, physical activity, and travel costs. The models will include personal and household variables and control for contextual factors (weather, terrain, cycling/transport facilities, etc.). Structural topic modelling (STM) will be used to analyse the open text data on experiences and perceptions of access, burdens, etc. STM was recently shown to be a powerful tool to examine systematic variation in traveller perceptions across population sub-groups using open text data from online surveys (Bardutz and Bigazzi, 2022). In addition to these two primary modelling tools, the researchers will perform descriptive and qualitative analysis of quantitative and text data.

The analysis methods will focus on equity in several ways. Firstly, income will be the primary segmenting variable in all of the analysis, because of the income-tiered rebate designs. For example, the statistical models will condition all of the effects (parameters) on income. Secondly, we will test moderating (interaction) effects of other personal and household factors on income-dependent program/adoption effects. The interaction analysis will reveal possible intersectional effects (positive or negative) of e-bike incentives targeting low-income households.

Task 1 (study design and preparation) involves project initiation and coordination among partners to ensure alignment on project objectives, scope, deliverables, and timeline. Key elements of the equitable engagement plan (see below) will inform the final study design. The research team will develop and test the survey tools, and obtain ethics approval prior to beginning data collection by Quarter 2. Assuming intake into Wave 1 over the course of 6 months, data collection will continue for 18 months in total (6 quarters), until the close of Wave 3.

Data analysis will begin after Wave 2 data are collected, to produce an interim report at the end of the first year of the project summarizing the results for short-term changes. Conference presentations will also be generated to share project information and early results with academics and industry. A longer, more extensive data analysis will be undertaken at the conclusion of Wave 3, leading to the final report at the end of the 2-year project, as well as a webinars, conference presentations, and academic journal articles (see Knowledge Mobilization Plan for details).

Knowledge Mobilization Plan

Our knowledge mobilization plan targets three groups of knowledge users: the public, practitioners, and researchers. Each group will be targeted with web, print, and presentation formats oriented to their needs and interests. The main research outputs will be:

- A final report, including three different executive summaries targeting each knowledge user group (public, practitioners, and researchers)
- A web page, with three different sub-sections targeting each of the same knowledge user groups (parallel to the content in the three executive summaries)
- Presentations in several distinct formats:
 - o A community webinar to discuss the draft findings pre-finalization (described above)
 - o A practitioner webinar focussing on recommendations to implement more equitable and effective EBPIP,
 - o Academic and practitioner conference presentations (Transportation Research Board, Institute of Transportation Engineers, Transportation Association of Canada, Canadian Transportation Research Forum, etc.)
- Academic journal articles, all open access and with possible interest to practitioners or the public, but targeted toward researchers

Dissemination to the public will utilize the communication channels of the EBPIP, direct contact with study participants, community partners described above (e.g., community & cycling organizations), and media outreach using UBC's media relations team. Dissemination to practitioners will utilize the professional networks of the research team and public agency partners. For example, the PI and Saanich (along with the Community Energy Association and other partners) organized a webinar on EBPIP design in November 2021 that attracted more than 100 government staff and decision-makers from across Canada. Also, the PI often consults on EBPIP with staff and decision-makers from governments around Canada and the USA, which provides an excellent opportunity to almost directly operationalize study findings to enhance the equity of new EBPIP.

SCHEDULE B—PROVINCE’S SERVICES

1. The Province will provide data from the e-bike rebate program to assist the University’s research team.
2. The Province will be involved in the project to provide information and any relevant data from their ongoing programs. Specifically, The Province will:
 - Provide any readily available and relevant data such as, but not limited to high-level demographic data of rebate participants:
 - Income distribution
 - Age distribution
 - Gender distribution
 - Ethnicity distribution
 - Primary mode of transportation distribution
 - Review and provide feedback on program results related to the e-bike rebate program.



**Ministry of Transportation and Infrastructure
MODIFICATION AGREEMENT**

AMENDMENT 1

065OA127210

THIS MODIFICATION AGREEMENT dated for reference May 31, 2023,

BETWEEN

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA,
represented by the Minister of Transportation and Infrastructure
Clean Transportation & Programs Branch
(the "Province", "we", "us", or "our", as applicable)

AND

SCRAP-IT Society doing business as SCRAP-IT
(the "Recipient" "you" or "your" as applicable)

BACKGROUND

- A. The parties entered into an agreement dated March 27, 2023, a copy of which is attached as Exhibit 1 (the "Agreement").
- B. The parties have agreed to modify the Agreement, effective March 27, 2023.

AGREEMENT

The parties agree as follows:

- (1) That Schedule "E" Privacy, and Schedule "E" Privacy Protection Schedule are both hereby deleted and replaced with the following:

Schedule "E" – Privacy

1.01 Custody and Control of Personal Information

The Parties agree that the Province does not have custody or control, for the purpose of FOIPPA, of any Personal Information collected, used or maintained by the Recipient in relation to its provision of the Services.

1.02 Collection and Disclosure

The Recipient:

- (a) will not collect any Personal Information from any individuals in relation to its provision of the Services unless such information relates directly to or is necessary for the Recipient's provision of the Services; and
- (b) must not at any time provide any such Personal Information to the Province.

1.03 Compliance

The Recipient is responsible for ensuring all Services conducted under this Agreement will remain compliant with all aspects of FOIPPA and the *Personal Information Protection Act*.

(2) In all other respects, the Agreement is confirmed.

SIGNED AND DELIVERED on the 12th day of June, 2023 on behalf of the Province by its duly authorized representative:

Signature Trish Rorison

Print Name Trish Rorison

SIGNED AND DELIVERED on the 12 day of June, 2023 by or on behalf of the Recipient (or by its authorized signatory or signatories if the Contractor is a corporation):

Signature Diane Roberts

Print Name Diane Roberts

Attachment 2. Research Compilation

Summary:

- E-bike usership appears to be concentrated among higher income older males.
- E-bikes have high potential to encourage modeshift. On average, 44% of e-bike trips replace car trips. Around 39km of driving per week is displaced by the average e-bike adopter.
- Upfront cost is a primary barrier to e-bike adoption.
- E-bike incentive programs take a variety of forms, but Saanich's E-Bike Incentive Pilot Program appears to follow many best practices.
- To expand adoption of e-bikes among diverse demographics, a tiered income approach is recommended, as well as expanding cycling infrastructure in general. Longer distance infrastructure in particular can encourage e-bike trips.
- Research is lacking on the overall size of the e-bike market.

Internal Sources

Research	Summary
E-bike user profile from 2019 ATS General Population Survey	<ul style="list-style-type: none"> • Subsample of 129 respondents (3%) who had at least one e-bike • Vast majority were 55+ and male and had lived in their community for over ten years. Almost half had incomes \$100K+. • 52% in Lower Mainland/Southwest, 31% on Vancouver Island/Coast • 11% primarily used their e-bike for work trips and 15% primarily used AT for community trips
MOTI E-Bike Infrastructure Study (2020)	<p>Recommendations:</p> <ul style="list-style-type: none"> • Establish cycle classification and regulation • Provide charging infrastructure at end-of-trip facilities • Improve security at parking facilities and ensure that larger cargo e-bikes will fit • Evaluate existing trails for opportunities to develop longer distance infrastructure • Expand Scrap-It or introduce other rebate programs • Establish connections with local cycling groups to adapt to changing e-bike market
Internal Research on E-Bike Employee Purchase Incentive Programs	<ul style="list-style-type: none"> • Low- or no-interest loans granted to certain groups (homeowners in Nelson, School District 8 employees) paid back through paychecks or utility bills • Vancity also offers a low interest e-bike loan
Internal Preliminary Research on E-Bike Market Size	<ul style="list-style-type: none"> • A paper by Alex Bigazzi on the local e-bike market estimated sales of e-bikes at 4–28 per 1000 population for Victoria and Vancouver (varying by geography and year). • Federal import data can be used to somewhat approximate the size of the Canadian market, though the sales code for e-bikes also includes electric motorcycles and e-scooters. This code shows import value (not sales value) of approximately \$350M.

External Sources

Research	Summary
Saanich Feasibility Study for Community E-Bike Incentive Pilot	<ul style="list-style-type: none"> • Primary local barrier to e-bike adoption was found to be upfront cost • Economic models evaluating the impact of different incentive levels were used to design a program that reduces free-ridership and achieves cost-effective GHG reductions. • Heavily based on research by Dr. Alex Bigazzi of UBC

	<ul style="list-style-type: none"> • Pilot would target 300 participants, would cost \$215,600 plus staff time and in-kind • GHG reductions are estimated to be between 1,000-2,000 tons
Alexander Bigazzi & Elmira Berjisian (2021) Modeling the impacts of electric bicycle purchase incentive program designs , Transportation Planning and Technology, 44:7, 679-694, DOI: 10.1080/03081060.2021.1956806	<ul style="list-style-type: none"> • Flat rebates are more effective and equitable than proportional rebates • Recommends tiering flat rebates to income level to improve program equity • E-bike rebate programs are expected to be oversubscribed, programs impacts increase proportionally with budget. • Incentive programs improve access for lower-income users
Saki Aono & Alexander Bigazzi (2018) British Columbia Electric Bicycle (E-Bike) Market Review . REACT (Research on Active Transportation) Lab, University of British Columbia.	<ul style="list-style-type: none"> • There is significant potential for growth of e-bikes • Data on sales, ownership, and usage is a challenge—ownership appears to be concentrated in middle-aged and high-income demographics • Supporting the development of general cycling facilities encourages the adoption of e-bikes and can widen the demographic of riders
Berjisian, E., & Bigazzi, A. (2019). Summarizing the Impacts of Electric Bicycle Adoption on Vehicle Travel, Emissions, and Physical Activity . REACT (Research on Active Transportation) Lab, University of British Columbia.	<ul style="list-style-type: none"> • Existing evidence suggests that on average each additional e-bike adoption will reduce around 2,000 vehicle-kilometers travelled per year, yielding a net reduction of 460 kg per year in CO2 emissions and a net increase of 21 minutes per week of physical activity. • On average, 44% of e-bike trips replace car trips. Around 39km of driving per week is displaced by the average e-bike adopter.
E-Bike Incentive Programs in North America Tracker (Excel table of all programs here)	<ul style="list-style-type: none"> • The project lead identified Saanich, BC as demonstrating an especially promising model. Their "targeted universalism" approach sets appropriate incentive levels for various income brackets, helping those who need it most with the largest incentives. • Most programs appear to set their incentive levels fairly arbitrarily. Many were based on a function of funding available and desired number of incentives, while many others were seemingly based on the \$200 precedent set early on by Burlington Vermont.
McQueen, M., MacArthur, J., & Cherry, C. (2019). How E-Bike Incentive Programs are Used to Expand the Market . Transportation Research and Education Centre, Portland State University.	<ul style="list-style-type: none"> • Experience-based education is an important tool to increase participation. • Strategic partnerships can provide advantages for program leaders, participants, and vendors, especially with regards to communications and marketing • Pre-approved preferred vendors can provide participants with a trusted resource and a quality product, ensuring a positive experience throughout the e-bike's lifetime. • Inventive sources of funding such as new toll-road revenue can reduce the burden on local governments to fund such programs.

Attachment 1. Stakeholder Engagement Summary

Development of a new e-bike incentive program option is underway, and stakeholder consultation is an important aspect of ensuring that recommended programs are viable and consider the needs of all users. Program staff began meeting with stakeholders at the end of March as laid out in the Stakeholder Engagement Strategy. Feedback included in this document is from the following stakeholders:

Stakeholder	Representatives
Ministry of Energy, Mines, and Low-Carbon Innovation (EMLI) – Clean Transportation Branch	Daniel Clancy, Policy Analyst Henry Lee, Policy Analyst Audrey Aubertin, Policy Analyst
E-bike researchers	1. Dr. Alex Bigazzi, UBC 2. Dr. Meghan Winters, SFU
Indigenous and local governments	s. 13, s. 16
Accessibility community groups	s. 13
Cycling advocacy groups	
Seniors representatives	
Cycling Industry	

Key Takeaways by Topic Area

Program Delivery

- Provincial Delivery: Provincial/centralized delivery is preferred over funding municipal delivery due to lack of funding, capacity, and political will at municipal level leading to spotty coverage (All stakeholders):

s. 13, s. 16

s. 13, s. 16

Broader Context

- MVA Update: Update the MVA to clarify definition of e-bikes and what they're allowed to do, consider a classification system. Consider expanding to additional forms of micromobility beyond ebikes. s. 1
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