


AGENDA INFORMATION	
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	GMJ	
Dept. Manager	GM/ Director	CAO

The District of North Vancouver REPORT TO COUNCIL

May 24, 2023
File: 16.8620.01/024.000

AUTHOR: Brendon James, TDM Coordinator, Transportation Engineering

SUBJECT: Electric Cargo Utility Bike Lending Program Update

RECOMMENDATION:

THAT Council direct staff to fund an electric cargo and utility bike lending pilot program that is facilitated by a third-party vendor for a total net cost of \$50,000, with funding from the Transportation and Mobility Reserve.

REASON FOR REPORT:

On March 11th, 2023, Councillor Back proposed a motion to Council that directed staff to investigate the feasibility of an electric cargo and utility bike lending pilot program. This report presents the findings and the feasibility of launching an electric cargo and utility bike lending pilot program in the District of North Vancouver.

SUMMARY:

Council directed staff to report back on the feasibility of an electric cargo and utility bike lending pilot program that is facilitated by the NVDPL.

Staff have determined that the program could be delivered by the NVDPL with training, a procedural framework, and technical support from a local bicycle shop. However, given the risk and liability implications that are involved in being the administrator of such a program, staff recommend outsourcing this program to a third party to facilitate administration of program activities.

The City of North Vancouver is presently engaged in the development of an analogous e-cargo bike program and intends to release a formal Request for Proposals (RFP) to solicit a third-party program administrator for their initiative. In light of this, staff has proposed that the District of North Vancouver (DNV) be included as an additional program funder in the event that Council opts to delegate the program administration to an external party.

Additionally, budget approval is required to implement the program within the stated timelines.

BACKGROUND:

E-cargo bikes are electric bikes that have the ability to carry cargo, including groceries and children, with relative ease. There are different variations of e-cargo bikes, including Front-Loaders (Fig 1), Longtails (Fig 2), and Trikes (Fig 3). E-cargo bikes are particularly suitable for hilly terrain, such as in the District of North Vancouver, due to their electric drive train that makes cycling easier.



Fig. 1



Fig. 2



Fig 3

By launching an electric cargo and utility lending bike program through the NVDPL, additional District residents would have access to these types of bikes and an opportunity to see how they could fit into their day-to-day life.

Existing Programs

Several e-bike, e-cargo bike and bicycle lending programs are currently in operation in the USA and Canada, but none at the District to date. **APPENDIX A** provides an overview of similar programs.

EXISTING POLICY:

By promoting the uptake of e-bikes, an e-cargo bike utility lending program would align with our Official Community Plan (OCP), OCP Action Plan, Transportation Plan, and the Community Energy and Emissions Plans (CEEP), as outlined below:

Official Community Plan: The District's OCP Part 1, Section 5.3, page 46¹, entitled 'The Bicycle Network, could be complemented by an e-bike incentive pilot program within the DNV'.

Transportation Plan: The DNV Transportation Plan notes several goals that could be further complimented by this pilot program² including supporting shift away from the use of single occupancy vehicles in the district. The electric drive train technology and cargo capacity help to enable this form of cycling to replace trips otherwise taken by single occupancy vehicles.

Community Energy and Emissions Plan: The CEEP was approved by Council on December 2, 2019, with the hopes of taking steps to becoming an energy efficient community. There is a reference in the CEEP to contribute to improved transportation, noting that 52% of DNV emissions originate from transportation. In part, the CEEP references the Transportation & Land Use Strategy #4, to support e-Bike adoption (purchases, bike share, & charging infrastructure, which can be found on page 41 of the document.³

ANALYSIS:

This program will provide residents access to a fleet of e-cargo bikes, in a variety of styles for a loan period of approximately one week. The bikes will be dispatched from the Lynn Valley Library or

¹ https://www.dnv.org/sites/default/files/edocs/Interactive_OCP_7900_Adopted_June_27_2011.pdf

² [transportation-plan.pdf \(dnv.org\)](#)

³ <https://www.dnv.org/sites/default/files/edocs/Community-Energy-Emissions-Plan.pdf>

another convenient location in the District. Residents with a valid library card will be able to book the e-cargo bike at no cost, using an online portal or by phone.

Staff have developed two different options for program facilitation:

Option 1 – Program Delivered by NVDPL (Not Recommended)

Staff have determined that the program is feasible and could be delivered by the NVDPL with training, a procedural framework, and technical support from a local bicycle shop. Overall, this approach would require program materials and additional training be provided to library staff before commencing the program, to convey essential technical knowledge.

- E-cargo bike management: The NVDPL staff will be responsible for managing the fleet of District owned e-cargo bikes for the program.
- Safety and Maintenance: A third-party vendor will provide the necessary safety inspections and maintenance of the bike fleet through a regular maintenance and service agreement.
- Online booking system: The NVDPL will manage the booking of bikes, and waitlists through their existing catalogue and website.
- Customer support: The NVDPL staff will handle customer inquiries, facilitate liability waiver completion, damage deposits, assist with bookings, and provide general support related to the program. They should have dedicated staff available to respond to residents' questions or concerns in person or via phone, and email.
- Safety orientations: The NVDPL staff will conduct safety orientations for users before they pick up the e-cargo bikes. This ensures that residents are properly informed about safe bike handling practices, compliance with regulations, and any specific instructions related to the e-cargo bikes.
- Reporting and analytics: The NVDPL staff will provide regular reports to the District of North Vancouver, including usage data, user feedback, and any maintenance or operational issues. These reports will enable the District to evaluate the program's success and make informed decisions for future enhancements.

North Vancouver District Public Libraries are low-barrier, equitable, and easily accessible hubs that are well-positioned to facilitate community-support initiatives. However, this option poses a higher level of liability/risk to the District of North Vancouver and so is not recommended.

Option 2 – Program Delivered by Third Party (Recommended)

Staff recommend engaging a third-party vendor through an RFP process to facilitate the program on behalf of the District of North Vancouver. Staff will stipulate that the dispatching and receiving of e-bikes be conducted from NVDPL Library locations. This vendor should have experience in managing bike-sharing programs and be capable of handling the following aspects:

- E-cargo bike management: The third-party vendor will be responsible for managing the fleet of District owned e-cargo bikes for the program. They will ensure the bikes are in good working condition, regularly serviced, and available for borrowing by residents.
- Online booking system: The vendor will manage an online platform that enables residents to easily book the e-cargo bikes. The system should allow users to check bike availability,

choose their desired bike style, take damage deposits and sign online liability waivers. This booking system will be available through the NVDPL website and catalogue.

- Customer support: The vendor will handle customer inquiries, assist with bookings, and provide general support related to the program. They should have dedicated staff available to respond to residents' questions or concerns via phone, email, or chat.
- Safety orientations: The third-party vendor will conduct comprehensive safety orientations for users before they pick up the e-cargo bikes. This ensures that residents are properly informed about safe bike handling practices, compliance with regulations, and any specific instructions related to the e-cargo bikes.
- Reporting and analytics: The third-party vendor will provide regular reports to the District of North Vancouver, including usage data, user feedback, and any maintenance or operational issues. These reports will enable the District to evaluate the program's success and make informed decisions for future enhancements.

By engaging a specialized third-party vendor, the District of North Vancouver can benefit from their expertise in managing bike-sharing programs as well as a mitigation of the risk and liability to the District and so is not recommended.

LIABILITY/RISK:

Operating an Electric Cargo Utility Bike Lending Program necessarily entails certain liability risks that arise when bicycles from the Program are operated on District roads, including possible property damage and the potential for significant personal injuries. Theft is also a risk in this program. To mitigate program risks, it is recommended that the operator of the E-cargo bike be at least 19 years old so that they can sign a legally binding liability waiver which will provide some measure of protection against lawsuits. It should be noted that waivers are not a complete answer as they do not prevent the District from being named in a lawsuit and may be challenged in court. Well-crafted waivers may, however, discourage the person who signed it from proceeding with a lawsuit and educate the person about potential risks of the activity.

The risks of the Electric Cargo Utility Bike Lending Program should be managed through program design and use of avoidance, loss reduction and risk transfer techniques, which may reduce the likelihood of loss occurring and severity of loss. Recommendations to manage the pilot program risks:

- Restricting the age of e-cargo bike operators to 19 years or older
- Requiring each user to agree to and sign a Bike Use and Liability Waiver Agreement.
- Meeting the definition of Motor Assisted Cycle in the Motor Vehicle Act and the Motor Assisted Cycle Regulation criteria.
- Providing training, education, and orientation to each user
- Providing a bike helmet and bike lock to each user
- Stipulating where e-cargo bikes can be used (for example, e-cargo bike cannot be operated on roads where maximum speed limit exceeds 50km/hr)
- Establishing documented regular maintenance and inspections of the e-cargo bikes
- Monitoring the pilot program closely and actively soliciting feedback from users, vendor or service provider and making necessary adjustments along the way
- Improving cycling infrastructure, such as bike routes, bike paths, bike lanes, paved surfaces, low angled grades, bicycle boxes at intersections, way-finding signage, and street lighting

If a third-party vendor is engaged, the risk arising from vendor's or service provider's operations can be contractually transferred to the vendor or service provider. The District's general liability insurance policy should be used as the last option to manage the program risk.

Minimum Program Requirements:

The recommended minimum program requirements for participants are that users must:

- be 19 years or older and produce a valid government photo ID,
- have a valid library card,
- provide a credit card to pay a refundable security deposit,
- complete a Bike Use and Liability Waiver Agreement,
- complete an on-site safety orientation.

During program operation, staff will monitor progress and make changes to program structure, minimum requirements or workflow.

Safety and Maintenance

Establishing a regular maintenance and inspection schedule is crucial to the effective operation of this program. In addition to regularly scheduled maintenance, each bike must be inspected before lending it out to participants. Other considerations for safety and maintenance include, but are not limited to:

- Maintenance and inspection records for each e-cargo bike must be kept on file.
- Regular maintenance and inspections must be documented by a qualified service technician.
- All e-bikes must have a working warning bell.
- Helmets must be available for borrowing/check-out (free of charge).
- Bike locks must be available for borrowing/check-out (free of charge).

Purchasing:

Purchasing has indicated that the RFP and equipment procurement process could take up to 4-8 weeks to complete.

TIMING/APPROVAL PROCESS:

Staff anticipate that the originally proposed launch of this program this summer is not achievable. The program launch date is expected to be Spring 2024, however this would be dependent on the successful vendors timeline requirements to operationalize following contract award.

Staff expect that the program will be operated during spring and summer months:

- **Year 1:** April 1 – September 30th, 2024.
- **Year 2:** April 1 – September 30th, 2025.

CONCURRENCE:

Staff have sought guidance from other internal stakeholders, including Risk Management, Legal, Communications, Finance, and the NVDPL.

FINANCIAL IMPACTS:

Staff recommend a phased approach by purchasing up to three (3) e-cargo bikes during the first calendar year of the pilot and adding up to two (2) additional (different style) e-cargo bikes in the second calendar year. There are funding opportunities available from the Provincial Government (up to \$1,700 per bike) through the SUVIBC funding grants (www.suvibc.ca).

If Council chooses to develop and fund an electric cargo and utility bike lending pilot program is facilitated by the NVDPL, estimated costs for the program are **\$41,600**, which includes an equipment buy back at the end of the pilot program. This option is not recommended due to the increased liability/risk to the District relative to a 3rd party facilitator.

If the Council decides to allocate funds for a pilot program that involves lending electric cargo and utility bikes through a third-party facilitator, it is anticipated that there will be additional expenses associated with program administration. The exact amount of these costs cannot be determined until a formal Request for Proposals (RFP) is released, and proposals are received. Staff suggest establishing a program budget limit of **\$50,000**. Through the Transportation and Mobility Reserve, and recommend engaging with a 3rd party facilitator to administer the Electric Cargo Utility Bike Lending Program.

ENVIRONMENTAL IMPACT:

The transportation sector is responsible for approximately 52% of the district's territorial greenhouse gas (GHG) emissions that contribute to climate change. However, e-bikes have low to no GHG emissions since they run on renewable, low carbon electricity, which can help reduce GHG emissions that would otherwise be generated by trips from fossil fuel-powered vehicles.

PUBLIC INPUT

Should the incentive program be approved, staff will work with the Communications Department on a targeted communications plan to raise awareness about the program.

CONCLUSION:

In conclusion, the proposed electric cargo and utility lending bike pilot program has the potential to positively impact the community's health and social wellness by expanding the number of trips that can be completed by active modes and reducing greenhouse gas emissions generated by fossil fuel-powered vehicles. However, it is important to consider the necessary safety and maintenance measures, liability risks, financial impacts, resourcing, and timing/approval process before launching the program. Council should weigh these factors carefully and consider directing staff to develop and fund the program or not pursue its development. As a result, staff recommend:

1. THAT Council instructs staff to allocate funding for an electric cargo and utility bike lending pilot program, to be facilitated by a third-party vendor.

Respectfully submitted,



Brendon James,
TDM Coordinator, Transportation Engineering

REVIEWED WITH:			
<input type="checkbox"/> Business and Economic	_____	<input type="checkbox"/> Finance	<u>X</u>
<input type="checkbox"/> Bylaw Services	_____	<input type="checkbox"/> Fire Services	_____
<input type="checkbox"/> Clerk's Office	_____	<input type="checkbox"/> GIS	_____
<input type="checkbox"/> Climate and Biodiversity	_____	<input type="checkbox"/> Human Resources	_____
<input type="checkbox"/> Communications	<u>X</u>	<input type="checkbox"/> ITS	_____
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Parks	_____
<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Real Estate	_____
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Review and Compliance	_____
<input type="checkbox"/> Engineering Operations	<u>X</u>	<input type="checkbox"/> Solicitor	<u>X</u>
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> Risk Management	<u>X</u>
<input type="checkbox"/> Facilities	_____		
		External Agencies:	
		<input type="checkbox"/> Library Board	_____
		<input type="checkbox"/> Museum and Archives	_____
		<input type="checkbox"/> NSEM	_____
		<input type="checkbox"/> NS Health	_____
		<input type="checkbox"/> NVRC	_____
		<input type="checkbox"/> RCMP	_____
		<input type="checkbox"/> NVDPL	<u>X</u>

APPENDIX A

Madison Public Library in Wisconsin:

Madison Bicycle Community Pass Program: Madison Bicycle has partnered with the Madison Public Library Foundation to launch its Community Pass Program, which allows riders to use their Madison Public Library card to access over 300 electric bikes. The foundation has funded the available Madison Bicycle passes and purchased helmets for the program. Madison Bicycle is managing the liability. More information on this program is available [here](#).

Avon Lake Public Library in Ohio:

Borrow a Bike (non-electric bikes): Funded by interest earned on the Avon Lake Public Library Endowment Fund, this program allows library card holders to borrow a bike with their valid library card for one day. Borrowers must be 18 years or older, wear a helmet, and sign a library bike agreement. Bikes cannot be placed on hold. More information on this program is available [here](#).

Markham Public Library in Ontario:

Bicycle Lending Library (e-bikes and regular bikes): In partnership with Markham Cycles, users can borrow a bike and other bike-related accessories using a Markham Public Library card. The program may be seasonal, and borrowers must complete a Markham Public Library's Special Collections Agreement with Markham Cycles before borrowing a bike. More information on this program is available [here](#).

Newmarket Public Library in Ontario:

Bicycle Lending Library (e-bikes, adult tricycles, youth-size bikes, and smaller adult-size bikes): Using a Newmarket Public Library card, borrowers can sign out a bike and a helmet for a two-week period at the Newmarket Cycles community hub and not at the Newmarket Public Library. Items are not holdable or renewable and are on a first come-first-serve basis. More information on this program is available [here](#).

Hamilton Public Library in Ontario:

Start the Cycle (regular bikes for kids): The Start the Cycle bike share pilot was implemented at two Hamilton Public Library branches in Ontario. The program was a two or three-month pilot in 2015 where kids aged 7 to 15 could borrow a regular bike (not an e-bike). More information on this program is available [here](#).