To: Finance and Intergovernment Committee

From: Raymond Kan, Regional Planner II, Parks, Planning and Environment

Date: September 25, 2018

Subject: TransLink Application for Federal Gas Tax Funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization

RECOMMENDATION
That the MVRD Board:

a) approve $142.10 million in funding from the Greater Vancouver Regional Fund for the following transit projects proposed by TransLink in its Application for Federal Gas Tax funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization as attached to the report dated September 25, 2018, titled “TransLink Application for Federal Gas Tax Funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization”:
   i. Project 1 – Year 2020 Double Decker Diesel Bus Purchases for Fleet Replacement
   ii. Project 2 – Year 2020 Conventional 60-ft Hybrid Bus Purchases and 40-ft Battery Electric Bus Purchases for Fleet Expansion
   iii. Project 3 – Year 2020 HandyDART Vehicle Purchases for Fleet Replacement
   iv. Project 4 – Year 2020 HandyDART Vehicle Purchases for Fleet Expansion
   v. Project 5 – Year 2020 Community Shuttle Vehicle Purchases for Fleet Expansion

b) direct staff to undertake a review of the Federal Gas Tax Fund Expenditures Policy, in consultation with TransLink and the Union of British Columbia Municipalities, and to report back to the Finance and Intergovernment Committee in 2019 with findings and, where appropriate, recommendations.

PURPOSE
To present for MVRD Board consideration TransLink’s request for federal gas tax funding from the Greater Vancouver Regional Fund (GVRF) under Metro Vancouver’s Federal Gas Tax Fund Expenditures Policy (GVRF Policy) and seek Board approval to undertake a review of the Greater Vancouver Regional Fund policy.

BACKGROUND
TransLink is requesting approval of five projects for federal gas tax funding from the GVRF to expedite the delivery of new transit vehicles beginning in 2020. On September 24, 2018, Metro Vancouver received TransLink’s application for $142.10 million in GVRF funding for five projects. The Metro Vancouver Regional District Board has approval authority over requests for GVRF funding, including scope changes. Since adopting the GVRF Policy in May 2016, the MVRD Board has approved approximately $394 million in GVRF funds to TransLink for eligible regional transportation projects. Continuous investment in the expansion and modernization of the transit fleet is crucial to the achievement of the Board’s regional growth management, environmental, and economic objectives. The Union of British Columbia Municipalities holds the federal gas tax funds in a special account, and transfers the funds to TransLink upon formal notification by the MVRD Board of its approval.
With nearly three years of experience implementing the GVRF policy and given the expectation that the GVRF will remain a major source of funding for transit fleet investments over the coming decade, it is an appropriate time to review the policy with TransLink and the Union of BC Municipalities.

This report presents TransLink’s request for federal gas tax funding from the Greater Vancouver Regional Fund (GVRF) under Metro Vancouver’s Federal Gas Tax Fund Expenditures Policy (GVRF Policy) and seeks Board approval to undertake a review of the Federal Gas Tax Fund Expenditures Policy.

GREATER VANCOUVER REGIONAL FUND POLICY REQUIREMENTS
The GVRF Policy sets out the application process, information requirements, and evaluation criteria to respond to TransLink’s request for GVRF funding. The GVRF Policy sets out the expectation for the MVRD Board to issue a call for proposals on an annual basis by April 1. The deadline for TransLink to submit final proposals is September 1. The MVRD Board would make its decisions by November 30. Notwithstanding the prescribed process, Metro Vancouver has accommodated TransLink’s desire to be flexible when submitting applications for new projects or scope changes. Under the GVRF Policy, TransLink is also responsible for providing semi-annual reports on active projects funded through the GVRF to the MVRD Board. The 2018 semi-annual report as at June 30, 2018 is provided under separate cover in the October 12, 2018 Finance and Intergovernment Committee agenda. Additional context about the Federal Gas Tax Administrative Agreement and the GVRF Policy can be found in Appendix A; recently approved GVRF applications are summarized in Appendix B.

PROPOSED PROJECTS
TransLink is seeking approval for five projects totaling $142.10 million in GVRF funding. The fleet expansion projects (Projects 2, 4, and 5) fulfill a large portion of the transit vehicle expansion commitment set out in the 2018 Phase Two Investment Plan. Projects 1 and 3 will replace aging highway coach buses and HandyDART vehicles, respectively. Details about costs, GVRF funding amounts, and deployment are described in the tables below. Please note that Project 2, even though it comprises two different bus types, is being managed by TransLink as one procurement order.

Project Description

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Vehicles</th>
<th>Total Cost ($ millions)</th>
<th>Prior Approved GVRF Funding ($ millions)</th>
<th>2018 GVRF Funding Request ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2020 Conventional (Double Decker) Bus Purchases for Modernization</td>
<td>25 double decker diesel buses</td>
<td>32.32</td>
<td>0</td>
<td>29.08</td>
</tr>
<tr>
<td>2. 2020 Conventional 60’ Hybrid and 40’ Battery Electric Bus Purchases for Expansion</td>
<td>62 60-ft hybrid buses, 6 40-ft battery electric buses</td>
<td>109.00</td>
<td>0</td>
<td>103.55</td>
</tr>
<tr>
<td>3. 2020 HandyDART Vehicle Purchases for Modernization</td>
<td>42 gasoline vehicles</td>
<td>6.45</td>
<td>0</td>
<td>6.13</td>
</tr>
<tr>
<td>4. 2020 HandyDART Vehicle Purchases for Expansion</td>
<td>10 gasoline vehicles</td>
<td>1.60</td>
<td>0</td>
<td>1.44</td>
</tr>
</tbody>
</table>
Project Deployment
TransLink is currently preparing a service plan for the 2020 service expansion, which will identify the specific annual service hours associated with each vehicle type, and the routes to which the vehicles will be deployed.

<table>
<thead>
<tr>
<th>Project</th>
<th>Service Initialization / End of Service</th>
<th>Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2020 Conventional (Double Decker) Bus Purchases for Modernization</td>
<td>2020/2036</td>
<td>• Highway coach routes</td>
</tr>
</tbody>
</table>
| 2. 2020 Conventional 60’ Hybrid and 40’ Battery Electric Bus Purchases for Expansion | 2020/2037                               | • The 60-ft buses will be deployed on new B-Line routes, on routes providing service maintenance during major project construction activities, and on other corridors to improve service levels
• The battery electric buses will likely operate on route 100 (22nd St Station in New Westminster / Marpole Loop in Vancouver) |
| 3. 2020 HandyDART Vehicle Purchases for Modernization                 | 2020/2027                               | • Region-wide deployment             |
| 4. 2020 HandyDART Vehicle Purchases for Expansion                     | 2020/2027                               | • Region-wide deployment             |
| 5. 2020 Community Shuttle Purchases for Expansion                     | 2020/2025                               | • Region-wide deployment             |

METRO VANCOUVER STAFF ANALYSIS
A summary of staff’s analysis is presented below.

Application Completeness and Screening Criteria. TransLink’s application meets the application information requirements and screening criteria.

Integrated Criteria Evaluation. The application represents a significant contribution towards the transit service expansion commitments set out in the 2018 Phase Two Investment Plan. It is recognized that expansion of transit vehicles powered by fossil fuels will generally lead to an absolute increase in transit-related tailpipe emissions. Improved service levels and expanded capacity could encourage greater modal shift from personal vehicles, thereby reducing transportation emissions associated with the light duty vehicle fleet. The proposed fleet expansion is expected to achieve 50% of the total service expansion set out in the 2018 Phase Two Investment Plan.

The expansion battery electric buses are consistent with TransLink’s Low Carbon Fleet Strategy and efforts to move towards zero emissions transportation technologies. It should be noted that the MVRD Board approved $6.9 million in GVRF funds in April 2017 for four battery electric buses and
one on-route charging unit for evaluation as part of a national battery electric bus pilot program. The expansion battery electric buses are not part of the pilot as they will go into service approximately 16 months after the start of the pilot in early 2019. TransLink’s portion of the project has increased from $7.9 million to $9.9 million. TransLink has secured $500,000 in funding from BC Hydro and will fund the remaining costs. TransLink does not intend to seek a scope amendment for the pilot project.

According to TransLink, the six expansion battery electric buses, potentially from different vendors, will help develop the in-operation knowledge more quickly related to reliability, maintenance requirements, and operational performance. If during the procurement process, the proposals from vendors do not meet TransLink’s expectations, TransLink maintains the option to revert the order to hybrid buses upon receiving approval from the MVRD Board for a scope change.

The application also modernizes highway-based buses and HandyDART vehicles. The double decker buses, based on seating capacity, will reduce emissions per full load passenger km by one-third compared to a comparable 40-ft highway coach bus. The new gasoline HandyDART vehicles will result in 44% less NOx emissions on a per kilometer basis compared to diesel engines used previously in these vehicles.

In the aggregate, the application is broadly consistent and supportive of the MVRD Board’s policies on regional growth management, air quality, and climate protection, as well as the Board’s interest in economic prosperity.

Summary of Evaluation Criteria
The application was evaluated in aggregate against the integrated criteria set out in the GVRF Policy.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>MV Staff Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible Project Category</td>
<td>Local roads and bridges, including active transportation, OR public transit</td>
<td>Meets criterion</td>
</tr>
<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement.</td>
<td>Meets criterion</td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects <strong>must be consistent</strong> with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Meets criterion</td>
</tr>
<tr>
<td>Corporate Policies</td>
<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions, and infrastructure.</td>
<td>Meets criterion</td>
</tr>
</tbody>
</table>

**Integrated Criteria: Regional Growth Strategy**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>MV Staff Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supports the Regional Growth Strategy</td>
<td>The degree to which the project assists in achieving the five goals in <em>Metro 2040</em>.</td>
<td>Excellent: Expansion vehicles will serve new B-Line corridors and enhance service elsewhere.</td>
</tr>
<tr>
<td>Urban Centres and Frequent Transit</td>
<td>Where applicable, the project is located in, or demonstrates tangible benefits to, the overall</td>
<td>Good: subject to performance monitoring as service expands, especially on the B-Line corridors.</td>
</tr>
</tbody>
</table>
TransLink Application for Federal Gas Tax Funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization

Finance and Intergovernment Committee Regular Meeting Date: October 12, 2018

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<tr>
<th>Criterion</th>
<th>Description</th>
<th>MV Staff Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development Areas</strong></td>
<td>performance of Urban Centres and Frequent Transit Development Areas.</td>
<td></td>
</tr>
<tr>
<td><strong>Integrated Criteria: Transportation Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headline Targets</td>
<td>Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share.</td>
<td>Good: subject to performance monitoring as service expands</td>
</tr>
<tr>
<td>Other Transportation Outcomes</td>
<td>Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project.</td>
<td>Good: subject to performance monitoring as service expands</td>
</tr>
<tr>
<td>Project Type</td>
<td>Demonstrated value of the project type.</td>
<td>Good: subject to performance monitoring as service expands</td>
</tr>
<tr>
<td><strong>Integrated Criteria: Regional Environmental Objectives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports the Integrated Air Quality and Greenhouse Gas Management Plan</td>
<td>Contributes to the achievement of one or more goals in the <em>Integrated Air Quality and Greenhouse Gas Management Plan</em>.</td>
<td>Good: modernizes and expands the transit fleet to capture more ridership and encourage modal shift from personal vehicles, and deploys zero emission battery electric buses. TransLink should explore low or zero-emission alternatives to gasoline-based HandyDART and Community Shuttle vehicles.</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project.</td>
<td>Good: subject to performance monitoring as service expands</td>
</tr>
<tr>
<td><strong>Integrated Criteria: Economic Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports Regional Prosperity</td>
<td>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity.</td>
<td>Good: modernizes and expands the transit fleet to encourage modal shift.</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Tangible beneficial effects on the movement of people and/or goods for the duration of the project.</td>
<td>Good: subject to performance monitoring as service expands</td>
</tr>
</tbody>
</table>

PROPOSED REVIEW OF THE GVRF POLICY
Since adopting the GVRF Policy in May 2016, the MVRD Board has approved approximately $394 million in GVRF funds towards eligible TransLink projects. Looking ahead, the 2018 Phase Two Investment Plan is forecasted to draw on $1.74 billion in GVRF funds through 2027. With nearly three years of experience implementing the policy and given the expectation that the GVRF will remain a major source of funding for transit fleet investments over the coming decade, it is an appropriate time to review the policy and determine which elements of the policy are working effectively, which elements may warrant updating to reflect current practice and the realities of coordinating between

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1 Since the inception of the federal gas tax transfer program in 2005, the region has reallocated nearly all its share – approximately $1.2 billion – to TransLink (as at June 30, 2018). Of this amount, $349 million have been applied to completed projects and $816 million have been obligated to active projects.
two regional agencies, and which elements may no longer be crucial for evaluating the projects. Staff would undertake the review in consultation with TransLink and the Union of British Columbia Municipalities. The areas for review may include the following, subject to the direction from the MVRD Board.

**Application Development and Review Process:** Metro Vancouver has been responsive and flexible in accommodating the timing of TransLink’s GVRF application submissions. The amount and quality of information contained in the GVRF applications have improved. However, a significant effort is still required to review, query, and confirm understanding of project details and upstream internal TransLink decisions.

- Does the current practice of preparing and reviewing GVRF applications reflect the prescribed process set out in the policy (i.e. notification from MVRD Board in the Spring; September 1 deadline for TransLink submissions)?
- What modifications could be made to the policy and application information requirements (i.e. screening and integrated criteria) to ensure a process that remains efficient, transparent, and responsive to the needs of both TransLink and Metro Vancouver?
- Should evaluation criteria be set out for the review of semi-annual reports?

**Measuring Beneficial Effects:** The policy includes a requirement to articulate the tangible beneficial effects of the projects relative to transportation, environmental, and economic development objectives. However, the policy did not specify methodologies or metrics for data collection and reporting out.

- Should the GVRF evaluation focus on the prospective effects of the projects only, rather than attempt to characterize or speculate on the post-implementation effects?
- What is the technical feasibility and resource requirements for TransLink and/or Metro Vancouver to quantify the beneficial effects?
- Does individual project monitoring make sense in light of the types of projects that are typically submitted – transit fleet replacement or expansion – or should monitoring be targeted on a regional basis for the entire regional transit system through established data collection means, such as the census and TransLink’s regional trip diary surveys and transit monitoring program?
- What are the appropriate metrics to describe the beneficial effects?

**Coordination with Mayors’ Council and TransLink Board:** Members of the MVRD Board have consistently expressed a desire to have more information about the capital planning process at TransLink, in particular on decisions related to bus technology.

- How might TransLink’s capital planning process be modified to accommodate the MVRD Board’s interest in the transit capital planning process?
- What are the opportunities to enhance the level of coordination between the MVRD Board, the Mayors’ Council, and TransLink Board on transit capital planning while ensuring efficiency and transparency of capital planning decisions?
- What are the staff resource and time requirements to support any enhanced interagency coordination efforts around transit capital planning?
ALTERNATIVES

1. That the MVRD Board:
   a) approve $142.10 million in funding from the Greater Vancouver Regional Fund for the following transit projects proposed by TransLink in its Application for Federal Gas Tax funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization as attached to the report dated September 25, 2018, titled “TransLink Application for Federal Gas Tax Funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization”:
      i. Project 1 – Year 2020 Double Decker Diesel Bus Purchases for Fleet Replacement
      ii. Project 2 – Year 2020 Conventional 60-ft Hybrid Bus Purchases and 40-ft Battery Electric Bus Purchases for Fleet Expansion
      iii. Project 3 – Year 2020 HandyDART Vehicle Purchases for Fleet Replacement
      iv. Project 4 – Year 2020 HandyDART Vehicle Purchases for Fleet Expansion
      v. Project 5 – Year 2020 Community Shuttle Vehicle Purchases for Fleet Expansion
   b) direct staff to undertake a review of the Federal Gas Tax Fund Expenditures Policy, in consultation with TransLink and the Union of British Columbia Municipalities, and to report back to the Finance and Intergovernment Committee in 2019 with findings and, where appropriate, recommendations.

2. That the MVRD Board endorse in principle the report dated September 25, 2018, titled “TransLink Application for Federal Gas Tax Funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization” and refer it to the Mayors’ Council on Regional Transportation for comment prior to final consideration by the MVRD Board.

FINANCIAL IMPLICATIONS

If the MVRD Board approves alternative one, the UBCM will be notified within seven business days of the Board’s decision to approve $142.10 million in GVRF funding for all of the projects in TransLink’s application. Under alternative one, staff will also initiate a review of the GVRF Policy in consultation with TransLink and the Union of British Columbia Municipalities, and return to the Finance and Intergovernment Committee in early 2019 with findings and, where appropriate, recommendations to improve the implementation of the policy. Financial implications of any modifications to the policy will also be identified.

If the MVRD Board approves alternative two, the Metro Vancouver report and recommendations, along with the TransLink application, will be forwarded to the Mayors’ council for comment prior to consideration by the MVRD Board.

SUMMARY / CONCLUSION

TransLink is requesting approval of five projects for federal gas tax funding from the GVRF totaling $142.10 million. The 87 expansion vehicles partially fulfill the fleet expansion commitments set out in the 2018 Phase Two Investment Plan, and the 67 replacement vehicles will help support the ongoing modernization of the transit fleet.
For the expansion projects, TransLink proposes to purchase 62 60-ft conventional hybrid buses, 6 40-ft battery electric buses, 10 HandyDART vehicles, and 9 Community Shuttles. The conventional hybrid buses will emit less air emissions in comparison to alternative diesel buses (on the order of 20%). The battery electric buses will emit zero emissions. The gasoline HandyDART vehicles have some emissions improvements over new diesel equivalents.

For the modernization projects, TransLink proposes to purchase 25 double decker buses to replace aging highway coach buses and 42 HandyDART vehicles to replace aging vehicles.

In the aggregate, the application is broadly consistent and supportive of the MVRD Board’s policies on regional growth management, air quality, and climate protection, as well as the Board’s interest in economic prosperity.

Since adopting the GVRF Policy in May 2016, the MVRD Board has approved approximately $394 million in GVRF funds towards eligible TransLink projects. Looking ahead, the 2018 Phase Two Investment Plan is forecasted to draw on $1.74 billion in GVRF funds through 2027. With nearly three years of experience implementing the policy and given the expectation that the GVRF will remain a major source of funding for transit fleet investments over the coming decade, it is an appropriate time to review the policy and determine which elements of the policy are working effectively, which elements may warrant updating to reflect current practice and the realities of coordinating between two regional agencies, and which elements may be redundant. Staff have outlined potential areas for review in this report should the Board direct staff to initiate a review in consultation with TransLink and the Union of British Columbia Municipalities.

For these reasons, staff recommend alternative one.

Appendix:
A. Background on Federal Gas Tax Administrative Agreement and Greater Vancouver Regional Fund Policy
B. Recent GVRF Application Approvals

Attachment: (Doc #26904044)
Application for Federal Gas Tax funding from the Greater Vancouver Regional Fund for 2020 Fleet Expansion and Modernization (dated October 4, 2018)
APPENDIX A

Background on Federal Gas Tax Administrative Agreement and Greater Vancouver Regional Fund Policy

Federal Gas Tax Administrative Agreement
The renewed Administrative Agreement on Federal Gas Tax Fund in British Columbia came into effect in April 2014. The Agreement sets out the roles and responsibilities of the federal government, provincial government, and UBCM for the administration of the Federal Gas Tax Fund. The Agreement also sets out the following:

- The GVRF pools 95% of the MVRD and its member municipalities’ per-capital allocation of federal gas tax funds to support regional transportation projects proposed for funding by TransLink.
- The MVRD Board must approve all eligible projects proposed by TransLink for funding.
- The MVRD must notify UBCM of the eligible projects that it has approved for funding, after which the UBCM may provide funding to TransLink.
- In order to receive GVRF funding, TransLink must sign a Funding Agreement with UBCM.
- The remaining 5% of federal gas tax funds is allocated among local governments in Metro Vancouver through the Community Works Fund.
- Requests for new projects, amendments to the scope of prior approved projects, and use of approved but unspent funds for other projects must receive approval from the MVRD Board.

Greater Vancouver Regional Fund Policy
On May 27, 2016, the MVRD Board adopted the Greater Vancouver Regional Fund Policy, which establishes the process and criteria for approving expenditures from the GVRF for regional transportation projects proposed by TransLink. The Union of British Columbia Municipalities (UBCM) holds the GVRF monies in trust, and transfers the requested amount of funds to TransLink only upon notification by the MVRD Board of its approval. The GVRF Policy sets out the application process, information requirements, and evaluation criteria to respond to TransLink’s request for GVRF funding. Under the Policy, the MVRD Board will issue a call for proposals on an annual basis by April 1. The deadline for TransLink to submit final proposals is September 1. The MVRD Board makes its decisions by November 30.
APPENDIX B

Recent GVRF Application Approvals

A summary of recent GVRF applications approved by the MVRD Board is provided below.

- September 23, 2016 – the MVRD Board approved $127.182 million in GVRF funds to TransLink for nine projects comprising replacement transit fleet vehicles only (84 community shuttles, 75 HandyDART vehicles, and 238 conventional buses). These projects were consistent with TransLink’s 2014 Base Plan and Mayors’ Council Transportation and Transit Plan.

- April 28, 2017 – the MVRD Board approved $121.280 million in GVRF funds to TransLink for six projects comprising expansion transit fleet vehicles, four battery electric buses for a pilot program, and equipment for deferred retirement of transit vehicles.

- July 28, 2017 – the MVRD Board approved scope changes and $24.210 million in additional GVRF funds to TransLink for three projects approved in 2016. The scope changes involved the purchase of conventional CNG and hybrid buses, rather than conventional diesel buses.

- October 27, 2017 – the MVRD Board approved $121.150 million in GVRF funds to TransLink for seven projects comprising expansion and replacement transit vehicles.

- March 23, 2018 – the MVRD Board approved a scope change to one project approved in 2017. The scope change involved procuring five 60-ft hybrid buses in lieu of seven 40-ft hybrid buses. There was no change to the previously approved GVRF funding amount of $7.29 million.

- As of June 30, 2018, the balance in the GVRF was $309.699 million.