Report of the
Regional Transportation Commissioner
on
TransLink's 2010 10-Year Plan

August 31, 2009

Table of Contents

Mayor Dianne Watts
Chair
Mayors' Council on Regional Transportation
delivered via email

Mr. Dale Parker
Chair
Board of Directors
South Coast British Columbia
Transportation Authority
delivered via email

August 31, 2009

Dear Mayor Watts and Mr. Parker:

Regional Transportation Commissioner's Report on the South Coast British Columbia Transportation Authority's 2010 10-Year Plan

I am pleased to submit the enclosed report as required by section 203 of the South Coast British Columbia Transportation Authority Act. The report gives my opinion on the reasonableness of the assumptions and parameters in the Authority's 2010 10-Year Plan.

Last year, my review of the 2009 10-Year Plan, which was a Base Plan only with no Supplemental Plans, was quite limited in nature. In contrast, this year's review, of the 2010 Base Plan and two Supplements, was a considerably deeper examination.

The Commission team and I are available to present the findings and recommendation to you in person, at your convenience.

Yours truly,

Martin Crilly
Regional Transportation Commissioner

P.O. Box 1497, Comox, British Columbia, V9M 8A2
Telephone (250) 339-2714
http://translinkcommission.org
martin.crilly@translinkcommission.org

1 Findings and Recommendations

TransLink's 2010 Ten-Year Plan

---

1. "Drastic Cuts"

Base Plan

- reduces transit service as TransLink will soon exhaust its cash reserves
- uses existing funding sources and
- existing borrowing limit ($2.8B)

---

2. "Funding Stabilization"

Supplement to Base Plan

- minimizes the above service cuts
- buys time for further planning and funding efforts
- needs +$130 M/yr above Base Plan from increases allowed in the Act and
- existing borrowing limit ($2.8B)

---

3. "Maintain and Upgrade"

Supplement to Base Plan

- strengthens existing services
- lays groundwork for future expansion (see scenario below)
- needs +$275 M/year above the Base Plan from sources in the Act, including a new vehicle levy, and
- borrows up to $3.9B

---

4. "On Track to a Sustainable Region"

Scenario

- takes the above "Maintain and Upgrade" as starting point
- dramatically expands rapid transit
- needs funding +$175 m/yr over the above *"Maintain and Upgrade"*: no revenue source is identified
- requires an approved supplement to form part of a Strategic Plan and
- borrows up to $6.5B

TransLink has submitted its 2010 Ten-year Plan. It contains an array of proposals for supplying transit services, delivering capital projects and mounting other initiatives, with projected revenues, expenditures and borrowing.

The purpose of this report is to advise the Mayors' Council, who may vote on the Plan in October 2009. It contains the Commissioner's opinion and insights on **whether the Plan is reasonable as to its parameters and assumptions**. Further, as decision maker on short-term fare increases, the Commissioner gives a preliminary view on **whether proposed fare increases in the Plan are reasonable and appropriate**.

In preparing this report, a Commission team inspected the Plan from several angles, asking questions like the following.

To what extent does TransLink's 2010 Ten-Year Plan:

- *feature all elements necessary to be considered legitimate under the South Coast BC Transportation Authority Act?*
- *rest on reasonable expectations about the overall economic outlook (e.g. regarding cost inflation, interest rates, and population growth)?*
- *use sound methods of forecasting travel demand and transit use?*
- *give clear expectations about TransLink's future operational productivity and use of inputs including labour, fuel, maintenance and transit vehicles, to meet travel demand?*
- *contain a logical, affordable capital expenditure programme and other initiatives supporting its planned delivery of service?*
- *appropriately and adequately address TransLink's non-transit responsibilities including roads, cycling, and goods movement?*

- *offer satisfactory evidence that any presumed future funding from senior governments can be relied upon?*
- *marry with Metro Vancouver's growth strategy, the Provincial Transit Plan, and TransLink's own Transport 2040 long range plan?*
- *leave TransLink solvent and financially sustainable?*

TransLink has been fully collaborative in opening its files and enabling the Commission team to tackle these and many other detailed questions about the Plan. Accordingly, the following findings rely on an examination of vastly more data and analyses than have been publicly released.

A General Observation on the Base Plan and Two Supplements

"Drastic Cuts" is **the default or Base Plan if the Mayors' Council does not approve a Supplement**. It is clearly unpalatable. The proposed cuts, drastic indeed if made today, would be much less so if TransLink had not, over the last several years, expanded service and invested in capital projects that it knew to be unaffordable under its existing funding constraints. These investments were made with the hope and expectation that senior governments would agree to bear a large portion of the operating costs, which they have not done.

This expansion of service has reduced the productivity of the bus network, with each increment of service costing more and carrying fewer riders, while fares increase. There is now available capacity—that is empty seats—on much, but not all, of the bus network which can accommodate future growth in ridership. At the same time, productivity on SkyTrain has improved, but the Expo Line is now becoming capacity constrained.

To some extent, the two Supplements to the Base Plan, "*Funding Stabilization*" and "*Maintain and Upgrade*" perpetuate these trends, although the latter does add capacity to the Expo Line.

"On Track…" expansion scenario: not a formal Supplement

A prominent feature of the *"On Track ..."* expansion scenario **is the gap of $175 million/year** in identified funding. This means that the scenario has no status as a Supplement to be approved or rejected under the Act. Furthermore, were funding sources to be identified and were it to be resubmitted in the form of a Supplement in a future year as currently prepared, even with the unpublished supporting material, the Commission would find it insufficiently detailed to support an evaluation of its reasonableness.

Underlying external economic assumptions are not unreasonable

The Plan options all make assumptions on future cost inflation, interest rates, diesel fuel prices, population growth, and other variables. The pace of **wage growth** strongly affects TransLink's total costs and is possibly understated in the Plan. On the revenue side, two large new assets—the **Golden Ears Bridge and Canada Line**—are just starting to earn revenue; the 10-year projections of customer traffic for them, representing up to 12% of Plan revenues by 2019, are much less predictable than for TransLink's long-established services.

If these variables conspire against TransLink it could be several hundred million dollars short by 2019 and, therefore, unable to deliver all the services, capital projects and other initiatives as planned. Nonetheless, the Commissioner is satisfied that TransLink is alert to the risks. It can propose adjustments as the future unfolds and as it gains more information, as the rolling ten-year plan is revisited annually. **Overall the underlying external economic assumptions are not unreasonable**.

Ridership forecasting is adequate, but is narrowly focussed

The Plan projects ridership of bus and rail transit under scenarios of both contraction and expansion. It employs **forecasting methods adequate to the task.** Missing, though, is a broader analysis of the region's transportation network as a whole and transit's performance within it. Evolutionary shifts are occurring in the powerful challenge presented to transit by private transport—the choice of most travellers—e.g. as to automobile ownership and usage, cost characteristics, electric propulsion, smart highways and innovations in mobile communications.

TransLink's view, judged realistic, is that the slow process of **urban densification** will not lift ridership much by 2019.

Demand management is not strongly featured

TransLink's ridership forecast assumes that **demand management measures** of both carrot and stick varieties will remain essentially unavailable in the short-term. The most important advances in this area, in the Commissioner's view, would be some form of road pricing (notably on highways in the hands of the Province) and a region-wide, coordinated policy for tighter management of parking (belonging to the municipalities).

In particular, the Plan does not propose potential win-win innovations such as varying vehicle levies and car licence and insurance premiums by annual distance driven, which would allow motorists to save money by driving less.

Leading to a costly supply-driven solution

Unaided by these potential boosts to its ridership, in order to capture a bigger market share, **TransLink relies on ramping up the supply of transit service**: it aims, in effect, to buy transit ridership with both taxpayers' and farepayers' money, and at a rapidly escalating incremental (and less affordable) cost for each extra rider.

Capital spending priorities make sense

If the supply-driven strategy must be taken as a given for the immediate future, the Commissioner **concurs broadly with the rigour of TransLink's business logic in establishing its top capital spending priorities**: to maintain services already operating, and to keep assets in a state of good repair. Only when these two priorities are met would TransLink upgrade existing services and expand without adding infrastructure, and then, as a last priority, build new projects.

Rapid transit decisions have belonged to senior governments

For the large, lumpy investments in the system's rapid transit corridors, to date the provincial and federal governments have determined the routes and the transit technology—perhaps because provincial and federal taxpayers pay massive capital subsidies towards them. Regional taxpayers and fare-payers are drawn into funding some initial capital, plus all of the operating and renewal costs. To date, TransLink has not been free to select its own optimum rapid transit configuration.

Commissioner concurs with TransLink's priority for upgrades ahead of the Evergreen Line

The Commissioner **concurs with TransLink's assigning of upgrades to the existing system as the first priority** for capital, ahead of network expansion such as the Evergreen Line, on grounds of sound business policy including the management of risks. Also, the Evergreen line's ridership performance is likely to be relatively weak.

That said, the issue is not clear-cut. A rapid transit terminus in the north-east has long featured in provincial and regional plans; a previous TransLink board committed to Evergreen as a priority after the just-built Canada Line; north-east municipalities' efforts to densify rested partly on trust of Evergreen's completion; it can be argued that such trust is unlikely to be forthcoming elsewhere in the region if past commitments to the north-east are unmet or greatly delayed. While acknowledging this political argument, the Commissioner is clear that, beyond offering the view in the preceding paragraph, he has no place in weighing political considerations against economic ones. That is the preserve of elected officials.

Broader Issues of Provincial-Regional Coordination

A hazard lies in the gulf that exists between provincial and regional transportation planning and financing for Metro Vancouver: **some potential solutions may not receive full consideration**. One such is a coordinated demand management programme, as earlier mentioned; another could be light rail networks in the European style, which are versatile and are intermediate between buses and SkyTrain in cost, coverage, performance, and which also influence long-term urban densification. Such systems have been considered by TransLink in the past, but the provincial government has chosen automated light rapid transit systems.

More orderly planning and delivery of an efficient and effective urban transport system might result if senior governments and TransLink worked to develop transparency and predictability regarding funding long term of transit capital projects and operating expenses.

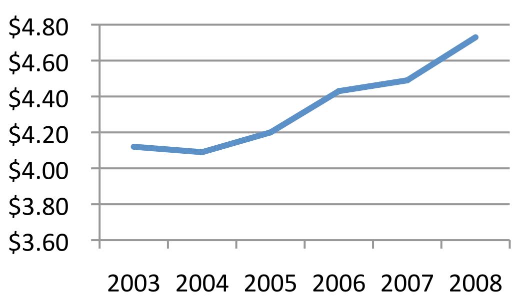
Preliminary Opinion on TransLink's proposed Fare Increases

The Plan (except for its Base level) seeks to **raise short-term[1] fares between 3 to 3.5% per year instead of the 2% per year permitted** in the Act, in four steps: on April 1 of 2010, 2013, 2016 and 2019.

The Commissioner:

- is reluctant to allow short-term fares to rise so quickly, without TransLink needing to return for approval for ten years (once given, approval cannot be retracted);
- notes that TransLink's average cost per vehicle-kilometer has increased 15% over and above the general rate of inflation (see chart), an increase that can only partly be explained by increases in fuel, security costs and maintenance costs as a result of more technology on buses;
- considers that TransLink should demonstrate diligence in cost containment as a condition of further approvals;
- expects changes before 2019 in government policy, technology, and other innovations to drive transit ridership, improve the utilization of TransLink's services and enhance its revenue picture; and
- wishes to be positioned to pass part of future productivity gains to fare-payers through lower-than-otherwise-required fare increases.

Transit Operating Cost per Service Kilometer
in constant 2002 dollars



Accordingly the Commissioner hereby gives a preliminary non-binding indication, as required in the Act, that TransLink's **proposed short-term fare increase at April 1 2010 may be appropriate and reasonable, but not necessarily in 2013, 2016 and 2019**.

Balanced funding test is met re: $0.03/litre fuel tax increase

The Act calls on the Commissioner to confirm that a balanced funding formula[2] is satisfied, respecting an allowed 3

[1] i.e. cash fares and prepaid ticket books, which put an effective per-trip cap on the monthly passes and other offerings in TransLink's tariff.

[2] The formula is detailed in the Act and amounts to testing that the above-2%/yr forecast dollar growth between 2009 and 2019 in non-fuel tax revenues is at least

cents per litre increase in fuel tax revenue for TransLink. The Commissioner hereby gives **notice that both of TransLink's proposed plan Supplements meet the test**, clearing the way for the extra fuel tax to be levied.

Relationship to Transport 2040 Goals is moot

Transport 2040: Six Long Range Goals

---

1 Greenhouse gas emissions from transportation are aggressively reduced, in support of federal, provincial and regional targets.

2 Most trips are by transit, walking and cycling.

3 The majority of jobs and housing in the region are located along the Frequent Transit Network.

4 Traveling in the region is safe, secure, and accessible for everyone.

5 Economic growth and efficient goods movement are facilitated through effective management of the transportation network.

6 Funding for TransLink is stable, sufficient, appropriate and influences transportation choices.

How far does the Plan go in attaining the six high-level goals of *Transport 2040: a Transportation Strategy for Metro Vancouver*? TransLink often referred to these goals in its Plan consultation, arguing that the higher-funded Plan levels would approach them faster. **The Transport 2040 goals are of limited value in assessing the Plan.** This is partly because vital tools for managing transportation and regional growth belong to other decision makers, and are not at TransLink's disposal. Success on achieving these goals relies on the collaborative and complimentary actions of other partners.

It is beyond the Commissioner's terms of reference to critique *Transport 2040*. However, he respectfully submits that it mixes ends, means and targets. It misses important strategies, such as increasing car occupancy and reducing vehicle miles travelled, to meet the region's aspiration to be sustainable, livable and resilient in an uncertain future.

As to the first and sole environmental goal of *Transport 2040*, to reduce greenhouse gas emissions aggressively, the Commissioner is concerned that TransLink left an impression, during its public consultations on the Plan, that the potential emission reduction benefits of higher levels of increased funding for TransLink versus lower levels, are far greater than a technical analysis indicates.

In addition to delivering public transit, TransLink invests in portions of the road network and in cycling infrastructure. Also, economic growth and goods movement appear in the *Transport 2040* goals. All of the Plan options contain funding for the Patullo Bridge; funding for other road capital and maintenance and cycling varies between the plans. Each Plan commits TransLink to the future development of a regional goods movement strategy. The Commissioner finds that none of the Plan options provide an integrated approach to roads, bridges, and cycling, nor do they adequately address TransLink's responsibility for economic growth and goods movement.

Financial Sustainability

The Commission team inspected the Plan's financial projections. Key findings are that:

---

twice the incremental fuel tax revenue forecast to flow from the tax for the year 2019.

- the most significant **risk factors** are: wage inflation, fuel tax revenues, senior government funding, Canada Line and Golden Ears Bridge revenues, and interest rates;
- if revenue and expenditure forecasts materialize, **TransLink will remain solvent** through the 2019 horizon, i.e. have an accumulated surplus above zero, for the first three funding levels of the Plan (but not for the unfunded *"On Track…"* scenario), provided that a higher borrowing limit is authorized under *"Maintain and Upgrade"*;
- there is an upward trend in the surplus towards the end of the decade for the first three levels of the plan, **indicating financial sustainability** (the *"On Track…"* trend is sharply down, and deemed unsustainable);
- the percentage of revenue consumed by debt service costs is currently 20%. By 2019, this figure grows to 23% for both "*Drastic Cuts"* and "*Maintain and Upgrade"* plans, cutting into TransLink's room to manage total costs. Under "*Funding Stabilization*" it declines somewhat to 19%. The figure for the unfunded *"On Track…*" scenario is much higher.

Summary of Findings

In summary, the Commissioner finds that:

- the *"On Track…"* expansion scenario, being unfunded, is not a legitimate supplement to be accepted or rejected under the Act; further, it lacks sufficient detail to be evaluated;
- underlying external economic assumptions in the Plan are not unreasonable although some factors do present risks;
- ridership forecasting is adequate (except for the *"On Track…"* scenario), but is narrowly focussed;
- the approach of adding supply to capture market share, in the absence of demand management policies to boost transit ridership, is increasingly costly, especially at the investment levels contemplated in *"On Track…"*;
- TransLink's capital planning priorities are rational, and its lower priority on the Evergreen Line is supportable;
- as a preliminary indication, Commissioner's approval is warranted for only the first of TransLink's four proposed short-term fare increases;
- the balanced funding formula is satisfied for the two supplements, allowing access to an additional 3 cents per litre fuel tax;

- as a plan parameter, the achievement of the Transport 2040 goals is of limited value in assessing reasonableness; and
- all plan levels except the *"On Track..."* scenario are financially sustainable, provided higher borrowing limits are authorized for the "*Maintain and Upgrade*" supplement.

Recommendations

The Commissioner recommends that the Mayors' Council and TransLink receive this report for their information.

There are three options of the Plan for the Mayors' Council to consider.

A. ***"Drastic Cuts"*** will apply, should the Council not approve either of the two Supplements. The forced rationalization of service under this option might improve TransLink's productivity, but at too high a cost of disruption to the region and destruction of transit customer loyalty. For this reason it is not recommended, unless keeping tax increases of any kind (including gas taxes) to the absolute minimum is the overriding consideration.

The choice between the other two levels depends on the appetite for higher taxes and levies on citizens, relative to perceived benefits. On this aspect the Commissioner makes no recommendation on the choices before the Council. They are:

B. ***"Funding Stabilization"*** which maintains today's level of service; buys some time for further planning and funding efforts; requires +$130 M/yr above Base Plan from existing sources; and uses the existing borrowing limit ($2.8B). It is worth noting that this is not simply an emergency option; it stabilizes service at a level much higher than a few years ago; and buys time for policy development between the region and the province; and

C. ***"Maintain and Upgrade"*** which strengthens existing services; lays groundwork for future expansion; needs +$275 M/year above the Base Plan from sources in the Act, including a new vehicle levy, and borrows up to $3.9B, which is beyond the existing limit. This option invests to improve the quality of the system but without a commitment to productivity increases. It is a preparatory and positioning option which might only pay off with future expansion.

Considerations for the Future

Finally, the Commissioner respectfully notes that there is now an important opportunity to dwell upon the lessons offered by today's prospect of funding shortfalls and potential service cuts, and upon the challenge of achieving goals in the current policy environment.

TransLink must find ways to bridge the gulf between system planning and system financing to ensure that it does not continue to live beyond its means; planned expansions in services and infrastructure must be accompanied by the revenues to support them.

The time for behaviour change has arrived

For fifteen or more years in Metro Vancouver, there have been calls for more transit service to be in place before behaviour-changing measures (especially pricing reforms—i.e. how transport is paid for, by whom and how much) are applied to influence travel choices. Looking back, one sees that ample expansions of transit service have indeed been made. The time has arrived for policy makers to follow through with carefully crafted measures to influence travel choices. If well-designed, these can improve the utilization of all forms of shared transport, notably public transit as provided by TransLink, control traffic congestion, and improve the overall efficiency of the urban system.

Parallel importance of pursuing land use strategy

Similarly, the region has long had a land use strategy in place to develop in a way that will support walking, biking and transit on a much broader scale than today. Achievement, however, of land use goals has been mixed, particularly with regards to the siting of employment. TransLink cannot significantly change these patterns by offering major expansions of service in low density areas but must rely on the region and its municipalities to do so using the more the effective and focused tools in their arsenals.

These things will only be accomplished through working cooperatively and constructively with the region, its municipalities and the province to develop a solid framework for mutual action to achieve shared goals.

• • •

2 Background

The South Coast British Columbia Transportation Authority Act, which was passed in the provincial legislature in November 2007, created a new governance structure for TransLink. The Act established a new Board of Directors, a Mayors' Council on Regional Transportation and a Regional Transportation Commission.

Under the Act, TransLink must produce long term and strategic plans. The Act also requires TransLink to consult with the public and stakeholders as these plans are created. The Act specifies key milestones in the development of these plans, including fixed dates for review and adoption.

1. Long Term Strategy

Plans and Approvals

1. 30+ Year Strategy
- Act requires "Long Term Strategy"
- must be updated every 5 years
- must be approved by Board
- reviewed by Mayors' Council
- *Transport 2040* is current strategy

2. 10 Year Strategic Plan
- Act requires "Strategic Plan"
- updated annually
- equals last year's Base Plan + any approved Supplement(s)
- Base Plan must be approved by TransLink Board
- reviewed annually by Commission
- Supplements must be approved by Board and Council; fare increases, if any, over 2%/year must also be approved by Commission

The **Long Term Strategy**, which spans a period of thirty or more years:

- identifies goals and direction for the transportation system, identifies key initiatives, and states the underlying principles; and
- guides preparation of Base Plans and any Supplemental Plans.

It must consider:

- regional land use objectives
- provincial and regional environmental objectives including air quality and greenhouse gas emission reduction objectives; and
- anticipated regional population growth and economic development.

In developing the Long Term Strategy, TransLink must consult with Metro Vancouver, the Minister of Transportation, local governments in/adjacent to the service region, agencies of government involved in transportation in the region, the public in the service region, and other appropriate bodies.

The Long Term Strategy must be submitted to the TransLink Board for approval and then submitted to the Mayors' Council. The Long Term Strategy, first approved in 2008, must be updated and submitted for approval and review by the respective bodies every five years.

2. 10-Year Strategic Plan

TransLink must also develop a rolling **10-Year Strategic Plan** that is guided by and is consistent with its Long Term Strategy. The 10-Year Strategic Plan consists of a Base Plan and possibly Supplements to it. Once in place, the 10-Year Strategic Plan becomes the Base Plan for the next ten years, and must be updated every year through the process for Base Plans and Supplements.

Base plan

The Base Plan outlines TransLink's plan to provide transportation services, manage transportation demand, and meet financial requirements, utilizing only:

- established funding resources, i.e.:
  - fuel tax rates (existing rates, or as approved in a Supplement);
  - property tax revenues (inflated by 2% annually and 1% growth, or as approved in a Supplement);
  - fare revenues (April 1, 2008 short term fares inflated by 2% annually, or as approved in a Supplement and by the Regional Transportation Commission);
  - other estimated revenues;
- accumulated resources from previous years; and
- established borrowing limits.

Approval requirements for the 10-Year Plan

The consultation process for developing the 10-Year Plan is similar to that of the Long Term Strategy. The approval process, however, is different. The Base Plan must be submitted to the TransLink Board for approval, and then submitted to the Mayors' Council and the Regional Transportation Commission by August 1st of each year. The Mayors' Council receives the Base Plan for information. Within 30 days of receipt, the Commission must advise TransLink and the Mayors' Council of reasonableness and appropriateness of the assumptions and parameters[3] in the Base Plan.

Supplements and their approval

Supplements, which must also be guided by the Long Term Strategy, set out additions, enhancements or other changes to the transportation services and major capital projects in the

---

[3] The Commission interprets the term **parameter** as intended in section 203 of the Act to mean both (a) any notable feature or distinguishing characteristic of the plan, and also (b) a limiting factor such as a fact or circumstance that restricts the plan, how it is prepared, and what is in or not in it.

Base Plan, based on increased funding resources (beyond inflation) or increased borrowing limits. Supplements must be submitted to the TransLink Board for approval, and then submitted to the Mayors' Council and the Regional Transportation Commission by August 1st of each year. Within 30 days of receipt, the Commission must advise TransLink and the Mayors' Council of the reasonableness and appropriateness of the Supplements. The Mayors' Council must approve/reject the Supplements by October 31st of that year. If approved, the Supplements form part of the Ten Year Strategic Plan. If the Supplements are not approved, the Base Plan governs. Any increases, beyond inflation, in Short Term Fares (i.e. any transit fare valid for up to 3 days) contemplated by a Supplement must also be approved by the Commission.

3. Regional Transportation Commission's Role

Under the provisions of the Act, the Regional Transportation Commission is responsible for:

- advising TransLink and the Mayors' Council of the reasonableness of the assumptions and parameters included in the Base Plan submitted by TransLink, by September 1st of each year;
- providing TransLink and the Mayors' Council with a preliminary, non-binding indication of the appropriateness and reasonableness of a fare increase or an assessment of a new short-term fare proposed in any Supplement, by September 1st of each year;
- considering applications for short term fares (transit service passes that are valid for less than 3 days) that are being assessed for the first time;
- considering applications for increases in short term fares (transit service passes that are valid for less than 3 days) being proposed under a Supplement approved by the Mayors' Council, that are greater than the rate of inflation (2% compounded annually);
- holding public hearings on the application for new short term fares or an increase in short term fares above the rate of inflation, if he considers it necessary;
- approving the process for undertaking an annual customer satisfaction survey and any subsequent amendments to the process;
- approving the complaints resolution process and any subsequent amendments to the process;

- providing the Mayors' Council with an annual report that includes:
  - a summary of all applications and requests for decision to the Commission in the previous fiscal year;
  - a summary of all decisions made and all orders issued by the Commission in the previous fiscal year;
  - the financial statements applicable to the office of the Commission for that year along with the full disclosure of the expenses of, and associated with, the office of the Commission; and
  - an opinion as to whether TransLink's operations and its subsidiaries for the previous fiscal year were in accordance with the strategic plan and applicable service, capital, and operational plans;
- a review of the disposition of any major facility or major asset; and
- if required, carrying out inspections of records held by TransLink, as they relate to the Commission's authority under the Act.

4. Last Year's (2009) 10-Year Plan

Last year, TransLink faced considerable challenges in preparing its first 10-year plan (i.e. its 2009 10-Year Plan) consistent with the requirements of the Act. First and foremost among these challenges was the short time frame between the Act coming into force (January 1st, 2008), and the deadline of August 1st, 2008 for a Plan submission to the Mayors' Council and the Commission. Given the significant time required to consult and obtain consensus on additional supplemental revenues, TransLink decided that the 2009-2018 Strategic Plan would be a Base Plan only. In other words, in order to meet legislated restrictions under the Act, only existing funding resources were used and projected borrowings remained within the current borrowing limit. As a result, the Plan was developed based on the following major principles:

- provision was made for the costs of maintaining the system in a state of good repair (i.e. replacing assets as required);
- existing programmes, projects, and commitments anticipated in the 2009-2011 period were included;
- short term fares grew at 2% per year and property tax revenues grew at 3% per year; and
- accumulated surplus was used to fund annual deficits in the first three years of the Plan.

Over the 2009 10-Year Plan period, revenues increased from $1 billion to $1.4 billion, and expenditures increased from $1.1 billion to $1.5 billion. The annual deficit ranged from $80 million in 2009 to a peak of $180 million in 2015. These deficits were funded from the cumulative surplus through 2011. New and/or increased revenues in the range of $150 million per year would be required to sustain 2011 service levels. For the Base Plan to be compliant with the Act, expenditures were reduced significantly in 2012. It was assumed that this would be achieved through service reductions.

The 2009 10-Year Plan was viewed as a transitional plan with an intended one-year life. TransLink stated it planned to begin developing the 2010 10-Year Transportation and Financial Plan in fall 2008. It was anticipated that this would include one or more Supplemental Plans, as defined by the Act, necessary to maintain 2011 service levels and implement significant improvements. TransLink planned to work with the public, stakeholders, and all levels of government to identify the investments needed to achieve the region's objectives.

The Commission accepted the fact that the 2009 10-Year Plan was a transitional plan, intended to have a one-year shelf life. As the service reductions in the latter years of the Plan were not deemed to be realistic, the Commission's focus was on the first three years of the plan only. The Commission was of the view that TransLink's approach to the development of its 2009 10-Year Plan was appropriate in order to meet legislated requirements. The Commission was also of the opinion that the significant parameters and assumptions of the Plan, including expenditure and revenue estimates, were reasonable.

In its conclusions, the Commission outlined several implications for TransLink in the future. Notably, they included:

- the 2010 10-Year Plan needs to include those major capital investments that move the transportation system in Metro Vancouver in the direction of the Long Term Strategy;
- to accomplish a search for additional revenue was imperative; and
- a consultation process was necessary to gauge the willingness of the public and its elected representatives to accept any new taxation or fare levies that would be contained in Supplemental Plans.

5. TransLink's 2010 10-Year Plans

On July 29, 2009, the TransLink Board of Directors approved TransLink's submission for the 2010 10-Year Plan. It comprised:

- a Base Plan, titled *"Drastic Cuts"*, 2010 10-Year Transportation and Financial Base Plan;
- *"Funding Stabilization",* 2010 10-Year Transportation and Financial Supplemental Plan; and
- *"On Track to a Sustainable Region",* 2010 10-Year Transportation and Financial Plan (with Supplement).

In approving the plans, the Board resolutions stated that the TransLink Board of Directors:

> Approves the *"Drastic Cuts"* 2010 10-Year Transportation and Financial Base Plan… which is the base plan for the purposes of the *South Coast British Columbia Transportation Authority Act*;

- Provides the *"Drastic Cuts"* Plan, and the associated bylaws and resolutions in relation to revenue measures and borrowing limits ... to the Mayors' Council on Regional Transportation for information and to the Regional Transportation Commissioner;
- Approves the *"On Track to a Sustainable Region"* 2010 10-Year Transportation and Financial Plan (with Supplement) (the "On Track Plan"), ..., which contains a supplemental plan for the purposes of the *South Coast British Columbia Transportation Authority Act*;
- Provides the approved *"On Track Plan",* and the associated bylaws and resolutions in relation to revenue measures and borrowing limits, ..., to the Mayors' Council on Regional Transportation for approval, and to the Regional Transportation Commissioner;
- Approves the *"Funding Stabilization"* 2010 10-Year Transportation and Financial Plan (the "Funding Stabilization Plan"), ..., which is a supplemental plan for the purposes of the *South Coast British Columbia Transportation Authority Act*;
- Provides the *"Funding Stabilization"* Plan, and the associated bylaws and resolutions in relation to revenue measures and borrowing limits, ..., to the Mayors' Council on Regional Transportation for approval, and to the Regional Transportation Commissioner; and
- Recommends that the Mayors' Council on Regional Transportation approves either:

- The *"On Track"* Plan if additional revenues to support its full implementation are confirmed on or before October 31, 2009; or
- The *"Funding Stabilization"* Plan if additional revenues are not confirmed on or before October 31, 2009.

In accordance with the requirements of the Act, the two plans containing supplements were forwarded to the Mayors' Council for review and consideration on July 30, 2009. All three plans were forwarded on the same date for review by the Regional Transportation Commissioner for his determination of the reasonableness of the assumptions and parameters in the plans. As noted above, the Commission must also provide TransLink and the Mayors' Council a preliminary, non-binding indication of the appropriateness and reasonableness of a fare increase, or an assessment of a new short term fares proposed in a Supplement.

Base Plan: The *"Drastic Cuts"* plan outlines a series of actions that TransLink would take to reduce investments and cut services so that expenditures match existing revenue sources as required by the Act. For example, the plan would see bus service reduced by approximately 40%, and reduced expenditures for road and cycling programmes, but would allow for continued bus and Sea Bus replacement and the costs for state-of-good-repair projects.

Funding sources and proposed rate increases for the Base Plan would include:

- fuel tax revenues at existing rates;
- property tax revenues, inflated by 3% annually;
- short term fare rates inflated 2% annually and higher increases in long term fares;
- replacement tax revenues of $18 million;
- parking sales tax at 7%; and
- other miscellaneous revenue, such as advertising, real estate, and non-short term fares.

The *"Funding Stabilization"* Plan is a supplemental plan, incremental to the Base Plan. It proposes revenue increases beyond what is permissible under a Base Plan. The increased revenue would allow TransLink to minimize reductions in services and programs, largely keeping the organization whole, but it would not allow for upgrades to existing infrastructure and services, nor would it allow for expansion. Overall, the plan identifies approximately $130 million per year in additional revenues from the following:

- fuel tax revenues – rate is increased by 3 cents/litre effective January 1st, 2010;
- fare revenues – increases over the next ten year that would results in an increase of 7%, over and above what is legislatively permitted in a Base Plan; and
- parking sales tax – the rate is increased from 7% to 21% in January 2010.

The alternative *"Maintain and Upgrade"* supplemental plan would require current revenue sources to be increased in stages to generate an additional $275 million per year. These sources would include:

- fuel tax revenues – an increase of 3 cents/litre effective January 1st, 2010;
- property tax revenues – increasing 3% annually;
- fare increase – increases over the next 10 years that would result in approximately 10% more revenue than the 2% annual increases allowed by legislation;
- replacement tax revenues remaining at $18 million;
- parking sales tax – increasing to 14% in January 2010 and to 21% by January 2015;
- Transportation Improvement Fee - $150 million from a new fee levied on vehicles in the region.

This Supplement also describes an "On Track…" expansion scenario that would require an additional $175 to $200 million over the *"Maintain and Upgrade"* program. No funding sources for this expansion program are described, however TransLink states that it will consult with the provincial government on mechanisms such as a new road pricing system. The expansion scenario would require an additional supplement to be developed and approved before it could form part of TransLink's strategic plan and be implemented.

3 Review of 10-Year Plan

1. Commission Approach

Early in 2009 the Commission concluded that consulting assistance would be necessary to provide a proper assessment of the reasonableness of TransLink's 2010 10-Year Plan. Two factors were primary in influencing this decision. The first was the short one-month time frame from when the TransLink Board would approve the plan and the Commission report was due. The second was the expectation that the Plan would contain not only a Base Plan but also one or more supplements.

As a result, the Commission issued a Request for Qualifications (RFQ) on March 04, 2009, requesting qualifications from consultants who would check, analyze and comment on TransLink's 2010 10-Year Plan. The RFQ stated that the Commission would rely on the consultant's report in preparing its opinion.

Eight consortia responded to the RFQ. After assessing the responses, and ranking them on the basis of the depth and breadth of the qualifications of the personnel who would work on the assignment, the Commission selected four teams to respond to a Request for Proposals (RFP).

The RFP was issued on March 20, 2009, and the four responses to it were analyzed by the Commission. On April 09, 2009 the Underhill Company LLC was selected. The diverse Underhill team, led by Mary Jo Porter and Eva Hage, has extensive experience in transportation planning, economic analysis, regional planning and transit and roadway operations.

2. Consultations by the Commission team

The commission team (collectively the Commissioner, the senior advisor and the Underhill group) had early access to TransLink staff and received draft documents for analysis as they were produced. Several meetings and conference calls were held with Tom Prendergast, the CEO of TransLink, and his senior staff over the course of the summer months. The Underhill team had extensive consultation with TransLink's planning and financial staff. The Commission attended meetings of the Mayors' Council and the Board of Directors where plan development was discussed. Members of the Commission team attended TransLink's Greater Vancouver's Livability Forum.

Consultation also took place with the Ministry of Transportation and Infrastructure. The Commission would like to acknowledge prompt responses it received from TransLink and TransLink's willingness to share early versions of its plan documents and to provide access to its staff.

3. Source Documents Examined

The South Coast British Columbia Transportation Authority Act was the guiding document for the review. As detailed in the Introduction, it provides legislative direction to both TransLink and the Regional Transportation Commission for the development of the 10-Year Plan and its review. The applicable provisions of the Act were carefully reviewed to ensure full compliance with them.

TransLink's Long Term Strategy, a requirement under the Act, was compared to the Provincial Transit Plan. Both documents serve as a framework for future actions by TransLink and provide context for its 10-Year Plan.

The Provincial Transit Plan contains several key objectives for the Metro Vancouver area. These include the transit market share growing from 12% during weekdays today to 17% by 2020 and 22% by 2030, along with a major reduction in greenhouse gas emissions. To achieve this, increased investments in new buses are contemplated, along with new and expanded rapid transit lines: the Evergreen Line, the UBC Line, an upgraded Expo Line, and the Canada Line which recently opened. The Plan also calls for new RapidBus BC lines on major corridors.

TransLink's Long Term Strategy, titled *Transport 2040: A Transportation Strategy for Metro Vancouver, Now and in the Future*, has six goals that are consistent with the Provincial Transit Plan. They are:

- greenhouse gas emissions from transportation are aggressively reduced in support of federal, provincial and regional targets;
- most trips are by transit, walking, and cycling;
- the majority of jobs and housing in the region are located along the Frequent Transit Network;
- traveling in the region is safe, secure, and accessible for everyone;
- economic growth and efficient goods movement are facilitated through effective management of the transportation network; and

- funding for TransLink is stable, sufficient, appropriate, and influences transportation choices.

The Act, the Long Term Strategy, and the Provincial Transit Plan establish the basis for development of the 10-Year Plans. It was necessary to understand their context to adequately assess whether or not the parameters and assumptions in the 2010 10-Year Plan were appropriate and reasonable. In the conduct of that assessment, the team also reviewed several other background documents, including:

- TransLink's 2008 Statutory Report
- TransLink 2009 10-Year Plan
- the Commission's opinion on TransLink's 2009 10-Year Plan
- the TransLink's Commission Annual Report 2008.

4. TransLink's Consultation Process

Under the Act TransLink is required to carry out a consultation process as it develops its base plan and supplements with the following:

- the public in the transportation service region;
- the Mayors' Council on Regional Transportation;
- the Greater Vancouver Regional district: and
- any municipality and other organization that the authority considers will be affected.

TransLink's consultation program was done in three phases. In Phase 1 (September to December 2008) challenges were defined. Phase 2 (January to April 2009) saw input from stakeholders on possible solutions to the challenges. In Phase 3 (May and June 2009) three options ("*Drastic Cuts", Maintaining What We Have"* and *"On Track to a Sustainable Region*") were developed and presented to the region.

A range of methods was used to engage stakeholders regarding the challenges, the transportation needs and funding requirements. They included:

- stakeholder roundtable groups;
- the Greater Vancouver Livability Forum;
- front-room forums
- community workshops; and
- TransLink and family employee consultation.

Communication tools included an interactive exercise – *It's Your Move*, a custom web-site, and a multi-media advertising campaign. Qualitative and quantitative research was also conducted to assess public opinion.

5. TransLink's Approach to Plan Development

TransLink's financial strategy, the centerpiece of its10-Year Plan, sets out the expected revenues and costs for the period 2010 to 2019 for each of the scenarios described in the 10-Year Plan.

TransLink developed a new long-range financial model ("LRFM") to assist in the development of the financial strategy for the 10-Year Plan. The LRFM is a comprehensive, multipurpose and interactive model, which in addition to the proforma cash flow statements also produces the financial statements required by the TransLink Board.

The model spans a period of 17 years:

- up to 5 years of historic information (2004 to 2008);
- 2009 projections; and
- forecasts for 2010 to 2021.

The model includes the multiple investment and revenue scenarios described above, i.e., *"Drastic Cuts", "Funding Stabilization", "Maintain and Upgrade"* and *"On Track...".*

At the request of TransLink, KPMG undertook an audit of the LRFM in June 2009 to check for errors and omissions in the functionality and calculations of the model. KPMG has since reported back to TransLink that the financial model is error free, and can be relied on to provide mathematically correct projections.

The Commission has relied on the opinion by KPMG and has done no further audit of the model, other than checking for consistency between assumptions and projections.

TransLink's Funding Priorities

TransLink applied a sequence of priorities to guide the allocation of funding to the transportation needs of the region. They are as follows:

- maintain existing services;
- maintain assets in a state of good repair;
- upgrade existing services and expansion without new infrastructure; and
- expand with new infrastructure.

Transit service hours are the major cost driver in TransLink's plans and, as such, have the largest influence on the allocation of resources.

The Commission's understanding of the application of the above priorities to each of TransLink's scenarios and their effect on service hours is:

For the *"Drastic Cuts"* Base Plan, service hours would be determined based on available funding, and prioritized as follows:

- maintain existing rapid transit service;
- deploy already ordered rapid transit vehicles;
- maintain existing assets; and
- match the bus service hours with remaining existing revenues.

For the *"Funding Stabilization"* supplemental plan service hours would be based on maintaining the service that exists today, as follows:

- maintain existing rapid transit service;
- deploy already ordered rapid transit vehicles; and
- maintain existing bus service.

For the *"Maintain and Upgrade"* supplemental plan service hours would be based not only on keeping the bus system in a state of good repair but would include expansion as follows:

- maintain and upgrade existing rapid transit service;
- deploy already ordered rapid transit vehicles;
- maintain existing bus service; and
- modest expansion to keep up with background growth.

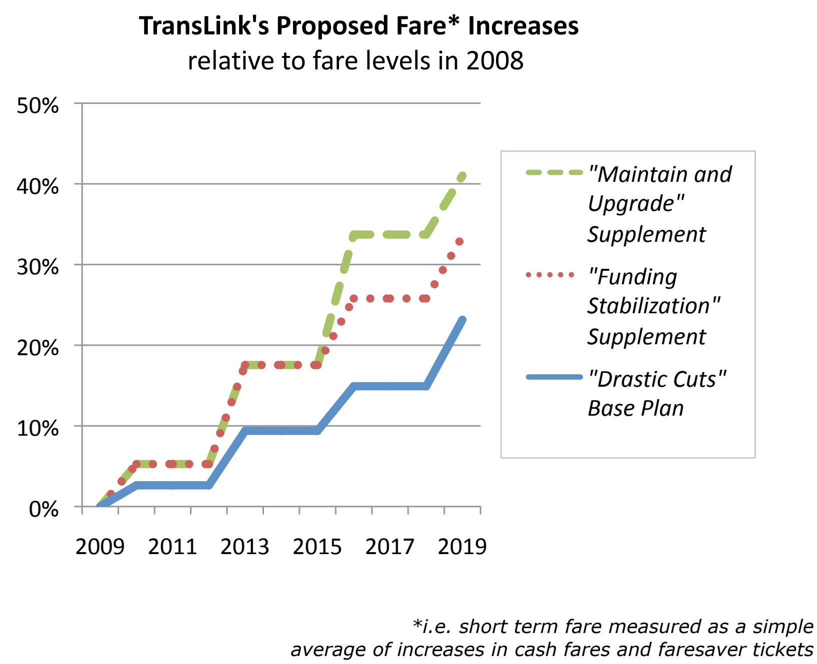
The *"On Track..."* scenario would not only include all of the features of the *"Maintain and Upgrade"* plan but would also see service growth including:

- further upgrade of existing services;
- expansion of the Frequent Transit Network;
- addition of three rapid transit lines or extensions and seven BRT lines; and
- expansion into new markets.

Total service hours would increase to meet the mode share target of 17% in the Provincial Transit Plan.

Fare Levels

TransLink assumed fare increases will be applied in four steps through 2019. For the *"Drastic Cuts"* Base Plan, the Act allows TransLink to increase short term fares (i.e. cash fares and faresaver tickets) at a rate of 2% per year, compounding, without the need of approval from the Mayors' Council or Commissioner. The two supplements propose higher increases than this, which therefore require approval.[4]



Ridership

TransLink projected ridership using spreadsheet models that assumed:

- background growth would equal the rate of population growth;
- service cuts would primarily be applied to the least productive service, with some discretion to address system connectivity, minimum service levels and related measures, raising the average productivity (boardings per service hour) of the remaining service;
- ridership estimates for new rapid transit and BRT projects would be taken from the business plans or sketch planning already completed for those projects;
- ridership estimates as a result of capacity improvements on SkyTrain are based on historic ridership patterns on that service and estimates of latent demand based on characteristics of the service operating today, including passengers left in the stations by overfull trains;

[4] As stated in the Findings section of this report, the Commissioner gives a preliminary indication that the April 1, 2010 proposed increase may be appropriate and reasonable, but not necessarily the increases in subsequent years.

- in the *On-Track* scenario, which adds new rapid transit and BRT projects, bus hours on those routes would be re-allocated first to feeding riders to and from those routes; and
- boardings per service hour for conventional bus service would vary for each level of the Plan, based on the characteristics of the bus service contained in each plan.

System wide ridership was not modeled using a regional transportation model for any of the plans. The Commission team has some difficulty in commenting on the reasonableness of the ridership estimates but views the methodology used by TransLink as adequate.

Fare Revenue

The annual fare revenues for *"Drastic Cuts"*, *"Funding Stabilization"* and *"Maintain and Upgrade"*, are calculated by assuming the above proposed higher fares, which are multiplied by forecasts of ridership described above, adjusted for demand elasticity (i.e. loss of some riders due to higher fares).

In the absence of system-wide ridership modeling results, the Commission must rely on TransLink's boardings per hour factors to determine if there is a ridership revenue risk in these plans.

For conventional bus service, the three plan options assume boardings per hour in 2019 of 56.4 in *"Drastic Cuts"* and 52 in the other two plans, compared to 47.4 in 2008. Since 1992, this number has varied between 47 and 56. In 2009 the fare revenue impact of one additional or fewer boardings per bus service hour system-wide would be approximately $9 million, about 1% of this year's total operating expenditures or 1.5% of bus operating expenditures.

For the other transit modes the *"Drastic Cuts"* and *"Funding Stabilization"* plans assume slight or no changes in boardings per hour by 2019, while *"Maintain and Upgrade"* assumes productivity on the Canada Line will be 9% higher in 2019 than it is projected to be in the two other plans.

Taken together, the **fare revenue estimates** in the "*Drastic Cuts", "Funding Stabilization"* and *"Maintain and Upgrade"* plans **appear reasonable and do not represent an unacceptable risk to TransLink**.

In the "*On-Track..."* scenario ten new rapid transit/BRT projects are completed, versus none in the three plan options. The ridership estimates for these new projects, and for the recently completed Canada Line, are taken from individual business cases or feasibility studies for those projects. Overall, in the "*On-Track…*" scenario rapid transit riders represents about 50% of all riders, compared to less than 30% today. On conventional bus service, productivity declines from about 47.5 boardings per service hour in 2008 to 42.5 in 2019, as the most productive bus routes are upgraded to rapid transit and new bus service is added in lower productivity areas. Productivity (boardings per hour) of the transit system overall improves when rail and BRT ridership is also considered. However, ridership restructuring and the share of riders on projects not yet sited, designed or built, lend **too much uncertainty to the "*On-Track…*" scenario to establish confidence in its fare revenue estimates**.

6. Key Expenditure Assumptions

Several external economic conditions, which are both beyond TransLink's control and have varying degrees of uncertainty surrounding them, have a significant impact on expenditure forecasts. This is especially true in the latter years of TransLink's plan, where the degree of both the uncertainty, and the risk associated with it, increases. The following are the Commission's comments and observations:

General Inflation

TransLink's general inflation assumption for all three scenarios is 2.0% annually. This assumption is also reflected in a number of TransLink's specific price inflation assumptions for several individual cost factors (e.g. labour, fuel, and energy costs), especially in the later years of the 2010 10-Year Plan. Annual increases in the consumer price index (CPI) have averaged 2.3% for Canada, 2.0% for BC and 2.0% for Vancouver over the past eight years. For the industrial product price index (IPPI), the increase has averaged 1.6% over eight years. TransLink's use of 2.0% as an allowance for future general price inflation appears reasonable.

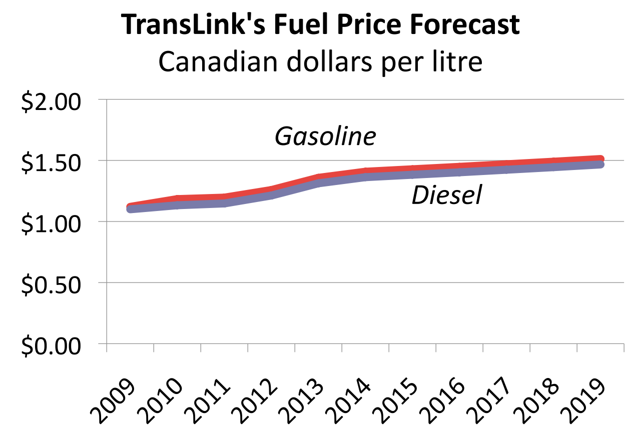
Interest Rates

TransLink's long-term interest rate (for all scenarios) is 5.50%. Each year the BC provincial budget and fiscal plan provides forecasts of the long-term interest rates for new borrowings. Historically, long-term rates have been generally declining over the past five years, averaging approximately 5%. Future trends in long-term interest rates are of course highly uncertain. However, TransLink's assumptions appear reasonable, possibly even a bit conservative, in that they are consistent with or lower than recent provincial projections.

For short-term rates, TransLink is assuming 2.25% for 2010, 3.50% for 2011, and 4.50% thereafter. Short term interest rates have declined over the past eighteen months and are now at near historical lows. In this context, the assumed short-term interest rates contained in the 2010 10-Year Plan appear on the high side. However, TransLink's financial projections are not overly sensitive to short-term interest rates.

Fuel Costs

TransLink's future fuel price assumption, for all planning scenarios, are shown in the following chart. The projections are for a significant price increase in 2010, relatively flat prices in



2011, much higher rates of increase for 2012-2014 (particularly 2013), and moderate rates of increase for 2015-2019. The projections are based on an analysis performed for TransLink by an independent consulting group. Over the ten years, diesel prices are projected to increase by 33-35%, for an average annual increase of 2.9-3.0%.

After declining between 2000 and 2002, diesel prices more than doubled between 2003 and 2008. TransLink projections, however, of diesel/gasoline fuel price increases averaging approximately 3% over ten years represent an expectation that the high rates of increase that have occurred since 2002 will not be experienced in future years. In particular, the assumptions for 2014 through 2019 are for price increases that are lower than general rates of inflation. While future price levels are highly uncertain, and prognostications vary widely, TransLink's assumptions represent the low end of expectations regarding future fuel prices. The Commission team's recommendation would have been to assume moderately higher rates of fuel price increases, particularly in later years.

BC Hydro Electricity Rates

TransLink's assumptions for electricity rates from 2010 through 2012, are for increases in the range of 6.56% to 8.00%, are based on BC Hydro planning documents. Beyond 2013, the assumptions are for 2.00% annual rate increases. As in the case of diesel/gasoline fuel price increases, the main area of concern is with regard to the assumed 2% electricity price increases between 2013 and 2019, effectively assuming that the higher increases planned for 2010-2012 do not continue into later years, and that future electricity costs increases at rates that are similar to general inflation. However, in the absence of information to the contrary, the assumed rates are deemed reasonable.

Construction and Road Cost Inflation

TransLink's construction cost inflation assumption (for all scenarios) is 3.0% for all years, except for 2012 where 5.0% is assumed. TransLink indicates that the 5.0% assumption in 2012 is based on forecasts provided by BTY, a Vancouver-based construction management and quantity surveying firm. TransLink's road construction cost inflation assumption (for all scenarios) is 4.0% through 2019.

Recent-year construction cost inflation trends between 2004 and 2008 have been in the range of 6% to 12% annually, following a period of 1% to 6% annual increases between 1998 and 2003. Thus the average 3% to 4% average annual increase being projected by TransLink relies on a return to price inflation trends in the years prior to 2004.

Recent monthly and quarterly non-residential construction price trends in Metro Vancouver have been stable or declining in the wake of the economic recession beginning in Fall 2008, suggesting a return to a lower-inflation construction cost environment. Looking ahead, the Commission's assessment is that TransLink's 3% to 4% annual allowances for general construction and road construction price inflation over the next ten years are reasonable.

Labour Rates

Different from the factors discussed above, the cost of labour is the one major expenditure over which TransLink does have a degree of control. It is also the largest cost driver for TransLink and thus carries the highest degree of risk.

For the years 2010 and 2011, TransLink's assumption is that labour rate increases are 3.0%, similar to TransLink's actual experience in 2007 and 2008 and slightly lower than 2009. For the years 2012 through 2014, TransLink's assumptions vary between the Plans:

- for the *"Drastic Cuts"* and the *"Funding Stabilization"* plans, TransLink's projections assume a 0% labour rate increase for three years.
- for the *"Maintain and Upgrade"* plan and in the *"On Track..."* scenario, TransLink's assumptions are for a 2% annual wage rate increase for 2012 through 2014.

For the years 2015 through 2019, TransLink is assuming a 2% annual labour rate increase under all levels of the Plan, consistent with its general inflation allowance.

TransLink's labour rate increases in recent years averaged approximately 3.1% annually. These increases have been generally consistent with or slightly higher than those experienced in other industries, which have generally averaged about 2.5% to 3.0%. While the economic recession starting in 2008 may place downward pressures on wage rate increases over the next few years, the Commission's assessment is that the assumed rates of increase are much more likely to underestimate than overestimate future labour rate increases.

As mentioned above, labour costs are by far TransLink's most significant cost component. If TransLink can limit annual increases between 2012 and 2019 to the levels assumed, the achievement of these targets will ensure TransLink's ability to provide the levels of service envisaged in its plans. At the same time, for the purposes of developing a set of expectations for actual future labour costs, our assessment is that TransLink's actual labour rate increases will almost certainly be higher than the ones being assumed. In brief then, it is the Commission's opinion that the assumptions pose a high degree of risk.

Sensitivity Analysis

A 1% sensitivity analysis was conducted on the impact on the annual surplus or deficit, over the 10-year planning horizon, of each expenditure assumption being 1% higher or lower than budgeted. For examples, if general inflation were to increase by 3% annually, rather than the 2% as assumed by TransLink, then the difference in the projected surplus/deficit over 10 years would total $45 million, an annual increase of $4.5 million.

The two key assumptions, however, that have the greatest effect on TransLink's financial stability are labour rates and long-term interest costs.

- Depending on the funding scenario, an annual variance of 1% in the rate of increase of labour costs translates to an average difference in the projected surplus/deficit of $26.9 million *("Drastic Cuts")* to $48.5 million *("On Track...")* annually, a total of $269 million to $485 million over the ten year planning horizon.
- If long term interest rates were to be 6.5% (rather than TransLink's primary assumption of 5.5%) the difference in the projected surplus/deficit would average $11.3 million *("Drastic Cuts")* to $26.7 million *("On Track...")* annually, or a total of $113 million to $267 million over ten years.
- Other assumptions do not show nearly the same degree of sensitivity as these two factors.

- The relative sensitivity of results to the various factors is generally consistent for each of the four options, although the size of the variance is greater for higher funding scenarios than for lower funding scenarios.

It is the Commission's opinion that the labour rate increase assumptions contained in the 1% sensitivity analysis are more consistent with historical trends. Based on this assessment, the Commission considers the labour rate assumption questionable.

7. Key Revenue Assumptions

TransLink has made several important assumptions with respect to its revenues. Obviously, the accuracy of the assumptions will have a significant impact on its plans and each has some inherent risk. The major assumptions, and the Commission's opinion of their reasonableness, are discussed below:

Fuel Tax Revenue

Fuel tax revenue is one of TransLink's three major revenue sources and historically it has been stable and predictable. However, as vehicles become more fuel efficient or shift to alternate energy sources, fuel consumption per vehicle kilometer traveled will continue to decline. In addition, the instability in world oil markets adds considerable uncertainty; last year's spike in fuel prices resulted in a decline in driving which was reflected in reductions in TransLink's fuel tax revenues. In addition to lowering TransLink's revenues, the higher fuel prices shift people from personal vehicles to transit, increasing TransLink's demand as its revenues are falling.

TransLink is assuming that fuel consumption will decrease by 22% by 2019 due to drivers switching to tax-exempt fuels. In projecting fuel tax revenues, it also assumes that it will be kept financially whole by the provincial government. In the event that the Province does not make up the shortfall in fuel tax revenues, TransLink will in 2019 receive $58 million less under the *"Drastic Cuts"* plan and more than $70 million less under the *"Funding Stabilization",* the *"Maintain and Upgrade"* and *"On Track..."* plans. The cumulative effect over the 10-year period is up to $390 million in lost revenues.

In assuming that the Province will make it whole, TransLink is relying on a 1998 Memorandum of Understanding (MOU) between the Greater Vancouver Regional District and the Province. Section 10.3 of the MOU states:

> *In the event that sales of gasoline and diesel fuel decline and threaten a revenue source of the GVTA and the province imposes a tax on a new fuel or energy source for motor vehicles, the province will negotiate revenue sharing arrangements similar to that for gasoline and diesel fuel with the GVTA.*

Section 10.5 of the MOU goes on to state:

> *The province recognizes that the ongoing legal entitlement to the revenue sources set out in the Act is essential for the GVTA to discharge its responsibilities. It is the intent of the province to maintain the revenue sources available to the GVTA under the Act* (the Act means Bill 36 introduced into the legislative assembly in June 1998).

It is the Commission's viewpoint that fuel tax revenue represents the single largest risk to TransLink and that the MOU, due to its vague wording, does not constitute a legally binding commitment to mitigate that risk.

Fuel tax rate meets the terms of the Act

The commissioner must determine if the fuel tax increase meets the terms of *Section 27.1* of the *Act,* which stipulates that: *"Outcome revenues must equal an amount twice that of the additional fuel tax revenues"*. If that is the case, the commissioner will issue a notice confirming that determination.

The formula for the 2010 10-Year Plan to determine whether the fuel tax increase is in accordance with the Act is as follows:

Outcome Revenues:
*(2019 revenues excl. government contributions and grants – 2019 fuel tax revenues) – (1.35 * (2009 revenues excl. government contributions and grants – 2009 fuel tax revenues))*

Additional fuel tax revenues:
(2019 fuel tax revenues in Supplement Plan – 2019 fuel tax revenues in Base Plan)

In calculating the Outcome Revenues interest income was also deducted as it is restricted and can only be used for financing.

As shown in the calculation below, the proposed fuel tax increase in the *"Funding Stabilization"* plan is in accordance with the Act. Since the *"Maintain and Upgrade"* plan has a higher level of non-fuel tax revenues, it is also in accordance with the Act (all $ in thousands):

*Outcome revenues: $1,180,246 –(1.35 * $721,845) = $205,755*

Additional fuel tax revenues: $371,830 – $299,260 = $72,570

Rule:
Outcome Revenues must be twice as large as Additional fuel tax revenues

$205,755 / $72,570 = 2.84

Population Increase

TransLink's forecasts are based on relatively steady growth in the range of 1.6% to 1.7% annually, trending slightly downward towards the end of the 10-year planning horizon. Medium to long run historical growth trends in Metro Vancouver show that, following a period of higher growth between 1992 and 1997, rates averaged 1.56% for the period 1997 to 2007. TransLink's population projections are consistent with those developed by BC Stats and are considered reasonable by the Commission.

Canada Line Ridership

The ridership projections for Canada Line are based on a ridership forecast done in 2003-2005 and are corridor specific. Some 25.6 million riders are expected in 2019 (under the "*Funding Stabilization*" Plan), half the 51 million projected in 2019 for the Expo and Millennium Lines combined. While these projections may not be out-of-line given the relative characteristics of the lines, Canada Line represents a new, untested service.

In the *"Drastic Cuts"* and *"Funding Stabilization"* plans, it is forecast that Canada Line will generate an incremental $54 million, equivalent to 12% of all of TransLink's fare revenues, in 2019. If ridership on the Canada Line varies by 20% (up or down) the accumulated gain (or loss) in revenues between 2010 and 2019 would amount to $85 million in the *"Drastic Cuts"* and *"Funding Stabilization"* plans and $96 million in the other two plans.

Since the service on Canada Line is contractually fixed, if there are less revenues than expected, TransLink will have to make up the difference through service reductions or other cost containment.

Golden Ears Bridge Toll Revenue

In any toll revenue forecast there is inherent uncertainty. In the case of Golden Ears Bridge (GEB) the fact that it is a new link, which will have a major impact on travel and land development patterns in the region, increases the level of uncertainty in the revenue forecast. The uncertainty around the traffic volumes is the largest in the early years as traffic ramps up and employment and land development patterns change.

The GEB Traffic and Revenue study commissioned by TransLink in 2003 estimates a variance in traffic during the ramp-up period (the first 4-5 years) of between -35% and +50%. Post ramp-up the variance in traffic narrows to -25% and +23%.

Over the period (2010-2019) the cumulative variance is between -$200 million and +$220 million or approximately +/- $20 million per year. However, the downside risk has diminished somewhat from the time of the toll revenue forecast by the following:

- the actual toll rates are slightly higher than what was contemplated during the planning phase; and
- the GEB Traffic and Revenue study assumed that the Port Mann Bridge was not going to be tolled. As the Port Mann Bridge will be tolled by 2012 it would have a positive effect on the demand on the Golden Ears Bridge.

If toll revenues fall short of forecast, and since the payments to the GEB Concessionaire are contractually fixed, TransLink will have to make up the difference by either raising tolls (which requires TransLink board approval and ratification by the Mayors' Council) and/or reducing other service.

Property taxes

Property taxes are another major revenue source. The property tax is levied on residential, utilities, unmanaged forest, major industry, light industry, business, recreational and non-profit and farm properties in Metro Vancouver. The TransLink portion of the property tax in 2009 is approximately $210 on a house with average assessment ($600,000 in 2007). In 2009, a 1% change in TransLink's property tax share would be worth $2.6 million region wide.

The "*Drastic Cuts*" Base Plan assumes a 3% increase in property taxes each year, which is in accordance with *Section 196 (1) (a)* \of the *Act*. The 3% reflects 2% for inflation and 1% for real growth in properties. The assumption with respect to property taxes is identical throughout all plans.

Replacement Tax

The replacement tax is an add-on tax levied on properties. It replaces the revenues lost due to the repeal of the Parking Site Tax and came into effect in 2008. The Replacement Tax is assessed on the net taxable value of land and can be applied to residential, utilities, major industry, light industry and business properties in Metro Vancouver. It is legislated to a maximum of $18 million per year.

Parking Sales Tax

TransLink currently levies a 7% sales tax on all paid parking which generates approximately $15 million per year. No tax is levied on metered parking or unpaid parking, such as shopping mall parking.

In the "*Drastic Cuts"* Base Plan the parking sales tax rate of 7% is held constant and assumed to grow at inflation of 2% per year (i.e. it is assumed that parking rates will increase at the rate of inflation) growing to $18 million in 2019.

In the *"Funding Stabilization"* supplemental plan, TransLink has proposed an increase of the parking sales tax from 7% to 21% effective in 2010. This would take the parking sales tax rate to the maximum allowed under the legislation as per *Section 30.1 (1) (a)* in the *Act*. In 2019, this would result in $55 million in revenues – some additional $37 million over and above *"Drastic Cuts"* plan.

The "*Maintain and Upgrade*" supplemental plan includes an increase in the parking tax from 7% to 14% in 2010 and a further increase to 21% in 2015.

Parking sales tax revenue, although a small portion of TransLink's revenues, is a fairly stable source. Any change in parking supply is generally met with price changes, resulting in a stable and sustainable revenue stream. Higher parking rates are also a powerful demand-management tool and provide an incentive to shift away from single occupancy vehicles to alternate modes. The demand-management effect of parking pricing, however, is dampened by the fact that the vast majority of workplace, retail and commercial parking in the region is free and not taxed.

Hydro Levy

The Hydro levy, another relatively small portion of the revenues, consists of a monthly charge of $1.90 per household that is included on the BC Hydro bill. This revenue source has been in place since 1991 and amounts to approximately $18 million per year.

The rate of $1.90 is held constant in all the plans. Revenues are assumed to grow with population over the period 2010-2019, approximately 1.6% on average per year, with revenues estimated at $21 million in 2019. The *Act* does not provide TransLink any possibility to increase this revenue source.

Real Estate Revenues

During the provincial governance review, revenues from real estate were identified as a potential new revenue source for TransLink. At the time, the governance review identified real estate as a significant source of revenues and one that TransLink largely had not used in the past.

As a result of the governance review TransLink created a real estate division, which was tasked with developing a strategy with how TransLink could generate revenues from real estate. TransLink has outlined three strategies for generating revenues from real estate in the *"On Track..."* scenario:

- early acquisition of land in strategic areas;
- sale of surplus sites; and

- project-based opportunities to maximize revenue potential through partnerships to ensure transit-oriented development opportunities are optimized.

In the *"Drastic Cuts", "Funding Stabilization"* and *"Maintain and Upgrade"* plans only the second strategy—sale of surplus sites—is included. It is estimated that $200 million will be generated between 2011 and 2013 through the sale of surplus lands, primarily the Oakridge Depot.

The other two strategies – early acquisition and partnerships – rely on capturing some of the land value increase that is caused primarily by rail based (rapid transit) investments.

In the *"On Track..."* scenario, the $200 million from the disposal of assets and an additional $75 million, are dedicated to "early investments" and project based partnerships. The annual interest cost is estimated at $12 million per year. The financial statements do not include any assumptions on the gain or return that would be realized of the investment in land. No detail was provided to the consulting team regarding how this revenue would be generated and what the potential projects for investment would be, so we were not able to evaluate whether the approach is reasonable.

As a general comment, it would not appear likely to expect TransLink to generate major revenues (i.e. hundreds of million dollars) through real estate due to:

- the need for a long lead time: large revenue returns can only be realized through very early investment (decades in advance on construction) in potential right-of-way of future rapid transit corridors. Pursuing that strategy today would be prohibitively expensive as most rapid transit routes are either known or traverse an area with high property prices; and
- TransLink does not have the excess funds to invest.

Transportation Improvement Fee

TransLink has proposed a new revenue source, a Transportation Improvement Fee (TIF) be included in the *"Maintain and Upgrade"* plan.

An April 2009 study by Perrin Thorau, performed for TransLink, considers several options for introducing a TIF. The proposed fee would vary depending on the vehicle's fuel efficiency. It would be introduced in 2011 and levied annually on all registered vehicles in Metro Vancouver.

The proposed rates vary from $65 to $165 per vehicle with the average estimated at approximately $122 per vehicle. The study estimates that the proposed rate would generate $150 million in the first year after taking into account revenue shortfalls (e.g. because of registrants changing addresses to avoid the TIF) and costs of collection. Revenues would grow by the rate of inflation and growth in the number of vehicles over the period.

The Commission team reviewed these estimates, and agrees that the **proposed average TIF of $120-$122, if introduced, can be expected to generate approximately $150 million in net revenue** for TransLink.

8. Capital Funding

TransLink receives senior government funding from both the Provincial and Federal governments. This funding, except for a Provincial annual operating contribution of $18 million to Canada Line, can only be used for capital.

The government funding programs include:

- **Federal Gas Tax Fund** (formerly "New Deal for Cities and Communities"). This program consists of federal gas tax revenues allocated back to cities. In Metro Vancouver, TransLink is the sole recipient of the funds. The program is estimated to provide $124.3 million per year to TransLink for the 10-year period. Funding is committed on a five-year basis and is currently approved up to 2014. Funding for the period 2015-2019 is tentative, but is assumed to continue through to 2019. The funds can only be used for capital, such as buses and related bus infrastructure, SkyTrain vehicles and new SeaBus vessels.
- **Building Canada Fund**. This program allocated $1.04 billion to the province of which TransLink received approximately $450 million towards Canada Line. Any capital contribution from this program is normally required to be matched by the Province and TransLink. It is expected that federal infrastructure funding will continue either under this program or some other funding program, as long as the federal government's share is matched by the Province and TransLink.
- **Asia Pacific Gateway**. This program has provided $75 million in capital funding for the Roberts Bank Rail Corridor project, which is underway, and $65 million towards the North Fraser Perimeter Road**.** TransLink is expected to match these capital contributions.
- **Provincial Transit Plan.** This is provincial capital funding towards rapid transit investments that would support the implementation of the goals in the Provincial Transit

Plan. There is no firm commitment as to the amount that will be forthcoming under this program, but it is expected that any funding from the Province will require matched contributions from the federal government and TransLink.

In its financial model, TransLink has assumed that all buses, SkyTrain vehicles, SeaBus vessels and maintenance facilities will be paid for by capital contributions from federal gas taxes. Under the *"Drastic Cuts", "Funding Stabilization"* and *"Maintain and Upgrade"* plans TransLink is not able to utilize the full amount available through the gas tax program - $124 million per year, or $1.2 billion over the 10 years – due to anticipated lower capital spending. In the *"Drastic Cuts"* and *"Funding Stabilization"* plans approximately half of the available funding is used - $690 million over 10 years; while in the *"Maintain and Upgrade"* plan approximately $1.1 billion of federal gas tax funding is included. The *"On Track..."* scenario is applying the full $1.2 billion towards capital.

Even though there is no firm commitment for any funds beyond 2014, it is reasonable to expect that TransLink will continue to receive this level of funding in the future.

For other major transit capital, such as rapid transit, TransLink assumes that capital will be shared 67% senior government funding and 33% TransLink funding. Estimated senior government funding in the *"Drastic Cuts"* and "*Funding Stabilization*" plans amounts to $1.1 billion over the 2009-2019 period. The *"Maintain and Upgrade"* plan assumes $2.7 billion, and the *"On Track..."* scenario is anticipating $5.7 billion in senior government funding.

If senior funding is not forthcoming as planned, TransLink's mitigation strategy is to re-evaluate the project and not proceed if funding cannot be secured.

Given the current fiscal situation of both senior governments, TransLink's ability to secure the level of funding envisioned in the plans, and in particular the *"On Track..."* scenario, appears optimistic. History has shown that in the event that the cost of the project is much higher than initially thought, TransLink is generally the entity that must cover the increase.

• • •