

Ottawa Light Rail Transit Public Inquiry

The Honourable Justice William Hourigan, Commissioner

CLOSING SUBMISSIONS OF THE PROVINCE OF ONTARIO

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INTRODUCTION

1. The Province of Ontario (Ontario or the Province) looks forward to receiving the Commission's findings regarding the commercial and technical circumstances that led to the issues with the OLRT1 Project (OLRT1 or the Project), including the breakdowns and derailments. In particular, Ontario looks forward to any recommendations the Commission may make regarding the procurement, delivery and operations of the OLRT1 which may serve to prevent similar issues with future large-scale transit projects in Ontario.

2. Ontario's involvement in the OLRT1 was limited to being "a major financial contributor" along with the federal government and the City of Ottawa (City).¹ As a financial contributor, Ontario was not involved in the procurement, design, or building of the OLRT1 and is not involved in its operation or maintenance. Ontario's involvement is strictly limited to partially funding the Project.

3. Infrastructure Ontario (IO), which provided a value for money assessment to the City pursuant to Ontario's *Contribution Agreement for the City of Ottawa Light Rail Transit Project* (OCA) and acted as the commercial procurement lead for the City, pursuant to a Letter of Direction issued by the Minister of Infrastructure,² acted independently of the Province, and was not acting as a Crown agent with respect to its involvement with the OLRT1.

¹ Order in Council 1859/2021

² Letter of Direction, ONT0006473

4. Ontario's submissions will focus on four areas of particular Provincial interest which arose during the Inquiry:

- 1) the amount of Ontario's contribution and Eligible Costs under the OCA;
- 2) clarifying that the OCA did not require the City to use a P3 (Public Private Partnership) or AFP (Alternative Financing and Procurement) model of procurement or to engage IO as the commercial procurement lead for the Project;
- 3) Ontario's Canadian Content Policy (CCP) and its implementation with respect to the OLRT1; and
- 4) the *Municipal Act, 2001*, as described in the Expert Report of Mary Ellen Bench, dated July 29, 2022.

THE ONTARIO CONTRIBUTION AGREEMENT

5. Ontario and the City's rights and obligations regarding the OLRT1 *vis a vis* each other are set out in the OCA, which became effective on September 1, 2011. The OCA was executed on behalf of Ontario by Kathleen Wynne, then the Minister of Transportation, and by Ottawa Mayor Jim Watson and Ottawa City Clerk and Solicitor Rick O'Connor on behalf of the City.³

6. The purpose of the OCA is to establish the terms and conditions whereby the Ministry of Transportation (Ministry or MTO) will reimburse part of the City's "Eligible Costs" towards "Project Implementation".⁴ The OCA contains an Entire Agreement clause,⁵ meaning that the only terms and conditions relating to Ontario's financial

³ Ontario Contribution Agreement (OCA), COM0001313. Also referred to as a "Transfer Payment Agreement" or TPA.

⁴ OCA, s. 2.2 - Purpose of this Agreement

⁵ OCA, s. 1.2 - Entire Agreement

contribution to the OLRT1 project are contained within the OCA and its Schedules and the OCA amending agreements. The OCA also specifically recognized that the Ministry “is neither a decision-maker nor an advisor to the Project”.⁶

7. Consequently, Ontario’s role with respect to the Project was to ensure that the claims for payment made by the City were eligible for payment pursuant to the OCA. Ontario participated in the OCA oversight committee (referred to as the “Committee” in the OCA) to ensure the OCA was being implemented as contemplated.⁷

1. Amount of Contribution and Eligible Costs under the OCA

8. The OCA provided that Ontario would pay a contribution to the City towards the total “Eligible Costs” of “Project Implementation” up to a maximum of \$600,000,000.00 for the purpose of carrying out the Project.⁸ The maximum contribution amount did not change through out the course of the Project. A detailed list of costs that are considered “Eligible” and “Ineligible” for reimbursement are set out in Schedule A to the OCA.⁹

9. The amount of Ontario’s contribution was determined by the City’s original budget estimate for the project of \$1.8 billion, which was set by the City at the

⁶ OCA, s. 3.1(c)

⁷ OCA, ss. 5.1 to 5.5

⁸ OCA, ss. 3.1 a) Contribution by the Ministry, 3.6 Increase in Project Costs and 8.3 Remedies on Default

⁹ OCA, Schedule A, pp. 19-22; See also OCA Amending Agreement #1 - IFO0038057

Environment Assessment phase of the Project. Ontario's contribution represented one-third of the original Project cost.¹⁰

10. A benefit of setting Provincial contributions at an early stage of a project is that it provides the project owner and potential bidders with more certainty about the available funding to support procurement and design choices.

11. Under Provincial transit transfer payment agreements, it is the responsibility of the recipient to manage any cost over-runs. With respect to the OLRT1, two bidders came in under budget. The City chose to proceed with the Project with its increased \$2.1 billion budget, even as costs continued to escalate.¹¹

2. OCA did not Require the City to use an AFP Model or to Engage IO as the Commercial Procurement Lead

Alternative Financing and Procurement Not a Requirement of the OCA

12. The OCA did not require the City to use a P3 (Public-Private Partnership) or "Alternative Financing and Procurement" (AFP) model of procurement or, if an AFP was chosen, designate which model of AFP to use. Instead, the OCA required the City to conduct a value for money assessment to see if an AFP model of procurement was preferable to a traditional procurement. The City was required to consult with IO to see

¹⁰ Deloitte-Boxfish Report, COM0001555, pp. 7-8; Testimony of Marian Simulik, TRN00000184, pp. 100-101; Testimony of Nancy Schepers, TRN00000185, pp. 117-118, 122-123, Testimony of John Jensen, TRN00000178, pp. 19-20

¹¹ Interview Transcript of Mayor Jim Watson, TRN00000063, p. 13; Testimony of Mayor Jim Watson, TRN00000203, pp. 208-209; Testimony of John Triaianopoulos, TRN00000185, pp. 29, 58-59.

if IO would be willing to perform this study.¹² If IO had declined to perform the study, the City could have retained its own expert (subject to Ontario's approval) to perform the study¹³ The cost of this study was an Eligible Cost that could be reimbursed under the OCA.¹⁴

13. "Alternative Financing and Procurement" and "AFP" are defined in the OCA as "a project delivery model whereby a Concessionaire, in whole or in part, designs, builds, maintains, operates and/or finances the Project under a long term Concession Agreement with the Recipient" (the City).¹⁵

14. City witnesses testified that the OCA did not require the City to use an AFP model, but that a value for money assessment was required.¹⁶ A value for money assessment was also a condition of Federal funding.¹⁷

15. In any event, the City's own consultants Deloitte and Boxfish recognized that the AFP model used in Ontario "is the most suitable for the delivery of large, complex infrastructure projects". And was particularly suited to the OLRT1:

The creation of LRT infrastructure is a good candidate for AFP because it involves so many different suppliers, contractors and design integration. Experiences in other municipalities are instructive in understanding just how difficult it can be for the public sector to manage the integration of all of the elements effectively. LRT

¹² Specifically, the OCA, s. 14(a)(viii), required the City to provide the Ministry with "written confirmation that it has consulted with Infrastructure Ontario to determine whether Infrastructure Ontario would undertake a value for money study to determine whether an Alternative Financing and Procurement approach to Project delivery can generate a value for money advantage over traditional procurement and the result of such consultation".

¹³ OCA, A.2.2. Scope of Eligible Costs o) i) d.

¹⁴ OCA, A.2.2. Scope of Eligible Costs o) i) d.

¹⁵ OCA, s.1.1 Definitions, p. 1

¹⁶ Testimony of John Jensen: TR00000178, p. 75; Marian Simulik TR00000184, p. 166 and 172; Nancy Schepers TR00000084, pp. 35-36, 41-43, 169-170

¹⁷ Federal Contribution Agreement, s. 5.1, COM0001314, p. 7

projects procured under traditional design build models are often late, over budget and mired in disputes.¹⁸

16. IO was also in support of using an AFP model and Deloitte, Boxfish and IO were all in support of using a Design Build Finance Maintain (DBFM) model in particular.¹⁹

17. The AFP model as implemented with respect to the OLRT1 Project did not avoid some of the issues common under traditional funding models as noted above at paragraph 15.

3. *No Requirement to Engage IO as the Commercial Procurement Lead*

18. There was no requirement in the OCA that the City do more than consult IO to determine if they would conduct a value for money assessment to evaluate whether an AFP procurement should be used for the OLRT1. It was the City's decision to retain IO as the commercial procurement lead for the Project.

19. Although IO is a Crown Corporation, wholly owned by Ontario, IO may act independently of the Province if it receives a Letter of Direction (LOD) from the Minister of Infrastructure to do so, as it did in the case of the OLRT1. The LOD directed IO "to work with the City of Ottawa on the competitive procurement of the Ottawa Light Rail

¹⁸ Deloitte-Boxfish Report, COM0001555, pp. 5-6

¹⁹ Deloitte-Boxfish Report, COM0001555, pp. 5-6; Testimony of John Traianopoulos, TRN00000185, pp 55, 57, 59-60, 61-63 and Nancy Schepers, TRN00000084 pp. 36-37 and 107-110

Transit project (the Project) using the AFP model as per the City of Ottawa's City Council decision on July 14th 2011".²⁰

20. The Memorandum of Understanding between the City and IO makes clear that the City retained "final approval on all decision-making" and that IO was not acting as Crown Agent with respect to this Project.²¹

21. In addition to retaining IO, the City also retained other consultants such as Deloitte and Boxfish to assist with the procurement related to the OLRT1. These consultants worked in conjunction with IO and the advice provided was provided collectively. All decisions were ultimately made by the City.²²

4. City's Request to Change Cost Eligibility and Payment Structure Under the OCA and Federal Contribution Agreement

22. In 2011, while the terms of the OCA were being negotiated, it was known that the Project schedule had changed and that costs had increased. The City also contacted the Province at that time to request that financing costs and costs that had not yet been paid by the City be considered Eligible Costs under the OCA, and that both Ontario and the Federal government pay more than their respective cost-shares of each claim

²⁰ Section 7(4)(j) of the *Ministry of Infrastructure Act, 2011*, which allows the Minister of Infrastructure to issue directions to the agencies for which he or she is responsible, including IO and section 4(1) of the *Ontario Infrastructure and Lands Corporation Act, 2011* which sets out the objects of IO and Letter of Direction ONT0006473.

²¹ COM0000234, Memorandum of Understanding Between Ontario Infrastructure and Lands Corporation and the City of Ottawa, ss. 2.6 a) and 4.4

²² Interview Transcript of Rob Pattison, TRN00000107, pp. 14, 84-85; Testimony of John Triaianopoulos, TRN00000185, p. 5

submitted, which would achieve a faster distribution of their Project contributions to the City.²³

23. In recognition of the importance of the Project and the inherent challenges with financing such a large undertaking, Ontario agreed to provide some flexibility to the City by allowing the OCA schedule and budget to be revised and by enabling the City to seek reimbursement for costs at an accelerated rate.

24. Ontario also made contributions to the Project beyond those committed in the OCA by allowing the City to use new lanes being constructed on Highway 417 for buses during the conversion of the Eastern Transitway from BRT to LRT. Additionally, Ontario altered its procurement plans to widen the Highway 417 so that that work could be bundled together with the OLRT1 contract, mitigating a significant project integration risk for the City in the OLRT1 Project Agreement.²⁴

²³ Letter from N. Schepers, July 2011; City of Ottawa Briefing Note – Provincial AFP Funding, ONT0002055

The Deloitte-Boxfish Group's report *Ottawa Light Rapid Transit System Lessons Learned from the Confederation Line and Stage 2 Implementation Implications* - COM0001555 raised the same issue. On page 11, the authors note that private financing costs are not eligible to be covered by the OCA and that Ontario should change that policy, so that *any liabilities incurred* in implementing an AFP model should be covered. They argue that capital costs funded by private financing should be treated the same as capital costs funded by city bonds, as both are liabilities on the city's books. They also suggest that this would show confidence in the AFP model. Ontario does not agree with this proposal for the reasons set out above.

Remo Bucci also testified that the Canada has since adopted the approach of permitting their funds to cover the cost of private financing (TRN00000134, pg 32, 34-35). While this may be correct with respect to the P3 Canada Fund, Ontario questions whether Canada is allowing financing costs under all of their agreements (for example the Investing in Canada Infrastructure Program (ICIP) does not appear to cover such costs. Further, the Deloitte-Boxfish report does not recognize other differences in provincial and federal funding policies. For example, most provincial agreements will fund property acquisition, where many federal government agreements do not. The issue of differences in funding policies as between the federal and provincial governments was not covered in the evidence before the Commission and it is Ontario's position that it should therefore not form the basis of any recommendation.

²⁴ City of Ottawa & Provincial AFP Funding Information Note, COM0001471

25. However, Ontario did not agree to the City's request to pay City claims as the City incurred the costs, or to make financing costs Eligible Costs under the OCA because: i) MTO and Ministry of Infrastructure (MOI) staff were concerned that the request, as framed by the City, could be inconsistent with the Ontario's *Cash Management Directive*²⁵ the risk-based principles in the *Transfer Payments Accountability Directive*²⁶ and the *Financial Administration Act*;²⁷ ii) it could increase costs to Ontario; iii) the City did not acknowledge the significant value for money provided by the AFP approach or previous actions Ontario had taken related to the Project to the benefit of Ottawa (i.e. Highway 417); and iv) financing costs are not eligible expenses under transit-related transfer payment agreements for any funding recipient.²⁸

26. Although the City appeared to suggest in a 2011 Information Note that ineligible financing costs would be eligible under the OCA if the City had used a traditional procurement model rather than an AFP model, that is not the case. Financing costs are not eligible under the OCA regardless of the delivery model, and all transit infrastructure Transfer Payment agreements that MTO enters into clearly identify that financing costs are not eligible for reimbursement.²⁹

²⁵ City of Ottawa & Provincial AFP Funding Information Note, COM0001471

²⁶ [Transfer Payment Accountability Directive | ontario.ca](https://www.ontario.ca/laws/statute/90f12?search=Financial+Administration+Act)

²⁷ *Financial Administration Act*, R.S.O. 1990, c. F. 12
<https://www.ontario.ca/laws/statute/90f12?search=Financial+Administration+Act>

²⁸ City of Ottawa & Provincial AFP Funding Information Note, COM0001471

²⁹ City of Ottawa & Provincial AFP Funding Information Note, COM0001471

27. The approvals for the concessions that Ontario provided for the Project were not obtained prior to the execution of the OCA. However, they were later obtained, and the OCA was amended several times as required to accommodate changes to various aspects of the Project. The most recent OCA amending agreement (OCA Amending Agreement #5) was executed in December 2020.³⁰

5. *Canadian Content Policy for Transit Vehicle Procurement Policy*

28. The OCA required the City to ensure that all Contracts and Concession Agreements it entered into for the OLRT1 Project were “in compliance with the Canadian Content Policy”³¹

29. MTO’s *Canadian Content for Transit Vehicle Procurement Policy* (CCP) came into effect on September 1, 2008³² (when Ottawa Mayor Jim Watson was a member of the Provincial Cabinet). It was amended in 2010³³ and again in 2017.³⁴ The 2010 version of the policy was the version in effect at the time of the OLRT1 procurement. The CPP requires that “all transit vehicles procured with provincial funding must have at least 25% Canadian content”. The intent of the policy is to “promote job retention and

³⁰Letter from Carol Layton and Drew Fagan to Kent Kirkpatrick, August 25, 2011 ONT0004959; OCA Amending Agreement (AA) #1, IFO0038057, AA#2 COM0001464; AA#3 COM0001465; AA#4 ONT0000087; AA#5 ONT0003628

³¹ OCA, s. 6.1 c) Awarding of Contracts and Concession Agreements

³² CCP, 2008 IFO0010389

³³ CCP, 2010 IFO0006808

³⁴ CCP, 2017 ONT0000001 As of June 15, 2017, the CCP has been amended to comply with required government procurement commitments under the Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union and its Member States. Under the amended Canadian content policy, 25% is the maximum level of Canadian content that can be required by transit operators and entities for the procurement of transit vehicles with provincial funding. For greater clarity, the province will not be able to increase the required level beyond 25%, nor will transit operators and entities have the discretion to require a higher percentage of Canadian content beyond 25%.

creation, foster economic development, protect skilled manufacturing jobs and continue to promote a fair, open and transparent procurement process that ensures value for taxpayer's dollars".³⁵

30. Canadian content is calculated as a percentage of the total final costs to the manufacturer, less any applicable taxes. The Canadian content must be directly related to a transit vehicle's manufacturing process; distribution and acquisition such as labour, subcomponents and components; project management; engineering; manuals; special tools; test equipment; freight; and warranty.³⁶

31. The CCP is silent with respect to how proponents are to satisfy the CCP in order to provide flexibility to proponents as each transit project differs. To provide added flexibility to manufacturers and their ability to reach the 25% content threshold, the CCP includes bonuses for the measurement of components. Specifically, vehicle components will be considered 100% Canadian if:

- They have undergone an irreversible manufacturing process in Canada; or they contain 60% or more Canadian content.
- A direct value of Canadian content will be applied to components where the Canadian content level is between 0% and 59%.
- For components that are sourced in Canada, a minimum content level of 15% will be assumed.³⁷

32. The CCP is similar to other domestic or local manufacturing policies internationally. For example, the United States' "Buy American" regulation currently

³⁵ CCP, 2008 IFO0010389, p. 5

³⁶ CCP, p. 56

³⁷ CCP, p. 6

requires 70%³⁸ of transit vehicle content be sourced from U.S. sources and that final assembly take place in the U.S. Canadian companies supplying the US market have transferred assembly jobs, as-needed, to comply with “Buy America”.³⁹ The European Union, Victoria, Australia, New York State, the Toronto Transit Commission,⁴⁰ Mexico and China also had some form of local content policy in place at the time the CCP became effective.⁴¹

Stakeholder Consultations

33. The CPP was created after MTO conducted extensive stakeholder consultations with municipalities, transit industry manufacturers, suppliers, dealers and Ontario transit agencies representing all modes of transit (commuter rail, heavy rail, light rail, bus rapid transit, bus and accessible transit) and Transport Canada. Both Alstom and OC Transpo participated in the stakeholder consultations.⁴²

34. Consulting firm Booz Allen Hamilton (BAH) was retained by MTO to assist in evaluating the feasibility of Canadian content requirements for the procurement of transit vehicles in Ontario. One conclusion of the consultations was that a “level of 25% Canadian content can be achieved by the existing rail and transit bus industry without impacting competition” and that a “higher level of Canadian content was achievable if the industry had time to adjust”. Foreign-based rail equipment manufacturers, including Alstom, advised BAH that a 25% content requirement for rail vehicles would be

³⁸Testimony of Lowell Goudge, TRN00000191, pg 9 line 18, At the time the CCP was implemented the Buy American requirement was 60% (Booz Allen Hamilton Report (BAH Report), ONT0000736, p. 24.

³⁹ BAH Report, p. 24.

⁴⁰ The Toronto Transit Commission (TTC) was already meeting a 25% or higher Canadian content requirement for light-rail low floor vehicles at the time of the consultations, Booz Allen Hamilton Report, p.

⁴¹ BAH Report, pp. 24-31

⁴² BAH Report, pp. 4 and 12

achievable, if the content requirement were interpreted flexibly and included items such as direct engineering and project management costs.⁴³

35. BAH also recommended that a waiver mechanism, or significantly lower Canadian content levels, would be required for vehicles that are not currently manufactured in Canada and where only a minimal level of Canadian content is achievable. BAH further recommended that a cost premium waiver should also be considered for non-Canadian compliant bids that are 25% less expensive than compliant ones.⁴⁴

36 The BAH Report recognized that mandating a Canadian content requirement increases costs and risks to transit equipment manufacturers because it reduces flexibility in selecting suppliers and may require them to find or develop new Canadian suppliers. It could also contribute to potential project delays or vehicle failures where a manufacturer was required to rely on new suppliers who are not accustomed to the quality demands of the transit bus and rail vehicle market to enter the transit industry. However, the BAH report concluded that all of these risks could be managed by providing manufacturers flexibility in determining how they achieve Canadian content.⁴⁵ Ontario adopted this recommendation.⁴⁶

⁴³ BAH Report, p. 9 and Stakeholder Consultations p. 9.

⁴⁴ BAH Report, p. 4

⁴⁵ BAH Report, p. 38

⁴⁶ CCP, p. 5-6

Exemptions and Waivers

37. BAH also recommend an exemption from, or waiver of, the CCP where 25% Canadian content was not achievable.⁴⁷ Ontario adopted this recommendation.⁴⁸ The CCP includes exemptions for certain types of vehicles which rail and bus equipment manufacturers advised could not be sourced from Canadian suppliers or assembled in Canada, such as heavy rail train locomotives. Light Rail Transit (LRT) vehicles did not require such an exemption, as they had already been produced in Canada and local rail equipment manufacturers had demonstrated the ability to exceed 25 percent Canadian content. The CCP also provided that, where no Canadian content compliant submissions are received as part of a fair, open and transparent procurement process for non-exempt transit-vehicles, a transit operator may formally request a waiver from compliance with the CCP from MTO.⁴⁹

38. All three bids for the OLRT1 Project received during the request for proposals process (RFP) met the Canadian content requirements and therefore no waiver from compliance from the CCP was requested for the OLRT1.⁵⁰

Manufacturing of the Trains and Implementation of the CCP

39. Many participants at the Inquiry asserted that some of the blame for the breakdowns, derailments and safety issues with the OLRT1 is attributable to the CCP. But as noted above, the CCP provides proponents and manufacturers with considerable

⁴⁷ BAH Report, p. 4

⁴⁸ CCP, pp. 7-8

⁴⁹ CCP, pp. 7-8

⁵⁰ Testimony of John Triaianopoulos, TRN00000185, pp. 29, 58-59.

latitude on how to comply with it. Based on testimony heard by the Inquiry, several choices regarding the design, engineering and manufacture of the train cars, none of which were required to comply with the CCP, appear to have contributed to the difficulties with the OLRT1:

- i) The train manufacturer had not previously designed or built a LRV for the North American market;
- ii) The choice to assemble the trains at the Maintenance and Storage facility;
- iii) The overlap in validation and serial testing; and
- iv) The choice to use different manufacturers for the trains and the signal system.

i) The Train Manufacturer had Never Designed or Built a LRV in North America

40. Alstom, the train-manufacturer, was new to the North American LRV market.⁵¹

Witnesses indicated that this created three distinct issues:

- a. Adapting a train based on European standards to North American standards and requirements;
- b. Adapting a train to the City's particular specifications, which pushed the limit of what an LRV could do; and
- c. Alstom had not established supply chain or labour market for LRV vehicles in North America or Canada specifically.⁵²

⁵¹ TRN00000182 Interview of Yves Declerq, pp 3-4⁵² TRN00000191 Testimony of Lowell Goudge pp. 9-10; TRN00000048 Interview of Yang Liu, pp. 101-104

⁵² TRN00000191 Testimony of Lowell Goudge pp. 9-10; TRN00000048 Interview of Yang Liu, pp. 101-104

a. Adapting Trains Built to European Standards for the North American Market

41. When RTG's original vehicle supplier, CAF, was rejected by the City, RTG had "very few vehicle suppliers to chose from".⁵³ Alstom, who had originally bid on the project, but was not chosen, was then retained as the vehicle supplier, only two months before the RFP process closed.⁵⁴

42. Alstom witnesses testified that Alstom viewed the OLRT1 as a development project and a way to break into the North American LRV market.⁵⁵ Its intention was to set-up a supply chain in North America for a vehicle that was designed in North America. And although there was a 25% Canadian content project requirement for the Ottawa project, the U.S. market required 60% of all components to be manufactured in the US so Alstom was looking at the OLRT1 as a strategic long-term investment to set-up suppliers to supply a vehicle for use in other cities in North America.⁵⁶

43. While Alstom had manufactured other transit vehicles or components of those vehicles in the U.S. and Canada, it had no existing LRV that was compliant with North American standards.⁵⁷ During the procurement, the City had emphasized the requirement for "service proven vehicle" and in fact had rejected RTG's original vehicle

⁵³ TRN00000020 Interview of Lowell Goudge, pp. 19

⁵⁴ TRN00000182 Interview of Yves Declercq, p. 48

⁵⁵ TRN00000182 Interview of Yves Declercq, pp. 13-35, TRN00000020 Interview of Lowell Goudge, p. 25

⁵⁶ TRN 00000191 Testimony of Lowell Goudge pp 9-10

⁵⁷ TRN00000182 Interview of Yves Declercq, p. 13-35, TRN00000191 Testimony of Lowell Goudge p. 4, Testimony of Yves Declercq, p. 45-46

supplier, CAF, because their vehicle was not service proven.⁵⁸ However, the train ultimately chosen, the Citadis Spirit, had never been built.⁵⁹

44. To create the Citadis Spirit, Alstom adapted the Citadis Dualis which had been designed and built to European standards.⁶⁰ While Alstom has asserted that the Citadis Spirit was “service proven” because its parts were “service proven”,⁶¹ there were, in fact, “some changes to virtually every part on the train”.⁶² In fact the the Citadis Spirit has been described as a “prototype” vehicle.⁶³ The OLRT1 vehicle is the only vehicle in Canada that was based on American standards, as opposed to European Standards.⁶⁴

b. Adapting Trains to the City’s Particular Specifications

45. Alstom employees testified that Alstom also had to make adaptations to the Citadis Dualis to meet specific infrastructure requirements of Ottawa, some of which were “aggressive”.⁶⁵ For example, adaptations of the train to the tracks,⁶⁶ timing

⁵⁸ TRN00000182 Interview of Yves Declercq, p. 119, TRN00000178 Testimony of Riccardo Cosentino, pp. 122-123

⁵⁹ TRN00000182 Interview of Yves Declercq, pp. 13-35; TRN00000191 Testimony of Lowell Goudge p. 4; TRN00000210 Testimony of Yves Declercq, p. 45-46

⁶¹ TRN00000182 Interview of Yves Declercq, p. 119, TRN00000178 Testimony of Riccardo Cosentino, June 13, 2022, pp. 122-123

⁶¹ TRN00000182 Interview of Yves Declercq, p. 119, TRN00000178 Testimony of Riccardo Cosentino, June 13, 2022, pp. 122-123

⁶² TRN00000020 Interview of Lowell Goudge, p. 29

⁶³ RTM00592807.0001 – ORLT Lessons Learned Mitigation 2 Plan/2 – Liquidated Damages 8-Subcontractors, 10-Rolling 3 Stock Provider March 202; Testimony of Mario Guerra, p. 4. This brings to mind the testimony of Dr. Bent Flyvbjerg, and the problems raised by “bespoke” vehicles, July 28, 2022, p. 13

⁶⁴ TRN00000210 Testimony of Yves Declercq, p. 25

⁶⁵ TRN00000005 Interview of Bertrand Bouteloup, p. 19-20

⁶⁶ TRN00000005 Interview of Bertrand Bouteloup, p. 19-20 22-24 27

between stations and the requisite accelerating and braking,⁶⁷ and the number of full panel doors.⁶⁸

46. Alstom employees testified that specifications for the OLRT1 trains, and in particular, the speeds requested by the City, are at the limit for what an LRV can do, and that has resulted in some of the performance and reliability issues.⁶⁹

47. As noted by Remo Bucci, the Citadis Spirit was a “first off the line” vehicle, and that would have been the case no matter where it was assembled. This differs from for example, the Canada Line project, where an off the shelf vehicle was procured. The proponents of the Canada Line project benefitted from an established assembly line, and the benefits of a service proven design.⁷⁰

48. The City’s decision to purchase a “bespoke” train that was not actually service proven and to require specifications that pushed the limits of a LRV’s capabilities were decisions completely independent of, and not required by, the CCP.

⁶⁷ TRN00000005 Interview of Bertrand Bouteloup,35-39 Interview of Yang Liu, p. 104; Interview of Lowell Goudge p.27

⁶⁸ TRN00000020 Interview of Lowell Goudge, p. 37-38

⁶⁹ TRN00000182 Interview of Yves Declercq, pp. 65-70; TRN 00000191 Testimony of Lowell Goudge, pp. 3-4

⁷⁰ TRN00000190 Testimony of Remo Bcuci, p. 156

c. Supply Chain and Labour Market Concerns

49. The Commission also heard evidence concerning supply chain and labour market issues related to the CCP. The CCP did not require that the vehicles be built in Ottawa, as opposed to other places in Canada where the labour market profile may have better suited the project.

50. In its *Ottawa LRT Vehicle and Train Control Prequalification* document dated January 6, 2012 (Prequalification document), Alstom stated the following, *inter alia*, about its ability to meet the CCP requirements:

With a large experience of technology transfers in the world and in particular in North America, Alstom is confident in achieving the local content requirement of 25%. Procurement, assembly of trucks and traction services, cabling and fitting of vehicles, testing, commissioning and warranty, will all be considered for localization in the frame of the OLRT1 project.

...

ALSTOM confirms compliance to the minimum 25% local content required by this contract through the current footprint in North America and more specifically Canada.

...

Local Sourcing

At the present time, we are already working with Canadian suppliers or with other qualified suppliers working through joint ventures or as subsidiary to Canadian companies.

...

Alstom also provided a list of “leading potential suppliers for LRT Ottawa”, some of which were located in Canada.⁷¹

⁷¹ BDO0002215 - *Ottawa LRT Vehicle and Train Control Prequalification* – January 6, 2012, PDF pp. 3, 47-54

51. However, at the time Alstom submitted the Prequalification document, Yves Declercq testified that Alstom had not yet done an analysis of the Canadian workforce and was still working on identifying and auditing potential local suppliers in relation to the LRV market.⁷² Mr. Declercq also testified that Alstom underestimated the complexity of, and time required to, set up the supply chain, the supplier base and the qualification of these suppliers.⁷³ Alstom had facilities in North America that built rail vehicles, but setting up a supply chain for the specific LRV was new.⁷⁴

52. Alstom witnesses testified that while establishing Canadian suppliers, or European suppliers that could give local content through their local distributors, was necessary to ensure compliance with the CCP, using new suppliers was more a requirement of complying with North American standards than to the Canadian content requirements – “the first impact was the different way of doing things in North America”.⁷⁵

53. Alstom witnesses explained that the instability of Alstom’s supply chain, which was not stable until they obtained their Brampton facility,⁷⁶ did raise some issues and caused Alstom to change some suppliers during the course of OLRT1 Project for some parts like the bogey.⁷⁷ An unstable supply chain can increase the risk of subcomponent incompatibility.

⁷² TRN00000210 Testimony of Yves Declercq, p. 23, 49 and 120-121

⁷³ TRN00000210 Testimony of Yves Declercq, p. 84

⁷⁴ TRN 00000191 Testimony of Lowell Goudge, pp6-7

⁷⁵ TRN00000005 Interview of Bertrand Bouteloup, p. 27 and 251; TRN00000191 Testimony of Lowell Goudge, pp. 6-9

⁷⁶ TRN00000005 Interview of Bertrand Bouteloup, pp 247-249

⁷⁷TRN00000005 Interview of Bertrand Bouteloup, p. 249

54. Alstom also had internal requirements with respect to the supply chain to ensure it was viable for the North American market and to meet the much stricter Buy American requirements. It was attempting to develop a supply chain for a large customer base in two countries.⁷⁸

55. Alstom determined it could not meet the CCP requirement without doing final assembly in Canada. Some Alstom employees gave evidence questioning the skill base of the Canadian labour force assisting with final assembly. Those comments should be considered in light of the following evidence of Alstom witnesses before the Commission:

(1) That the final assembly of the trains did not require skilled or complex work. The modular concept of the Citadis vehicle means final assembly required only bolting or riveting the components together and that it is easy to set up a remote factory to do the final assembly as there are no complex processes.⁷⁹

(2) That all major fabricated assemblies were done elsewhere, and what was done in Ottawa was assembly using standard tools. There is no welding, cutting, drilling, machining, or painting. It was purely mechanical assembly and one reason for that choice was the requirement that welding would have required certified welders with either Canadian Safety Association (CSA) or European

⁷⁸ TRN00000020 Interview of Lowell Goudge. pp. 54-55

⁷⁹ TRN00000182 Interview of Yves Declercq, p. 190; TRN00000020 Interview of Lowell Goudge, p. 77

certifications and to set-up that type of regulated shop temporarily had “no value”.⁸⁰

(3) That Alstom decided that its labour force would be a mix of Alstom employees and those provided by a third-party recruitment firm;⁸¹ and

(4) That, as noted above, Alstom had not completed an assessment of the Canadian labour market when it decided to complete assembly at the MSF in Ottawa. Since that time, Alstom has either acquired or established manufacturing facilities in other parts of Ontario, including Kingston, Brampton, and Thunder Bay.⁸²

ii) Choice to assemble trains at the Maintenance and Storage Facility

56. Another manufacturing decision that witnesses identified as having potentially contributed to the issues with the OLRT1 related to the suitability of the Maintenance and Storage Facility (MSF) for assembly.⁸³ As Yves Declercq testified, the MSF was chosen because Alstom decided it needed to do assembly in Canada to meet CCP requirement and wanted something in the Ottawa region.⁸⁴ Yves Declercq further testified that the MSF was chosen to be multi-purpose facility to save money and reduce project costs.⁸⁵

⁸⁰ TRN 00000191 Testimony of Lowell Goudge p.10; TRN00000005 Interview of Bertrand Bouteloup, pp 265-267

⁸¹ TRN00000020 Interview of Lowell Goudge, p. 75; TRN00000182 Interview of Yves Declercq p. 187

⁸² Alstom in Canada: 4. Locations (webpage, accessed July 27, 2022); Testimony of Yves Declercq, TR00000186, p 31.

⁸³ TRN00000182 Interview of Yves Declercq, p. 191, p. 10-12

⁸⁴ TRN00000210 Testimony of Yves Declercq, p. 47

⁸⁵ TRN00000210 Testimony of Yves Declercq, p. 49 and 117-118

57. Various witnesses noted challenges with the MSF facility including that the building was not ready and initially did not have a proper power supply.⁸⁶ Assembly was a challenge because it was a new plant.⁸⁷ Space at the MSF was very tight so if a fault or unexpected situation occurred in the MSF it would have a larger impact on the overall project that it might have if assembly was done in a larger established facility.⁸⁸ Finally, the MSF was not properly planned, it had too many different functions.⁸⁹

58. Even though Alstom had decided it needed to assemble the trains in Canada to meet the CCP, that did not necessarily mean that assembly had to be done at the MSF. Pursuant to the CCP, assembly could have been done anywhere in Canada.⁹⁰

iii) Overlap in Validation and Serial Testing

59. A third factor identified during testimony relating to the decision to assemble the trains at MSF was an overlap between validation testing and serial testing. Witnesses testified that, ideally, validation testing should be completed before serial testing and that the overlap in testing resulted in more retrofitting being required and a delay in non-regression testing. It was asserted that late retrofitting compounded the issues at the

⁸⁶ TRN00000005 Interview of Bertrand Bouteloup, p.134; TRN00000048 Interview of Yang Liu, 71-84

⁸⁷ TRN00000005 Interview of Bertrand Bouteloup, pp265-267

⁸⁸ TRN00000048 Interview of Yang Liu, pp. 107-108

⁸⁹ TRN00000020 Interview of Lowell Goudge, pp. 68-71; TRN00000191 Testimony of Lowell Goudge, p. 13

⁹⁰ Testimony of Yves Declerq, TR00000186, p 108, 114; Testimony of Yves Declerq, TR00000186, p 31; Testimony of Hon. Mayor Watson, TRN00000203, pg 216.

MSF, and while this did not directly cause the derailments, it did have an impact on performance issues in the system generally.⁹¹

60. Yang Liu testified that constantly changing the design and making modifications increases the likelihood of human errors. He also testified that the sheer number of retrofits and number of changes that were being done to the trains was concerning. Also of concern was the lack of availability of infrastructure at the beginning of testing.⁹² These issues are not attributable to the CCP.

iv) Choice to use different manufacturers for the trains and the signal system

61. A fourth issue with respect to the manufacture of the trains was the choice to use different suppliers for the trains (Alstom) and the signal system (Thales). Several witnesses testified about issues arising from the lack of integration between the trains and the signal system.⁹³ One witness identified this as the “biggest issue”.⁹⁴

62. The lack of contractual relationship between Thales and Alstom was identified by witnesses as raising issues because Alstom bears the brunt of contractual penalties but has no means of contractual enforcement.⁹⁵ The Commission heard evidence that a breakdown in the relationship between Thales and Alstom has led to difficulties and

⁹¹ TRN00000005 Interview of Bertrand Bouteloup, pp 207 -215; TRN00000199 Testimony of Yang Liu, pp. 147-153; TRN00000048 Interview of Yang Liu, 71-84 and 122-123; TRN00000191 Testimony of Lowell Goudge, p. 15

⁹² TRN00000048 Interview of Yang Liu, pp. 108-109

⁹³ TRN00000210 Testimony Yves Declercq p. 78-80

⁹⁴ TRN 00000191 Testimony of Lowell Goudge, p. 4; TRN00000191 Testimony of Lowell Goudge pp.9-10, TRN00000048 Interview of Yang Liu, pp. 112-115; TRN00000020 Interview of Lowell Goudge. pp. 178-197

⁹⁵ TRN00000210 Testimony Yves Declercq p. 78-80; TRN00000048 Interview of Yang Liu, pp. 147; TRN00000182 Interview of Yves Declercq p. 78-80

technical issues.⁹⁶ The decision to use two different suppliers for the trains and signals is completely independent of the CCP.

Conclusion on CCP

63. Ultimately, the issues with the OLRT1 Project cannot be attributed to the CCP itself, but instead, those issues were partly caused by the design, engineering and manufacturing decisions outlined above, which were not required by, and were independent of, the CCP.

64. Witnesses testified that a main cause of breakdowns since Revenue Service Availability (RSA) have been engineering design related, rather than quality/human factors.⁹⁷ Testimony suggested that the design issues resulted from the combination of the fact that this was Alstom's first LRV project in Canada, the requirement to adapt a train designed to European standards to North American standards and conditions, new suppliers, new infrastructure, a new plant which had too many functions, and technical design changes.⁹⁸

65. The CCP is sufficiently flexible to allow manufacturers to implement it in a way that meets the 25% requirement *and* produce safe and reliable transit vehicles. It is attendant upon proponents and project owners to perform due diligence to ensure they are able to comply with the requirements of the CCP. In this case, choices made with

⁹⁶ TRN00000005 Interview of Bertrand Bouteloup, p73-111

⁹⁷ TRN00000048 Interview of Yang Liu, pp. 141-142

⁹⁸ TRN00000048 Interview of Yang Liu, pp. 101-104 and 141-143; TRN00000191 Testimony of Lowell Goudge, p. 13

respect to the implementation of the CCP, and other design and manufacturing choices were a source of the some of the issues with the OLRT1, not the CCP itself.

MUNICIPAL ACT, 2001

66. With respect to Expert Report of Marry-Ellen Bench, dated July 29, 2022, Ontario makes the following brief points about the interpretation of the *Municipal Act, 2001* S.O. 2001, c. 25.

67. On page four of her report, Ms. Bench discusses a municipal council's delegation powers. However, Ms. Bench did not reference section 23.3 of the *Act*, which enumerates certain powers which cannot be delegated by Council.⁹⁹ While none of these powers are engaged with respect to the issues before this Commission, Ontario makes this submission to clarify the correct interpretation of the statute.

68. On page 5 of her report, Ms. Bench discusses whether 'government powers,' being quasi-judicial or legislative in nature" may be delegated by Council. Section 23.2

⁹⁹ Powers that cannot be delegated

23.3 (1) Sections 9, 10 and 11 do not authorize a municipality to delegate any of the following powers and duties:

1. The power to appoint or remove from office an officer of the municipality whose appointment is required by this Act.
2. The power to pass a by-law under section 400.1 and Parts VIII, IX, IX.1 and X.
3. The power to incorporate corporations in accordance with section 203.
4. The power to adopt an official plan or an amendment to an official plan under the *Planning Act*.
5. The power to pass a zoning by-law under the *Planning Act*, except as provided under section 39.2 of that Act.
6. The powers to pass a by-law under subsections 108 (1) and (2) and 110 (3), (6) and (7).
7. The power to adopt a community improvement plan under section 28 of the *Planning Act*, if the plan includes provisions that authorize the exercise of any power under subsection 28 (6) or (7) of that Act or under section 365.1 of this Act.
8. The power to adopt or amend the budget of the municipality.
9. Any other power or duty that may be prescribed.

of the *Municipal Act, 2001* limits Council's ability to delegate legislative and quasi-judicial powers.¹⁰⁰

CONCLUSION

69. Public confidence in the safety and reliability of transit infrastructure in Ontario is essential, as is the prudent use of tax-payers money with respect to large-scale transit projects. Ontario looks forward to receiving the Commission's findings regarding the commercial and technical circumstances that led to the issues with the OLRT1 Project, including the breakdowns and derailments. In particular, Ontario welcomes any recommendations regarding procurement, delivery, operations and maintenance with respect to the OLRT1 which may serve to prevent similar issues with future large-scale transit projects in Ontario and to restore public confidence in the OLRT1 system.

70. Ontario looks forward to continuing to work municipalities to fund safe and

100 Restriction re delegation of legislative and quasi-judicial powers

23.2 (1) Sections 9, 10 and 11 do not authorize a municipality to delegate legislative and quasi-judicial powers under any Act except those listed in subsection (2) and the legislative and quasi-judicial powers under the listed Acts may be delegated only to,

- (a) one or more members of its council or a council committee;
- (b) a body having at least two members of whom at least 50 per cent are,
 - (i) member,
 - (ii) individuals appointed by its council,
 - (iii) a combination of individuals described in subclauses (i) and (ii); or
- (c) an individual who is an officer, employee or agent of the municipality. 2006, c. 32, Sched. A, s. 15.

Restriction re applicable Acts

(2) For the purposes of subsection (1), the listed Acts are this Act, the *Planning Act*, a private Act relating to the municipality and such other Acts as may be prescribed. 2006, c. 32, Sched. A, s. 15.

reliable transit infrastructure for the benefit of the public and the Ontario economy.

August 12, 2022



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