Message

From: Begin, Jocelyne [Jocelyne.Begin@ottawa.ca]

Sent: 8/8/2019 7:38:34 PM

To: Krieger, Scott A. [SCOTT.KRIEGER@stvinc.com]; Manconi, John [John.Manconi@ottawa.ca]

CC: Prendergast, Thomas F. [Thomas.Prendergast@stvinc.com]

Subject: Re: Asks of Alstom

Thank you Scott

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From: Krieger, Scott A. <SCOTT.KRIEGER@stvinc.com>

Sent: Thursday, August 8, 2019 7:34:05 PM **To:** Manconi, John < John. Manconi@ottawa.ca>

Cc: Begin, Jocelyne < Jocelyne.Begin@ottawa.ca>; Prendergast, Thomas F. < Thomas.Prendergast@stvinc.com>

Subject: Asks of Alstom

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John

As requested, the most major issues confronting Alstom and suggested asks for each are as follows:

1) Reliability

The reliability of the fleet is not where it needs to be to provide dependable service. Simplistically that means the vehicles require attention (repair) more often than they should. Increasing the reliability requires that defects be investigated with solid troubleshooting and the root cause be identified and fixed. Given the limited down time of the vehicles and limited number of spares, these activities will require more very savvy technicians working on the overnight shift. Given the current reliability of the fleet and the expected 2.5 failures a day, Alstom should add an additional 2-3 technicians for the night shift every night. Additionally, some of these issues may be beyond simply identifying a defective component or bad wire connection. There will be issues that require engineering investigation, design revision or software modification. Alstom must commit that during the next 2 months, access to engineering resources, whether local or remote, shall be unrestricted. Finally, Alstom must continue to improve its tracking of the closure of defects and faults. While Alstom is improving in this area, the degree of accuracy of the documentation of open defects, closed defects and defects which have not truly been "fixed" remains unclear, making the actual status of the vehicles' condition uncertain. Alstom must continue to ensure that defects are properly addressed and then closed in their SES database with a detailed description of the repairs performed. This will require focusing the maintenance supervisors on best maintenance practices and may require the addition of data entry clerks.

2) Response Time

Until the reliability of the fleet increases, the limited number of technicians (especially mobile technicians) combined with Alstom's refusal to allow the TOCC and the ERO's to troubleshoot vehicle defects beyond a certain point extends the down time due to major in-service defects to an unacceptable duration. Given those constraints, the only mitigation to improving response time in addressing major in-service defects is to **put a technician (rider) on each in-service train until fleet reliability improves**. While this may be a brute force solution, the limited spare vehicles, low fleet reliability and diminishing time for improvement makes this the most feasible at this point.

There are quite a few other issues that have been identified and passed to Alstom, but they get into the weeds ar	ıd
would, I believe, dilute this message. I can feed you a few of those tomorrow if you want.	

Let me know if you have any questions or recommendations.

Thanks

Scott

Scott A. Krieger, P.E. Vice President STV Incorporated (617) 350-5124 (office) (617) 206 8674 (mobile)

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