

BEFORE THE  
SURFACE TRANSPORTATION BOARD

ENTERED  
Office of Proceedings  
April 4, 2022  
Part of  
Public Record

---

Ex Parte No. 711 (Sub-No. 1)

---

**RECIPROCAL SWITCHING**

---

**FURTHER SUPPLEMENTAL COMMENTS OF CANADIAN PACIFIC**

Canadian Pacific Railway Limited (“Canadian Pacific” or “CP”) submits this brief further comment addressing testimony offered at the Board’s March 15 hearing by James Nolan concerning Canadian Regulated Interswitching. Mr. Nolan asserted that “cycle times” were lower during a several year period when Canada’s regulatory interswitching mandate was extended to shippers within a radius of 160km (approximately 100 miles) of an interchange in the three prairie provinces (Manitoba, Saskatchewan, and Alberta), as compared to 30km (approximately 18.6 miles) under the regulations applicable before and after this period. (For convenience we refer to this period as the period of “Extended Regulated Interswitching” or the “ERI Period”). Mr. Nolan claimed that a regression he performed supports this conclusion.<sup>1</sup>

Canadian Pacific has a good understanding of the market facts relating to the ERI Period and wishes to inform the Board, respectfully, that Mr. Nolan’s assertions are both incorrect as a matter of fact and unsupported by reliable evidence. These Supplemental Comments are verified by Tyme Wittebrood, CP’s Director of Regulatory Finance.

---

<sup>1</sup> Mr. Nolan also asserted, without evidentiary foundation, that shippers paid lower rates during this period of extended Regulated Interswitching.

**First**, in Canadian Pacific’s experience, the imposition of the ERI regime *did not* contribute to improved cycle times. Mr. Nolan’s assertions and purported regression results are squarely inconsistent with CP’s own real-world experience. In fact, cycle times did not generally improve during the ERI Period, contrary to Mr. Nolan’s assertions. Plotted in Figure 1 below are the Western Canada CN/CP grain cycle time statistics from the Grain Monitoring Program (“GMP”) data that CP believes Mr. Nolan relied upon for the period 1999 through 2018 (the last year examined by Mr. Nolan).<sup>2</sup> The ERI Period – from August 2014 through August 2017 – covered the three crop years (the period during which grain is harvested and transported by rail to market) of 2014-15, 2015-16, and 2016-17 – as indicated on the chart.<sup>3</sup> Grain cycle times are shown as the red line, which shows that cycle times were steadily decreasing prior to 2014, but plainly did not improve during the ERI Period. At best, after a long period of steadily improving cycle times, cycle times generally leveled off during the ERI Period.

---

<sup>2</sup> Mr. Nolan implied that he used data reported by Quorum Corporation (“Quorum”), a monitor appointed under the Government of Canada’s GMP. The data presented herein (in Figures 1 and 2) are based entirely on the Quorum GMP data relied upon by the Canadian Government.

<sup>3</sup> In May 2014 the Canadian Government passed the *Fair Rail for Grain Farmers Act*, S.C. 2014, c.8, which empowered the Canada Transportation Agency (“CTA”) to prescribe different distances for specific regions and goods. The CTA in turn amended the *Railway Interswitching Regulations*, SOR 88/41, to temporarily extend the interswitching limit to 160km from an interchange location in Manitoba, Saskatchewan, or Alberta for a period of two years beginning in August 2014. The Act, and thus the Regulation, was later extended to August 1, 2017 by resolution of Parliament.

**FIGURE 1**  
**GMP DATA ON GRAIN CYCLE TIMES IN WESTERN CANADA 1999-2018**

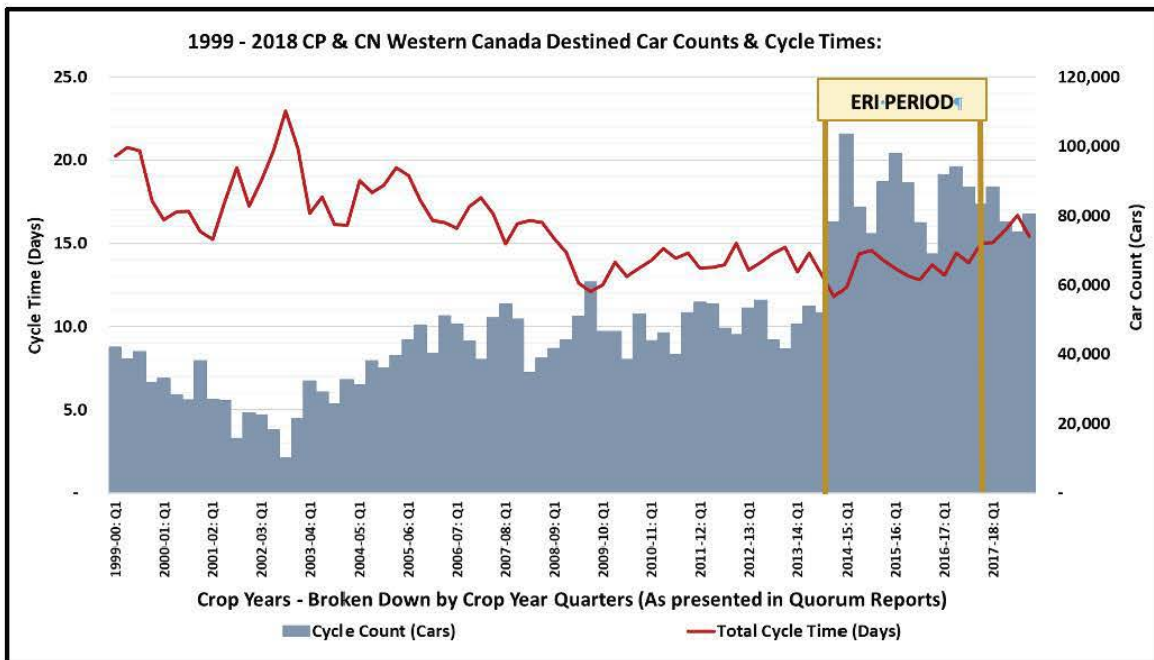
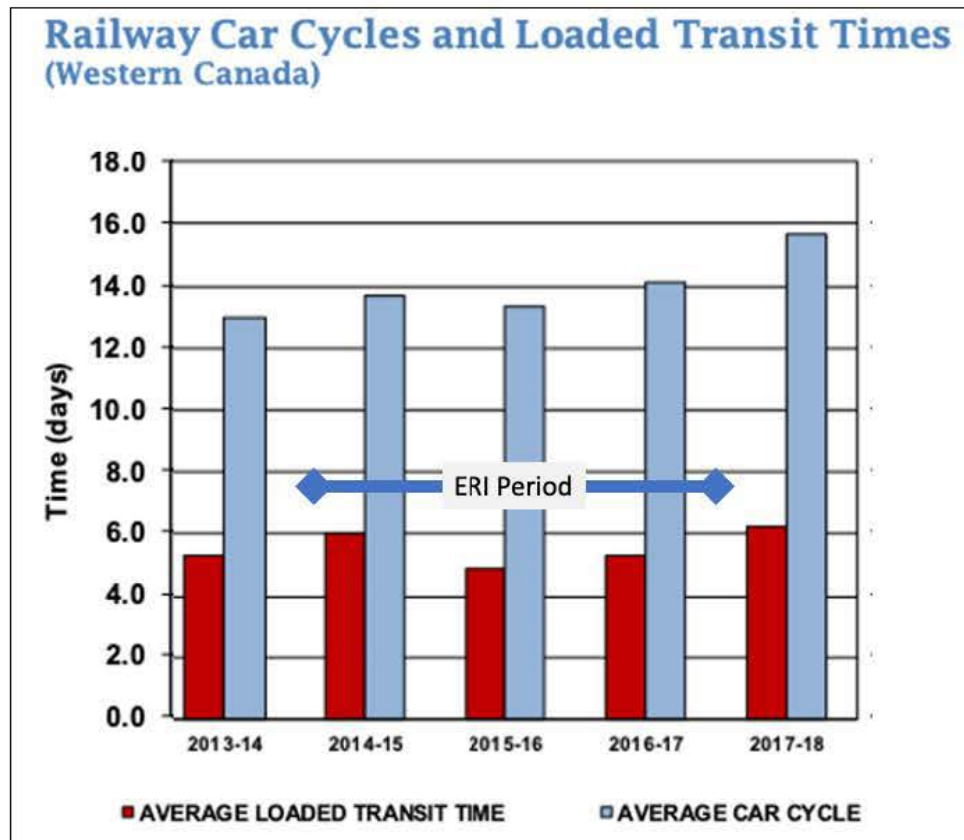


Figure 2 below zooms in on the same data during the five crop years that straddle the ERI Period to reveal this trend more starkly. Figure 2 is a portion of a chart drawn directly from Quorum's Annual Report for the 2017-18 crop year. It examines the three crop years (the period during which grain is harvested and transported by rail to market) during which the extended Regulated Interswitching rules applied and the two crop years before and after that period.

**FIGURE 2<sup>4</sup>**  
**GRAIN CYCLE TIMES IN WESTERN CANADA CROP YEARS 2013-14 TO 2017-18**



The picture drawn by these data is consistent with CP's real-world experience. The access of certain shippers to Regulated Interswitching over longer distances (a) did not significantly alter transportation shipping patterns and (b) did not contribute to improved cycle times. As explained immediately below, Mr. Nolan's regression analysis has not provided any evidence that the picture drawn by these data is somehow masking an effect of ERI on cycle time.

---

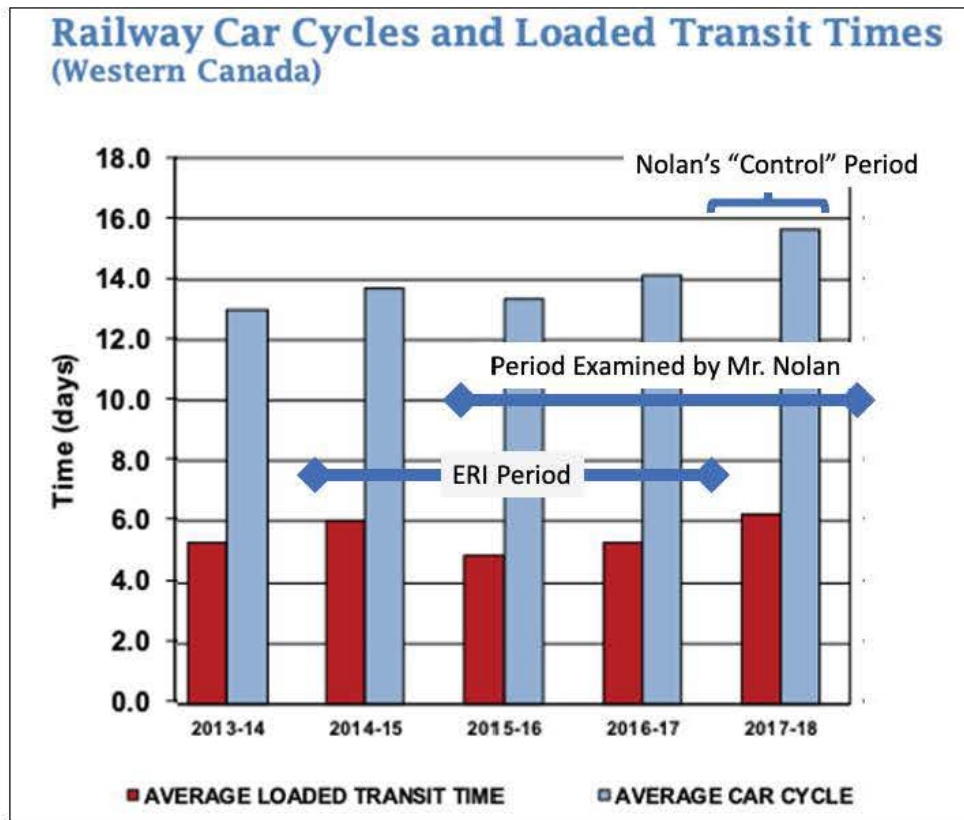
<sup>4</sup> Source: Monitoring the Canadian Grain Handling and Transportation System, Annual Report 2017-2018 Crop Year, at 36, *available at* <http://grainmonitor.ca/Downloads/AnnualReports/AnnualReport201718.pdf>.

**Second**, the “regression” Mr. Nolan presents to support his assertion that cycle times were reduced because of extended Regulated Interswitching is fundamentally flawed and does not support that conclusion.

As a threshold matter, although Mr. Nolan presents his regression as studying a “natural experiment” relating to the onset of extended Regulated Interswitching, that is not what Mr. Nolan studied. To the contrary, although the ERI Period began in August 2014, Mr. Nolan’s regression examined no data prior to August 2015. As a result, there is no “before-and-after” comparison of the world without ERI (prior to 2014) as compared with the regime of ERI (2014-2017) to support a claim that ERI led to reduced cycle times. As shown above, that assertion is contradicted by the facts: cycle times did not improve during the ERI Period.

Instead, Mr. Nolan’s regression examined only the three year period that included the second and third years of ERI and the one year following the end of the ERI Period. All of his conclusions thus depend on predictions offered by his regression based on a *single* crop year (2017-18) of what cycle times would have been during two years of the ERI period (2015-16 and 2016-17) had there not been ERI, as shown in Figure 3 below. Mr. Nolan provided no justification for using this single year to construct his control period, while ignoring all data prior to the ERI Period. Moreover, as discussed below, Mr. Nolan’s regression appears to do a poor job of explaining other factors that were likely impacting cycle times in 2017-2018. Such confounding factors, if not properly accounted for, would render Mr. Nolan’s “control” period, and thus his results, unreliable for saying anything about the effect of extended Regulated Interswitching on the rail network in Western Canada.

**FIGURE 3**  
**ERI PERIOD AND PERIOD EXAMINED BY MR. NOLAN**



CP has not been able to examine Mr. Nolan’s actual regression results because no backup detail or workpapers were provided. Mr. Nolan vaguely referred to his student’s linear regression being performed on data obtained in part from Quorum’s GMP data, as well as data collected by his students, but did not offer the actual full data set or any citation thereto. Indeed, although Mr. Nolan implied that his work had been published somewhere, he cited no such publication and CP has been unable to find any evidence of any such publication. However, on the face of the regression results Mr. Nolan presented to the Board, it is apparent that those results provide no support for his assertions, for at least the following reasons.

- Most fundamentally, Mr. Nolan’s regression model is very poorly specified for purposes of drawing conclusions about what influenced car cycle times during the period he

examined. There are very few statistically-significant variables. The only strongly significant variable in his analysis is the “Interswitching” variable, but it is quite apparent that extended interswitching (or the lack thereof) is not the only relevant factor driving grain shipment cycle times. We explore several obviously relevant factors that Mr. Nolan ignored below.

- Mr. Nolan does not provide a measure of the “goodness of fit,” such as an “R-squared,” for his regression results. An R-squared is a basic statistical metric indicating how well any regression model is doing at explaining differences in the dependent variable – here, cycle time. A very low R-squared would indicate that most of the variation in cycle times is not captured by Mr. Nolan’s specification, which leaves his analysis more prone to potential bias.

- Mr. Nolan’s findings regarding his variable of interest, “interswitching,” are vulnerable to bias from omitted factors that explain cycle time variations *but were not included in the regression*. In other words, Mr. Nolan is relying on his “interswitching” variable to capture *only* the effect of ERI on car cycle time. But, if the other variables in his regression are not doing a good job of explaining car cycle time in the absence of ERI, then it is more likely that his interswitching variable is picking up some combination of factors that (i) are not included in his regression, (ii) *do* affect car cycle time and (iii) happened to be correlated with his “interswitching” measure.

- Based on CP’s knowledge of rail operations and the factors influencing railcar cycle times for grain and other commodities, it is obvious that Mr. Nolan’s regression did not examine many (if not all) of the pertinent variables relating to railroad operations that can influence cycle time significantly. For example:

- **Length of Haul.** Mr. Nolan’s regression does not appear to include *any* measure of the length of the haul for the shipments in question, despite the fact that longer hauls tend to drive longer car cycle times. Length of haul is known to change from year to year as the mix of traffic changes over time in response to market

conditions. The CTA specifically controls for length of haul in the Maximum Revenue Entitlement regulatory program it administers with respect to the rail movement of Canadian grain traffic.

- **Unit Train vs. Single-Car Handling.** Mr. Nolan does not account for whether shipments were handled in unit train or in less-than-unit train blocks, despite the fact that unit train handling tends to reduce cycle times. In CP's experience, the steady decline in grain car cycle times from 2000 onwards was significantly influenced by the steady increase in the percentage of grain moving in unit trains.<sup>5</sup>
- **Number of Interchanges.** Mr. Nolan's regression does not control for the number of railroads or interchanges involved in each movement, despite the fact that the number of interchanges is a meaningful determinant of car cycle time.
- **Efficiency Differences Among Railroads.** Mr. Nolan's regression appears not to control at all for underlying differences across railroads in car cycle time, despite the fact that cycle times can vary based on the railroad handling any given shipment. (Stated another way, Mr. Nolan does not examine "carrier fixed effects.").
- **The Presence of Network Congestion.** Finally, and perhaps most significantly, Mr. Nolan's regression did not examine factors relating to network congestion. Although he did assess the "volume of shipments" (presumably just grain shipments given his data source), this is a crude measure of conditions that are relevant to the cycle time for any particular movement. The fact that this measure is not significant suggests it is not effectively accounting for the degree to which traffic growth, coupled with extreme weather events during 2017-2018 and other conditions, led to network congestion that affected cycle times..

This latter point is a glaring omission given that Mr. Nolan's entire regression result was driven by a single year "control period" – namely the 2017-2018 crop year. It is well known that railroad operating conditions in Western Canada were significantly degraded as a result of extreme winter weather (not just rain in Vancouver or wind chills in Regina) coupled with extreme congestion, particularly on CN's rail network. Indeed, CN's operating problems led to the resignation of its CEO in March 2018.

Both CN's own reporting and the Grain Reports prepared by Quorum, Transport Canada's Monitor, reflect the extraordinary impact on cycle times of the combination of a record

---

<sup>5</sup> For example, the percentage of traffic that CP moved in unit trains of 100 cars or more increased from 38% in the 2012-2013 crop year to 54% in the 2017-2018 crop year.

grain harvest, high volumes of non-grain traffic on CN in particular, and extreme winter weather in Western Canada:

- CN's March 5, 2018 press release announcing the resignation of CEO Luc Jobin stated that CN "recognizes the immediate operational and customer service challenges the company has been facing since Fall 2017 – led by high demand and insufficient network resiliency, coupled with severe winter weather conditions."<sup>6</sup>
- The Grain Report for April 2018 (the month after CN's CEO resigned), noted the uptick in cycle times and reported that rail carriers attributed the increased cycle times to "an unanticipated surge in traffic, a larger-than-expected crop and the debilitating effects of a cold and snowy winter."<sup>7</sup>
- As CN explained in its 1Q 2018 earnings call, the first for former-CEO Jean-Jacques Ruest:

"We had lower resiliency in some high volume areas going into winter. This made maintaining fluidity very challenging. Fluidity is the most important thing. This lower resiliency, coupled with extreme the harsh winter conditions in those same areas, resulted in a decline in the service levels and an increase in cost per for operation as evidenced in our operating metrics."

- CN's own reported operating metrics show the dramatic increase in terminal dwell and decreases in car and train velocity on CN's system during this period, as shown in Figure 4 below.

---

<sup>6</sup> CN Press Release (Mar. 5, 2018) *available at* <https://www.cn.ca/en/news/2018/03/ceo-luc-jobin-is-leaving-cn-board-appoints-jeanjacques-ruest-int/>.

<sup>7</sup> Grain Monitoring Report for April 2018 & Q3 2017-18 CY (May 30, 2018) at 7, *available at* <http://grainmonitor.ca/Downloads/MonthlyReports/MonthlyReport201804.pdf>.

“Unfortunately, they also came at a time when the GHTS was confronting a total grain supply of 80.6 million tonnes, the second largest on record. Furthermore, non-grain shipments were also at historic levels, with all Canadian-originated railway traffic having increased by 3.3% in the 2017- 18 crop year, to 374.6 million tonnes. This heightened demand for the railways’ limited carrying capacity led many stakeholders to voice concern over the reduced priority that grain shipments might again be given. Such treatment, it was feared, could bring about service problems akin to those encountered in the 2013-14 crop year, when the GHTS grappled with a record 81.9-million-tonne grain supply.

“Late in the 2016-17 crop year, it was observed that the average loaded- transit and car-cycle times associated with Western Canadian grain shipments had already begun to climb. This continued into the 2017-18 crop year, with year-to-date increases of 15% being typical by the close of the first quarter. The situation continued unabated into the second quarter and worsened still further in the third. At its peak in February 2018, the average loaded transit time on grain movements to Western Canadian ports had increased by 36.2%, reaching 7.9 days against 5.8 days a year earlier. A similar gain was observed for the average car cycle, which stood at 19.9 days as compared to the previous February’s 14.6 days.

“With the elongation of the railways’ car cycle significantly constricting the available supply of railcars, the growing backlog of unfilled car orders soon led to burgeoning country elevator stocks and longer times in inventory. The downstream effects of delayed shipments presented corollary issues for terminals starved of inbound grain – especially along the west coast – which soon found themselves short of the grain they needed to load ships in a timely manner. This in turn led to port congestion and vessel delays.

“The situation at Prince Rupert was made even more difficult as CN began restricting the number of hopper cars it was making available for the movement of grain in the corridor. Despite hopper-car orders that reached beyond the previous crop year’s handle, grain shipments through the Prince Rupert Grain terminal fell by 13.9%. Latent concerns over the setting of reduced movement priorities for grain seemed justified when gauged against volume increases of 26.0% for containers and 46.8% for coal.”<sup>10</sup>

The fact that Mr. Nolan’s regression apparently failed to find any indication of an effect of ERI on cycle times for movements to Eastern Canada or the United States, without explanation of why ERI would affect movements to the West and not these two regions, tends to

---

<sup>10</sup> *Id.* at 44.

confirm the regression's failure to identify the operational factors that affected cycle times in Western Canada during the ERI period and in the winter of 2017-2018, and thus that his estimated effect of ERI on cycle times is likely an artifact of a poorly specified regression.

Because Mr. Nolan's regression did not purport to measure or assess the likely drivers of grain car cycle times in Western Canada, it in effect merely compared cycle times during the ERI Period with those during the 2017-18 crop year and attributed the increase to there being less "Interswitching." Such a conclusion is not supported by Mr. Nolan's regression or the factual record. The effect Mr. Nolan's regression purported to measure had nothing to do with the sunset of extended Regulated Interswitching and everything to do with extreme weather and congestion conditions principally affecting CN's network in Western Canada during the winter of 2017-18. CP accordingly submits that the testimony and regression put forward at the Board's hearing in this proceeding is entitled to no weight.

Respectfully submitted,



David L. Meyer  
**LAW OFFICE OF DAVID L. MEYER**  
1105 S Street N.W.  
Washington, D.C. 20009  
Email: David@MeyerLawDC.com  
Telephone: (202) 294-1399

Cassandra P. Quach  
Canadian Pacific  
7550 Ogden Dale Road S.E.  
Calgary, AB T2C 4X9 Canada  
Email: Cassandra\_Quach@cpr.ca  
Telephone: (888) 333-6370

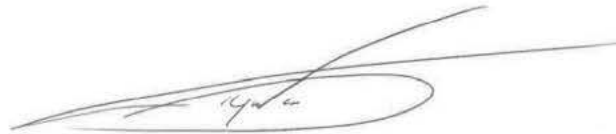
*Attorneys for Canadian Pacific*

April 4, 2022

### VERIFICATION

I, Tyme Wittebrood, declare under penalty of perjury under the laws of the United States that the facts set forth in the foregoing Further Supplemental Comments of Canadian Pacific are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on this \_4th day of April, 2022.

A handwritten signature in black ink, appearing to read 'Tyme Wittebrood', is written over a horizontal line.

Tyme Wittebrood