BEFORE THE CANADIAN RADIO-TELEVISION AND TELECOMMUNICATIONS COMMISSION

IN THE MATTER OF AN APPLICATION BY SHAW CABLESYSTEMS G.P. TO REVIEW AND VARY TELECOM REGULATORY POLICY CRTC 2011-703 – BILLING PRACTICES FOR WHOLESALE RESIDENTIAL HIGH-SPEED ACCESS SERVICES

APPLICATION OF SHAW CABLESYSTEMS G.P.

Filed: February 3, 2012

ABRIDGED

INTRODUCTION

1. This application ("Application") to review and vary Telecom Regulatory Policy CRTC 2011-703, *Billing practices for wholesale residential high-speed access services* (the "Decision") is made by Shaw Cablesystems G.P. ("Shaw") pursuant to section 62 of the *Telecommunications Act* and section 22 of the *CRTC Rules of Practice and Procedure*.

2. In the Decision the Commission finalized Shaw's Third Party Internet Access ("TPIA") Service rates at levels much lower than those proposed by Shaw, which had been supported by its costing evidence. The new rates are also much lower than the pre-existing approved rates and the rates approved in the Decision for similar services offered by most other carriers. The Commission justified these lower rates by making a number of unsubstantiated, arbitrary and internally inconsistent adjustments to Shaw's TPIA Cost Study[1] that was submitted to the Commission in December of 2010 (the "Cost Study"). As part of these adjustments, the Commission replaced Shaw's actual and forecasted costs with the Commission's own views of what Shaw's costs ought to be, with a view to micro-managing a competitive environment in which incentives for innovation and investment are dulled, rather than enhanced.

3. The net impact of the Commission's adjustments to Shaw's Cost Study is to unfairly favour third party Internet service providers ("independent ISPs"), who do not risk their own capital to invest in broadband facilities, over facilities-based carriers such as Shaw which invest billions of dollars in such networks. These networks drive Canada's digital economy and its development.

4. The goal of the proceeding in Telecom Public Notice of Consultation 2011-77, as amended ("NoC 2011-77"), was to design a wholesale billing model that would promote Canadians' use of the Internet, with greater speeds and higher quality. In particular, the CRTC's objective was to recalibrate the wholesale billing model

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[1] Shaw Cablesystems G.P. Economic Evaluation in Support of Third Party Internet Access Service Monthly End-user Rates, December 10, 2010.

to give independent ISPs more flexibility to compete, while maintaining the incentives for facilities-based carriers to continue making network investments. As Shaw emphasized throughout the proceeding, one of the critical criteria for realizing that objective is that carriers such as Shaw are able to realize a reasonable return on their significant network investments.[2] This has been echoed in Government comments that network owners have a reasonable expectation to be fairly compensated for their ongoing investments.[3]

5. The Decision's re-engineering of the broadband market through economic regulation clearly contravenes the spirit and letter of the *Policy Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives* (the "Policy Direction"). The Policy Direction requires that the Commission, when relying on regulation, must use measures that interfere with the operation of competitive market forces to the minimum extent necessary and that neither deter economically efficient competitive entry nor promote economically inefficient competitive entry. The Policy Direction prohibits the Commission from favouring either Canadian carriers or resellers and requires the Commission to have a view to increasing incentives for innovation and investment as part of any regime for mandated access to wholesale services.

6. The Commission's excessive intervention in the broadband market through this Decision is exacerbated by the fact that there is already intense competition in the retail Internet services market, particularly in Western Canada. The Decision ignores the ample evidence of that competition provided at the hearing, including Shaw's new innovative and customer-friendly Internet offerings. There is therefore no reason to give independent ISPs an artificial competitive advantage by providing them with TPIA Services at artificially low rates.

7. Furthermore, the Commission's adjustments to Shaw's Cost Study undermine the Commission's and the Government of Canada's over-arching goal of

[2] Final Comments of Shaw, July 29, 2011, paragraph 14.

[3] Final Comments of Shaw, July 29, 2011, paragraph 3, in which Shaw quoted Minister Clement from Evidence of Hon. Tony Clement, then Minister of Industry, to Standing Committee on Industry, Science and Technology, Number 059, 3rd session, 40th Parliament; Tuesday, March 1, 2011.

improving the quality and reach of broadband services in Canada in order to ensure that the Canadian economy is a leader among digital economies around the globe. The Commission's arbitrary adjustments to Shaw's costs and costing assumptions undermines Shaw's incentive to continue reinvesting in its broadband network by denying the company a reasonable return on its investment.

8. Shaw is also asking the Commission to review and vary another aspect of the Decision which provides the Incumbent Local Exchange Carriers (the "ILECs") with an additional 10% mark-up for their Fibre-to-the-Node (FTTN) services, while denying the same economic incentive to cable carriers like Shaw. Again, this determination by the Commission is totally inconsistent with the Policy Direction which requires regulation to be implemented in a symmetrical and competitively neutral manner. The Commission's determination on this issue gives Shaw's most significant competitors a 10% incentive to invest in more fibre facilities – while denying a similar incentive to Shaw.

9. As discussed in greater detail in this Application, these determinations in the Decision give rise to significant doubt as to the reasonableness of the Decision, justifying a review and variance by the Commission. The specific relief requested by Shaw and the arguments in support of this Application are set forth below.

REQUEST FOR RELIEF

10. Shaw respectfully requests that the Commission review its determinations with respect to Shaw's Cost Study and vary its Decision as follows:

(a) Revise Shaw's traffic growth projections to reflect the forecasts in Shaw's Cost Study – #% for the 3rd year, #% for the 4th year and #% in years 5 to 10.

(b) Revise Shaw's TPIA subscriber growth forecasts back to the level of #% of Shaw's total Internet customers by the end of the 10 year study period in Shaw's Cost Study which reflects Shaw's actual experience.

(c) Revise Shaw's forecast for retail subscriber growth back to reflect the forecasts in Shaw's Cost Study – #% in the 1st year, #% in the 2nd year, #% in the 3rd year and #% for years 4 to 10.

(d) Revise Shaw's Carrier Service Group (CSG) costs back to those set out in Shaw's Cost Study, which are based on Shaw's actual costs of resources devoted to the TPIA Service. The Commission's decision to apply Rogers' and Videotron's costs to Shaw is unsupported by any evidence.

(e) Revise Shaw's bad debt ratio back to the level set out in Shaw's Cost Study.

(f) Revise paragraph 109 of the Decision by restoring the Cost Study start date back to 1 September 2010 for all purposes, including with respect to capital unit cost changes.

11. In addition to the foregoing adjustments to the determinations made in respect of Shaw's cost of providing TPIA Services, Shaw respectfully requests that the Commission vary the Decision so as to apply the same additional 10% mark-up on Shaw's services, which require the deployment of fibre deeper into the network, as the Commission applied to the ILECs' FTTN services.

12. The foregoing adjustments will result in revised rates for Shaw's TPIA Services. Following the Commission's determination in this Application, Shaw will submit revised TPIA tariffs, with supporting costing studies, to reflect that determination.

13. Given that the rates approved in the Decision do not permit Shaw to make a reasonable return on its TPIA Services, Shaw respectfully requests that the Commission immediately make those rates, and the rates under Shaw's recent tariff notice that provides for three new Internet services,[4] interim pending the Commission's final determination of this Application. Shaw also requests that new rates approved as a result of this Application be made effective as of the date that the rates are made interim and be applied retrospectively to that date. If the Commission does not accede to this request and make the current rates interim, this would result in economic loss to Shaw, which it will not be able to recoup.

[4] Tariff Notice 18 to General Tariff 26300 – Third Party Internet Access (TPIA) Service.

14. After reviewing and varying the Decision in accordance with this Application, the Commission will have succeeded in meeting all of the objectives of the proceeding that took place under NoC 2011-77 – independent service providers will have greater flexibility under the billing models approved by the Commission and Shaw's TPIA rates will allow Shaw to continue making the significant network investments that provide the foundation for the development of Canada's digital economy.

JURISDICTION AND TESTS FOR REVIEW AND VARIANCE OF A CRTC DECISION

15. The Commission is empowered by section 62 of the *Telecommunications Act* to review and rescind or vary any decision made by it, either on its own motion or on application. Shaw was a party to the Commission's public proceeding which led to the Decision and the Decision approves new rates for Shaw's TPIA Service. Shaw therefore has standing to bring this application.

16. The Commission has established timelines and tests for when it will review and vary a decision. These tests are set forth in Telecom Information Bulletin CRTC 2011-214 (the "Bulletin"). Shaw's application has been filed within the 90 day period (from the date of the Decision) specified in section 7 of the Bulletin.

17. In section 5 of the Bulletin the Commission summarized its tests for review and vary applications as follows:

> 5. In order for the Commission to exercise its discretion pursuant to section 62 of the Act, applicants must demonstrate that there is substantial doubt as to the correctness of the original decision, for example due to
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> (i) an error in law or in fact;
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> (ii) a fundamental change in circumstances or facts since the decision;
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> (iii) a failure to consider a basic principle which had been raised in the original proceeding; or
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> (iv) a new principle which has arisen as a result of the decision.

18. In this Application Shaw identifies a number of errors of fact and law that the Commission has made in the Decision concerning Shaw's costs and its cost projections. Shaw also identifies a number of instances in which the Commission has failed to comply with the Policy Direction contrary to section 47(b) of the *Telecommunications Act*. The Commission has also applied costing principles which impose other carriers' costs on Shaw, contrary to the Commission's Phase II costing principles which require that rates be based on the carrier's own long run incremental costs, not the costs of other carriers. The impact of these errors is amplified as a result of changes that have taken place in the Internet services marketplace since the initiation of the proceeding that led to the Decision, particularly the significantly higher speeds that Shaw is now offering, and the Commission's new approach to TPIA billing, which erroneously characterized Shaw's billing model as including unlimited usage.

19. These grounds are identified and discussed in detail in the body of this Application. In Shaw's respectful submission they provide evidence of substantial doubt as to the correctness of the original decision and justify the variation of the Decision in the manner requested by Shaw.

BACKGROUND FACTS

20. Shaw filed its Tariff Notice 15 and the Cost Study on December 10, 2010 following the issuance of Telecom Regulatory Policy CRTC 2010-632; *Wholesale high-speed access services proceeding* ("TRP 2010-632") and its requirement for aggregated points of interconnection (POIs) within Shaw's serving territory. Since Shaw had already implemented aggregated POIs throughout most of its serving territory prior to the release of TRP 2010-632, the revised rates submitted in Shaw's Cost Study mainly reflected an update to the costs and expenses in providing TPIA Service since the last cost filing completed in 2004.

21. On January 7, 2011, Shaw filed Tariff Notice 16 to revise the volume based terms and rates within its TPIA Tariff that had also remained unchanged since

2000[5]. Shaw received no comments on its tariff filing. The Commission did not approve Tariff Notice 16. Instead, following the issuance of the Decision, the Commission sent a letter to Shaw indicating that the file is now closed.

22. Earlier in 2010, the Commission approved the Bell Companies' proposals with respect to usage based billing ("UBB") rates for their wholesale residential services.[6] Ultimately, that led to the Commission's decision in Telecom Decision CRTC 2011-44, which resulted in considerable public debate relating to the merits of UBB and the subsequent issuance of NoC 2011-77. The proceeding included a review of the wholesale billing models and rates of all of the major ILECs and cable carriers, including Shaw, relating to wholesale residential Internet services. Shaw's Tariff Notice 15 and corresponding Cost Study filed pursuant to TRP 2010-632 were also included as part of the scope of NoC 2011-77.

23. Unlike retail Internet services that have been forborne from price regulation due to the level of competition in the marketplace, wholesale TPIA services offered by cable carriers, and wholesale internet access offered by the ILECs, are services that the Commission requires them to provide at regulated rates in order to support the ability of independent ISPs to compete in the market.

24. Cable carriers, including Shaw, had been permitted since 2000 to introduce UBB for their wholesale third party Internet access services, known as TPIA services, provided that UBB was also applied for their own retail customers.[7] Historically, Shaw had not imposed UBB charges on its retail customers and as a result, even though Shaw's TPIA tariff included volume-based charges, it had not historically imposed those charges on its TPIA customers. The costing studies that Shaw has filed to support its TPIA rates, including the Cost Study filed in December of 2010, were based on assumptions that contemplated the same fixed volume of usage included with Shaw's retail services, not an unlimited amount of usage.

[5] Order CRTC 2000-789.
[6] Telecom Decision CRTC 2010-255.
[7] Telecom Order CRTC 200-789.

Rather than applying a volume charge under TPIA, Shaw's practice was to treat TPIA end-users in the same manner as its own retail customers in accordance with its acceptable use policy[8]. When TPIA end-users exceed the bandwidth usage included with a particular Internet service, Shaw would notify the relevant TPIA provider and, if necessary, the TPIA end-user would upgrade to an Internet service with higher bandwidth usage. At no point has Shaw ever characterized its TPIA service as including an unlimited volume of usage.

25. As referenced above, in its Decision the Commission made modifications to Shaw's Cost Study and its proposed rates that were not justifiable based on the record of the proceeding and which were inconsistent with important elements of the *Policy Direction.* The Commission has also mischaracterized Shaw's TPIA service as "unlimited" based on the incorrect assertion that Shaw's existing TPIA service provided for unlimited usage. While Shaw is not contesting the requirement in the Decision for cable carriers to use either a capacity-based tariff or an unlimited usage-based tariff, the fact that the costing evidence filed by Shaw well in advance of that determination was based on a limited usage model means that the approved rates do not recover the additional volume of traffic associated with unlimited usage. These and other errors have led Shaw to seek review and variance of the elements of the Decision outlined above and addressed in detail in the body of this application.

TRAFFIC GROWTH

26. In the Decision, the Commission revised Shaw's Internet traffic growth projections downwards despite considerable evidence on the public record that Shaw's estimates were realistic, if not conservative. This section of the Application explains the impact and flaws in the Commission's adjustments to Shaw's traffic growth projections, with specific reference to its inconsistency with other determinations in the Decision, the evidence on the record and recent developments in the Internet marketplace.

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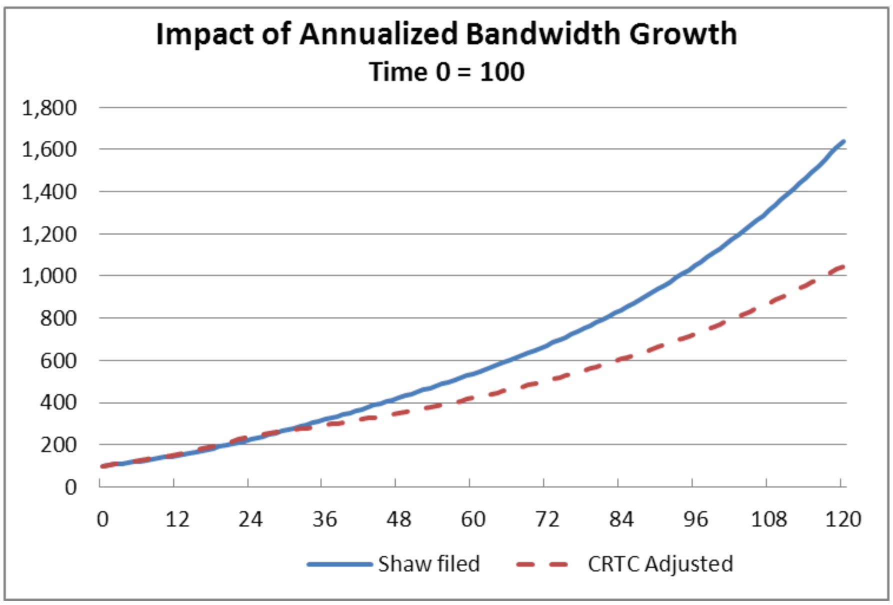
[8] http://www.shaw.ca/Terms-of-Use/#section4.

The Impact of the Adjustments

27. The Commission's adjustments to Shaw's Internet traffic growth projections had the effect of reducing all of Shaw's costs that are causal to the provision of TPIA services, thereby denying the company a reasonable return on its investment in these services.

28. The cost impact of the Commission's adjustments to Internet traffic growth estimates is significant. Over the ten year life of the study, the Commission's traffic growth assumptions result in approximately 40% less peak traffic per end-user by year 10 than what Shaw has projected, as illustrated by the graph below:



Note: the graph shows a relative measure of traffic comparing the traffic forecasted by Shaw versus that set out by the Commission in 2011-703 over 10 years.

Inconsistencies in the Adjustments

29. In the Decision, the Commission also increased Shaw's projections for both retail and TPIA customer growth. Those adjustments were unreasonable for the reasons discussed in a separate section below. At the same time, the Decision transformed Shaw's TPIA tariff into an unlimited usage tariff, which is not what Shaw had proposed or modelled in its supporting Cost Study.

30. Higher retail and TPIA subscriber growth and an unlimited usage TPIA billing model will certainly drive the volume of Internet traffic higher – yet the Commission has inexplicably lowered traffic volume estimates below the levels originally projected by Shaw for engineering purposes and below the levels projected by independent monitors of Internet traffic trends.

31. In addition, since filing its Cost Study with the Commission, the retail Internet services market in which Shaw operates continues to become more and more intensely competitive. This has prompted Shaw to significantly enhance the speeds and value of its Internet offerings over the past year. These changes have driven, and will continue to drive, Internet traffic volumes on Shaw's network still higher and are not reflected in the Decision or Shaw's Cost Study.

32. The cumulative impact of the Commission's inconsistent adjustments to Shaw's traffic and customer growth projections, the Commission's imposition of an unlimited usage model on Shaw and the changes in Shaw's Internet service offerings, is to artificially reduce Shaw's projected costs, and hence its rates, to levels that are unreasonably low. This encourages uneconomic entry in the Internet services market and denies Shaw the ability to recover its costs and make a reasonable return on its investment. This type of regulatory measure distorts the competitive market and dictates competitive outcomes in a manner that is inconsistent with the *Policy Direction*. The distortive impact is particularly threatening and acute in a highly competitive market, such as the retail Internet services market in Western Canada in which Shaw competes.

33. The Commission's error with respect to traffic growth projections is not something that could be easily fixed on a going forward basis. This is because, in paragraphs 166 to 169 of the Decision, the Commission determined not to schedule annual reviews. This means that Shaw bears the risk of the Commission's traffic projections being incorrect, unless Shaw pursues another uncertain process with the Commission, which would not redress the Commission's error in time to prevent considerable economic harm to Shaw.

34. In addition, while the Decision allows Shaw to file a capacity-based tariff, this is not a viable option for Shaw since the arbitrary adjustments made by the Commission to Shaw's Cost Study also artificially lowers the capacity-based rates. This has left Shaw with no reasonable options to recover the costs associated with the provision of this mandated wholesale service let alone earn a reasonable return on its investment.

Traffic Growth – The Evidence on the Record and Industry Developments

35. There was considerable evidence on the record of this proceeding concerning anticipated growth in Internet traffic volumes. Shaw's Cost Study forecasted an annual Internet traffic growth of #% for the first 2 years of the forward-looking study period, #% for the 3rd year, #% for the 4th year and finally #% annual growth from years 5-10.[9] This projected growth was based on actual forecasts used by Shaw's Engineering department for internal network planning purposes and was supported by Shaw's historical information as well as industry forecasts. These forecasts guide Shaw's investment decisions and set the roadmap for what Shaw's network will look like over the next several years. By making significant adjustments to Shaw's forecasts, the Commission is second guessing Shaw's business judgment in this regard. Shaw submits that this is not the role of the Commission. Furthermore, from a policy perspective, the logical implications of the Commission's adjustments are troubling, given that they would ultimately result in a less robust network that will be less equipped to meet the growing needs of consumers.

36. In the Decision, the Commission effectively agreed with Shaw's forecast for the first two years of the ten year study period, but thereafter inexplicably reduced traffic growth to 20% for the remaining 8 years. The Commission provided no reason or justification for the 20% traffic growth estimate it has imposed.

[9] This was provided in the cost model provided to the Commission and graphically in Shaw(CRTC)15Sept10-107 b) ii.)

37. Historical evidence of traffic growth for Shaw indicates very strong growth for the past three years at approximately #% per annum.[10] This growth was achieved when the number of Shaw's TPIA end-users declined and the growth rate for its own retail high-speed Internet customers was approximately #%. This supports the view that recent historical traffic growth has had much more to do with increased customer usage than with subscriber growth. This view is consistent with the common perception that increased use of the Internet for video applications is a major driver of Internet traffic growth. The Netflix phenomenon is a prime example of this and it is reflected in Cisco's Internet usage projections which attribute much of the forward-looking growth to video applications.[11] When Netflix was first introduced in Canada, Shaw experienced a 100% increase in Internet traffic volume over a six month period. ComScore's Video Matrix also indicates that Canada had the highest number of on-line videos per user worldwide in October 2011.[12]

38. The Commission has erred by disregarding considerable evidence on the record regarding traffic growth projections. Several independent industry members provided traffic forecasts that substantially exceed the 20% used by the Commission. The cable carriers filed a forecast from Cisco showing a compound annual growth rate of 33% to 2014. This same forecast was referenced by the Commission's own Navigating Convergence Report issued in August 2011. Even the Canadian Network Operators Consortium (CNOC), who represents independent ISPs using Shaw's TPIA service, expected a minimum traffic growth rate of 50% per year.[13]

39. While evidence of future traffic growth on the record of this proceeding varies widely, the Commission's traffic growth assumptions, which it has imposed on

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[10] Shaw(CRTC)04Feb11-104.

[11] Comments of Cable Carriers in Telecom Notice of Consultation 2011-77, March 28, 2011, Appendix B, Chart B-1.

[12] ComScore Video Matrix Selected Markets by Videos per Viewer and Online Video Viewing Penetration October 2011. http://www.comscore.com/Press_Events/Press_Releases/2011/12/More_than_200_Billion_Online_Videos_Viewed_Globally_in_October

[13] Comments of CNOC in Telecom Notice of Consultation 2011-77, March 28, 2011, paragraph 20.

Shaw for rate-making purposes, are generally lower than any of the evidence on the record before it. To lower the traffic growth estimates in the manner the Commission has, without citing any evidence or rationale for doing so, constitutes a serious error that will have significant negative repercussions for the carriers concerned.

40. While it is true that it is very difficult to accurately project Internet traffic more than a couple of years out, and it is extremely difficult to do in years five to ten,[14] it would be reckless for any carrier to low-ball Internet growth in the manner the Commission has done. Five years is a long time in the Internet world and ten years is an eternity – yet the Commission has locked Shaw into its estimate, substituting the Commission's own judgment for the judgment of traffic engineers, independent monitors of Internet traffic growth and industry members like CISCO. If past history has taught us anything, it is not to underestimate Internet traffic growth. It took Netflix just two years to generate one million customers in Canada for its video film and television services. For the Commission to predict flat growth of 20% per annum for Internet traffic three to ten years out is nonsensical in the context of such industry developments. It also makes no sense to think that traffic growth will drop from #% to 20% in one year – rather than trending down in the manner modelled by Shaw. The difference is that Shaw's forecast is not arbitrary – it reflects informed business and technical judgment about what our network will need to look like to meet the demands of the marketplace.

41. Another factor that drives usage is the increased speeds that are being offered to consumers as a result of competition in the marketplace. Over the past year, Shaw has been introducing much higher Internet speeds which directly result in higher customer usage. By way of example, the average peak downstream for a customer subscribed to Shaw's 25 MB speed service is # kbps whereas customers subscribed to Shaw's 50 Mbps service have an average peak

[14] Shaw notes that the Commission imposed the requirement on cable companies to prepare 10 year cost studies under Order CRTC 2000-789, paragraph 83, notwithstanding arguments regarding the challenges of preparing forecasts over that period in such a quickly evolving industry.

downstream usage of # kbps. There is a similar trend for each product as the speed increases. Dramatic increases in traffic on Shaw's network are already taking place with the faster speeds that have been introduced in the past several months. The graph below depicts the significant growth that has taken place since July 2011, shortly after Shaw introduced higher speed services under its Broadband Leadership program.

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42. The evidence provided above illustrates the very dramatic increases in usage that can occur in a very short time-frame through a combination of improved technology, introduction of faster speeds and customer demand for high bandwidth applications like on-line video products.

43. Shaw also has evidence that customers will react to higher speed services and unlimited use services by increasing their network usage. As part of its Broadband Leadership program, Shaw also introduced some packages offering unlimited usage. Based on our experience with those products, it is clear that an unlimited usage service will drive traffic growth per customer much higher. For example, the current downstream peak period demand for Shaw's BB100 service, with a fixed amount of bandwidth usage, is # kbps whereas Shaw's BB 100 package with unlimited bandwidth has a downstream peak period

demand of # kbps or nearly three times the amount. This clearly demonstrates how an unlimited offering will drive traffic growth.

44. As evidenced above, the substantially lower Internet traffic growth projections imposed by the Commission in the Decision are unsupported by industry trends for higher speeds and the imposition of TPIA Services with unlimited bandwidth usage. As Shaw emphasized throughout the Commission’s public process, we want all of our customers, retail and wholesale, to maximize their Internet experience by using it more and making it a bigger part of their lives. However, that requires innovation and investment. Network providers like Shaw will have no incentive to continue to improve Internet speeds if they cannot cover the resulting costs associated with increased usage. Yet that is the box that the Commission's decision is putting them in. By refusing to recognize that customers will continue to increase their usage as Internet speeds increase, and will increase that usage further if unlimited usage is offered, the Commission is in effect putting carriers like Shaw at economic risk if it continues to increase Internet speeds or is required to offer TPIA customers unlimited usage without adequate compensation.

<u>Cost Study Start Date</u>

45. In paragraph 109 of the Decision, the Commission “re-estimated the monthly service costs...by applying unit cost changes to reflect a study start date of 1 July 2011” instead of a start date of 1 September 2010, as Shaw had proposed. This change significantly decreases Shaw’s costs over the life of the Cost Study because capital unit costs are assumed to decline over the life of the Cost Study. By removing ten months from the early life of the Cost Study, the Commission effectively accelerated that decline.

46. The Commission’s approach to the start date constitutes a fundamental error because its adjustment is limited to one variable, namely capital unit costs, and not every material variable, including peak traffic per end-user at the start of the study period. By July 2011, Shaw’s network experienced considerable traffic

growth, both in actual fact, and as was projected in Shaw's Cost Study. Yet, the Commission's determination in paragraph 109 of the Decision makes no provision for that change. By selectively adjusting the start date for certain variables and not others, the Commission is unfairly re-engineering the network provider's costs, to the significant disadvantage of the network provider. The Commission has chosen to accelerate the cost decreases associated with capital unit cost declines over the period between 1 September 2010 and 1 July 2011, while ignoring the significant increases in costs that Shaw will face during that same period as a result of traffic growth. The effect of this arbitrary change is to prevent Shaw from recouping its costs.

47. Given the incomplete, unfair and prejudicial approach that the Commission took to this issue in the Decision, the most efficient and practicable variance is to restore the start date back to what Shaw initially proposed. This solution best ensures that network providers are able to recover their costs of investment, without excessively favouring the independent ISPs.

<u>Retail Subscriber Growth</u>

48. The Commission has unreasonably inflated the forecasts for retail Internet subscriber growth.

49. Whereas Shaw's forecasted retail Internet subscriber growth rate in its Cost Study was #% in the 1st year, #% in the 2nd year, #% in the 3rd year and #% from years 4 – 10, the Commission has arbitrarily dictated that this be changed to 4% per year over the entire 10 years. This would result in Shaw having in excess of # million Internet subscribers by 2021. This change does not reflect Shaw's internal growth forecasts for its Internet product and is not realistic given the mature nature of the Internet market. Annual retail customer growth of 4% for ten years could only be achieved with a collapse of Shaw's competition in the Internet market and stalled wireless data substitution.

50. Considering that the market for high-speed Internet services is relatively saturated and new homes passed are growing at only 1.5%, the 4% growth rate substituted by the Commission in place of Shaw's network engineering projections would require Shaw to take 8% market share from the ILECs over the ten year period. Considering that Shaw estimates that the ILECs currently have 39% of the market share, this would leave them with only 31% at the end of 10 years. This would also preclude any growth in market share by wireless or satellite service providers. This would require a very dramatic swing in demand from telco to cable systems – something that is extremely unlikely given the maturity of this highly competitive market.

51. To underscore this point, despite the fact that Shaw projected a #% increase in subscriber growth in the first year of its Cost Study, growth in 2011 actually increased by only #%. Finally, this illustrates the degree to which the Commission's forecast of 4% growth in retail subscribers per annum is off the mark. The growth rate in retail customers is fully expected to decline over the next decade – not increase. The 4% growth per annum is not realistic.

52. By inflating the growth rate of retail Internet customers, the Commission's adjustments amortize Shaw's costs over a greater number of customers that in all likelihood will never exist. If those customers do not materialize, Shaw will be unable to recover its costs. This highlights how risky it is to be unrealistic with respect to such projections. The Commission's adjustments will unfairly prevent Shaw from being able to charge a reasonable rate for its TPIA service.

<u>TPIA End-user Growth</u>

53. Coupled with its unrealistic growth forecasts for Shaw's own retail customer base, the Commission has substituted its own judgment for Shaw's historical experience with respect to growth in TPIA end-users. Under the Commission's adjustments, TPIA end-users would account for 5% of Shaw's total Internet customers by the end of the 10 year study period, in contrast to Shaw's forecast

of #%, which was based on Shaw's actual experience with growth in demand for its TPIA service.

54. The only rationale provided by the Commission for dismissing Shaw's projection was the assertion that: "…TPIA demand is expected to be higher with the implementation of aggregated POIs than it was in the cable carrier's historical wholesale experience."[15]

55. While this might affect TPIA demand elsewhere in Canada, it will have no effect in Shaw's operating territory. As evidenced by Shaw's filings in proceedings leading up to TRP 2010-632, since 2006, Shaw has offered aggregated POI locations in a manner consistent with the routing of Shaw's own retail Internet traffic[16]. Since that time, independent ISPs have only interconnected at the aggregated POIs. However, as reflected in Shaw's Cost Study and Shaw's interrogatory responses in NoC 2011-77, the number of TPIA end-users declined, not increased, during that timeframe. While we agree that the Decision will provide independent ISPs with additional flexibility to compete, and that this will likely increase the number of TPIA end-users over the coming years, the scale of the increase proposed by the Commission is unrealistic, distortive and unsupported by any information on the record of the proceeding.

56. The Commission's adjustment to Shaw's TPIA end-user forecast has a dramatic impact on Shaw's ability to recover its costs. As with the Commission's adjustments to retail subscriber growth, it results in an amortization of Shaw's costs over a much larger base of end-users that is highly unlikely to ever come to fruition. The impact of the adjustment to the TPIA end-user forecast is magnified by the fact that the 5% imposed by the Commission is applied to the inflated number of Shaw retail end-users projected by the Commission. The combined result of these two highly unrealistic projections by the Commission is to inflate the number of TPIA customers from the then current level of # end-users to a staggering # over the ten year period – or approximately five times

[15] The Decision, paragraph 139.

[16] Comments of Shaw in Telecom Notice of Consultation 2009-26, June 22, 2009.

the level projected by Shaw at the end of year 10. This results in much lower rates per end-user. If the TPIA end-users do not materialize, which is highly probable given our experience with TPIA demand growth and the fact that we have offered aggregated POIs for some time, Shaw will not be able to recover its costs.

Unlimited Usage

57. The Decision erroneously describes Shaw's TPIA service as including "unlimited usage".

> Although many parties proposed new approaches, Bell Aliant in its Atlantic Canada territory only (Bell Aliant in Atlantic Canada), Saskatchewan Telecommunications (SaskTel), Shaw Communications Inc. (Shaw), and TELUS Communications Company (TCC) submitted no changes to their current practices, referred to as the *flat rate model*. The wholesale flat rate model is comprised of a single monthly rate per retail customer by speed tier, [18] **with no additional usage charges**.[17] (emphasis added)

58. This determination ignores the fact that Shaw's Cost Study and Tariff Notice 15, filed on December 10, 2010, were based on an assumed fixed amount of usage, not unlimited usage, and included volume based rates for exceeding the usage included with the service. In addition, Shaw's Tariff Notice 16 filed on January 7, 2011 sought approval of revisions to the rates and terms of the volume based charge for its TPIA product:

> The attached tariff pages provide an update to the terms and rates for Usage Based Billing (UBB) that will apply to customers of Shaw's TPIA Service. Although Shaw's TPIA Tariff has included UBB rates and terms since inception, Shaw has never applied UBB to its wholesale TPIA customers because such charges did not also apply to our retail Internet customer. With the roll-out of UBB to Shaw's retail customers now in progress, we plan to start applying

[17] The Decision, at paragraph 21.

> UBB rates for those TPIA end-users **exceeding the monthly data allowance included with the TPIA Service** effective March 1, 2011.[18] (emphasis added)

59. Item 103, Section 3.1(i) set out the volume charge for exceeding the monthly data usage included in the TPIA Service tariff:

> i) Volume Charge: A charge will be applied when an End-User's monthly traffic volume exceeds the monthly data usage included in the monthly TPIA Transport rate service package. Details on the monthly data usage included with each TPIA Transport service package can be found within Shaw's Acceptable Use Policy at http://www.shaw.ca/enca/AboutShaw/TermsofUse/AcceptableUsePolicyInternet.htm.

60. Shaw ultimately did not proceed with applying UBB charges to its retail or TPIA customers. However, that does not take away from the fact that the Commission has erred in stating that Shaw's proposed TPIA Service included unlimited usage.

61. As discussed above in the section relating to traffic growth projections, an unlimited usage service will drive traffic growth per customer much higher. The example regarding Shaw's unlimited retail products provides clear evidence of this.

62. When Shaw developed its traffic growth assumptions for its Cost Study, it never contemplated that all of its TPIA Services would be offered with unlimited usage. Therefore, by erroneously transforming Shaw's TPIA Services into unlimited offerings, the Commission has also fundamentally changed the circumstances from those in which Shaw prepared and filed its Cost Study. Shaw's Cost Study was completed using average peak period demand over Shaw's Internet network for each service speed. Each of those service speeds was assumed to have a bandwidth usage cap. Had Shaw intended to offer unlimited usage TPIA

[18] Tariff Notice 16, January 7, 2011.

services, the Cost Study would have incorporated much higher average peak period demand.

63. Compounding the impact of the Commission's error is the fact that Shaw's experience to date has been that TPIA end-users have significantly higher traffic usage than Shaw's own retail customers. Currently, Shaw's TPIA end-users are using approximately three times as much data as Shaw's own retail customers. The Commission has therefore significantly disadvantaged Shaw by extending unlimited usage to TPIA end-users at tariff rates that were designed on the basis of a fixed amount of bandwidth use.

64. Shaw performed its Cost Study in a manner that complies with the Commission's Phase II costing methodology. The Commission's decision to change Shaw's TPIA tariff into an unlimited use tariff had no basis in any submission made by Shaw at any point in the proceeding. As discussed in detail above, the Commission's change is also entirely illogical given its aggressive discounting of our traffic growth projections. This approach is highly unfair, as it places Shaw in an untenable position. The Commission has made clear that it is not going to permit annual reviews of TPIA tariffs. At the same time, for Shaw, the alternative of filing a tariff based on the capacity model adopted by the Commission in the Decision is not a viable solution, given that Shaw will not be sufficiently compensated for its costs under the TPIA rates approved under the Decision because of the Commission's costing adjustments. As a result, this aspect of the Decision is inconsistent with the Policy Direction and the Commission's statutory obligation to ensure that all rates are just and reasonable – not just for consumers – but also for the companies that provide service. This is especially true in cases like this in which the Commission has mandated the provision of TPIA services at regulated rates.

65. With respect to the variance that Shaw is seeking for these errors on the Commission's part, Shaw's position is eminently reasonable. We are not asking the Commission to adjust the billing model itself. All that Shaw asks is that the Commission grant Shaw's requests for variance set out in the Request for Relief

section set out above, which include restoring the original traffic growth projections that Shaw initially included in its Cost Study. This will ensure that Shaw's TPIA rates reflect a much more realistic assessment of Shaw's costs, albeit without taking into account the significant traffic growth that we are anticipating as a result of our higher speeds and the Commission's imposition of unlimited usage on Shaw's TPIA services.

<u>CSG</u>

66. In the Decision, the Commission rejected Shaw's CSG expenses, which it described as "estimated based on time estimates and unit costs". It then adjusted Shaw's CSG costs "such that employee-to-retail customer ratio assumption is consistent across all cable carriers". The Commission's rationale for this part of its Decision was that:

> Shaw's proposed CSG expenses per retail customer and the associated CSG employee-to-retail customer ratio were significantly higher than those of RCP and Videotron, without evidence on the record demonstrating why this was so.[19]

67. In making this determination the Commission disregarded clear evidence regarding Shaw's CSG-related costs and imposed the costs estimated by other cable carriers that operate in different markets. Furthermore, contrary to the Commission's assertion, the Commission never asked Shaw to explain why its employee-to-retail customer ratio was higher than Rogers or Videotron. Nor did Shaw know what Rogers' or Videotron's employee-to-retail customer ratios were because they were filed in confidence with the Commission and were not disclosed by the Commission to Shaw.

68. The costs and CSG ratios proposed by Shaw were supported by actual current and historical staffing numbers in Shaw's serving territory and Shaw provided this justification to the Commission in its interrogatory responses. See: Shaw(CRTC)04Feb11-112, which showed actual staff levels at 2010.

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[19] The Decision, Appendix 3, Table 2. Note that Shaw has assumed that, when the Commission refers to CSG employee-to-retail customer, the retail customer contemplated is the end-user served by the Independent ISP, not all retail customers served by Shaw.

69. Shaw's CSG is responsible for the processing and tracking of TPIA service requests and the safeguarding of confidential customer information. The staff operating the CSGs must be separated from the staff that operates and markets Shaw's own network and services in order to protect the confidential nature of the information provided to it by independent ISPs.

70. There may be good reasons why Shaw's CSG-related costs are higher than Rogers and Videotron when expressed as a ratio of CSG employee-to-retail customer. Rogers and Videotron may have different structures or processes for their CSG when compared to Shaw. For example, Shaw's TPIA service provisioning is handled by the local region and therefore Shaw must have a CSG representative in each region to handle the TPIA customer orders. This means that there is a designated CSG staff member in the region irrespective of the volume of TPIA orders. The information available on the public record of this proceeding does not provide enough information to allow Shaw to determine whether this is the same for Rogers and Videotron. In any event, Shaw respectfully submits that the most relevant consideration is that the costs filed by Shaw were based on actual current CSG staff and that the Commission should therefore maintain them in the Cost Study. To do otherwise deprives Shaw of its ability to recover its costs, which defies the Commission's statutory obligation to ensure that rates are just and reasonable.

71. The Commission's arbitrary decision to impose Rogers' and Videotron's ratio of employee-to-retail customer on Shaw also ignores the Commission's own determination to base the approved rates for each carrier's TPIA Service on the long-run incremental cost of providing the service. This is why the rates approved by the Commission in its Decision for each cable carrier and ILEC are different. In fact, Shaw's rates are among the lowest of any carrier by far. As an example, the following table shows that Shaw's monthly rate for its 25 Mbps service is far lower than the rates for the same speed approved for the ILECs

who compete with Shaw in Western Canada and who are approved under the Decision's flat rate model:[20]

	Shaw	**SaskTel**	**Telus**
25 Mbps Monthly Access Rate	$21.25	$53.49	$39.51

72. This demonstrates that the other carriers' costs of provisioning the service were on average higher than Shaw's. It is obvious on the face of the Decision that the Commission did not adjust those other carriers' costs down to Shaw's level when Shaw's costs were lower. It is both discriminatory and inconsistent with fundamental principles of rate regulation for the Commission to lower Shaw's CSG costs to the other carriers' levels in this instance. This is an error because it is both inconsistent with Phase II costing methodology and the principle that carriers offering regulated services are permitted to charge rates that recover their reasonable costs of providing that service.

BAD DEBT RATIO

73. The Commission also adjusted Shaw's bad debt to revenue ratio. In doing so, it ignored evidence that Shaw had submitted regarding its experience with TPIA bad debt.

74. In its Cost Study Shaw proposed a bad debt expense of #%, which reflected its historical experience with TPIA bad debt. This experience reflected a higher level of bad debt with respect to TPIA customers, than with its own retail customer base.

75. In the Decision, the Commission referenced Telecom Decision CRTC 2006-77 and stated that:

[20] The Decision, Appendix 1.

> Shaw's proposed CSG expenses per retail customer and the associated CSG employee-to-retail-customer ratio were significantly higher than those of RCP and Videotron, without evidence on the record demonstrating why this was so.[21]

76. And the Commission ordered Shaw to:

> Adjust CSG costs such that employee-to-retail-customer ratio assumption is consistent across cable carriers.[22]

77. Shaw understands that as a result of these determinations, the Commission reduced Shaw's bad debt expense down to #%.

78. Shaw has a number of concerns related to these determinations.

79. First, Shaw's actual bad debt expense was #% for all its retail services as of November 30, 2010, when the Commission asked for this information.[23] It makes no sense to lower this expense to #% for TPIA Services especially when Shaw's experience is that TPIA bad debt expense is higher – not lower – than its company-wide bad debt ratio. The use of a #% bad debt ratio is therefore arbitrary and has no basis in fact or information filed on the record of the proceeding.

80. Second, in Telecom Order 2000-789, the Commission made no adjustments to Shaw's use of #% bad debt expense in its TPIA Service Cost Study.[24]

81. Third, in Telecom Decision CRTC 2006-77, which the Commission now relies on, it did not publicly reveal the level of bad debt it used. Therefore, there is no way that Shaw could have compared its bad debt expense with the 2006-77 level and there is no way that Shaw could have commented on the inconsistency, if any. The historic bad debt ratio in Telecom Decision CRTC 2006-77 was approved prior to the deployment of TPIA Services throughout Shaw's territory. Given the changes in the market and the failure of at least one large independent ISP in the

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[21] Decision, Table 2.

[22] Ibid.

[23] See Shaw(CRTC)4Feb11-113(a).

[24] Shaw(CRTC)28Jan00-4.

past five years there is no basis for reverting to a historic bad debt ratio over the current, actual numbers filed by Shaw. Here again, the Commission's Decision is inconsistent with its own Phase II costing rules by imposing another carrier's costs on Shaw.

10% ADDITIONAL MARK-UP FOR FIBRE-BASED SERVICES

82. In the Decision, the Commission granted the ILECs an additional 10% mark-up for their Fibre-to-the-Node (FTTN) services but refused to grant the cable carriers a similar mark-up for their services which also require the deployment of fibre deeper into their networks. This aspect of the Commission's Decision is discriminatory and inconsistent with the principles of rate regulation and competitive and technological neutrality set forth in the *Policy Direction*.

83. In discussing this issue at paragraph 78 of its Decision, the Commission stated the general principle that "In setting rates, the Commission balances the need to ensure that network providers are reasonably compensated for their costs with the need to ensure that mark-ups are not so high as to significantly impede independent service providers from providing competitive alternatives in the marketplace." The Commission then proceeded in paragraph 81 to note that in Telecom Decision CRTC 2010-225, which related to the Bell companies' legacy services, it had decided to apply mark-ups on costs that were comparable to the mark-ups associated with the cable carriers' wholesale high-speed access services:

> The Commission notes that in response to the original per-customer wholesale UBB proposal (Telecom Decision 2010-255), it decided that the markups on costs for the Bell companies' legacy services should be comparable to the markups associated with the cable carriers' TPIA services. The Commission considers that, in accordance with the objective of competitive neutrality, it remains appropriate that markups be comparable for all ILECs' and cable carriers' wholesale high-speed access services, with the exception of the ILECs' FTTN-based services.

84. The Commission's reason for allowing the Bell companies to charge this additional mark-up was in recognition of the significant upfront investments needed for their fibre-based services.

> In 2010, in the high-speed access decision, the Commission decided that a supplementary 10 percent markup on new higher-speed FTTN-based services was reasonable to recognize the significant upfront investments needed for these services. No evidence was presented in the current proceeding to challenge this determination.[25]

85. In the Decision, the Commission refined this approach slightly by applying the additional 10% mark-up only to the monthly access and usage components of the FTTN rates. It also extended the supplementary 10% mark-up to the other ILECs.

86. However, despite the general principle of competitive neutrality which led the Commission to initially raise Bell's mark-up to the same level as the cable carriers, the Commission did not apply an additional 10% mark-up on Shaw's fibre-based high-speed access services. The Commission provided the following rationale at paragraph 84:

> The Commission notes the cable carriers' request that, for symmetry, they be allowed to apply the same additional 10 percent markup, since TPIA services are also provided on an FTTN network. In the high-speed access decision, the Commission did not allow cable carriers to apply the additional markup because it considered that the rates for the cable carriers' wholesale high-speed access services appropriately recognized the investments they had made to upgrade their networks. In making its decision, the Commission noted that the cable carriers' cost of capital used to establish the rates for these services was higher than that of the ILECs and that the rates therefore appropriately captured the cable carriers' risk. In the current proceeding, the cable carriers did not provide any evidence to demonstrate that circumstances have changed since the high-speed access decision was issued. Accordingly, the

[25] Decision, paragraph 82.

> Commission denies the cable carriers' request for the additional 10 percent markup.

87. The Commission's justification for denying Shaw a comparable mark-up on its fibre-based services is incorrect in a number of respects.

88. First, there was ample evidence on the public record that Shaw is continuing to invest heavily in fibre deployment and will continue to do so over the life of the TPIA Service. As discussed in section 4 of Shaw's Cost Study, two of the five broad categories of costs causal to TPIA Service - Node Segmentation and Transport Provisioning - involve investment in fibre facilities:

> (a) Node Segmentation: Segmentation refers to the process of reducing the number of End-Users services by a fibre feed from the primary fibre ring or backbone network. As the number of End-Users and usage increases, the amount of bandwidth available to each End-User decreases. The greater the level of Internet traffic, the greater the level of segmentation required.
>
> (b) Transport Provisioning: This category includes the traffic transport-related equipment and fibre cable costs associated with transporting End-User traffic from the CMTS to the TPIA Customer's POI over the metropolitan area network (MAN).

89. If we were to accept the Commission's significantly discounted traffic growth projections as reasonable, which Shaw does not concede, the volume of Internet traffic will increase by 967%, or almost 10 times the current level. Shaw and the other cable carriers will be required to meet this increasing demand by significant new investment in fibre facilities, which under Shaw's more realistic traffic growth projections, would be even greater. In this regard, Shaw, the other cable carriers and the ILECs are all similarly situated.

90. To suggest, as the Commission has, that "...the rates for the cable carriers' wholesale high-speed access services appropriately recognized the investments they had made to upgrade their networks", incorrectly suggests that the necessary fibre investments have already been made. As the Commission is well aware, its Phase II costing methodology estimates long-run incremental costs over a forward-looking ten year study period. Shaw's evidence shows very

clearly that this investment will have to continue throughout the ten year study period in order to keep up with demand. There is no reason to believe that the ILECs' investment in fibre to the node is more risky than Shaw's.

91. Second, the Commission erred in two respects when it stated that: "...the cable carriers' cost of capital used to establish the rates for these services was higher than that of the ILECs and that the rates therefore appropriately captured the cable carriers' risk."[26]

92. A carrier's cost of capital reflects the cost of acquiring the money necessary to make network investments required to provide its services. Under the Phase II methodology, each carrier is permitted to recover its unique cost of capital. This does not benefit one carrier over another. The cost is the cost regardless of whether it is more or less. The Commission's decision to grant the ILECs an additional 10% mark-up over their causal costs (including their cost of capital) was "...to recognize the significant upfront investments needed for these [FTTN] services."[27] The additional 10% mark-up therefore did not have anything to do with risk. It appears to have more to do with incentives or rewards.

93. By providing the ILECs with an incentive to increase fibre investment to the node, and denying the same incentives to Shaw when Shaw will face at least a 10-fold increase in Internet traffic volume, the Commission is favouring one class of carrier over another and applying an economic incentive in a preferential manner - rather than in a competitively neutral manner.

94. In addition, even if the Commission's comparison of Shaw's cost of capital and the ILECs' additional mark-up was not an "apples to oranges" comparison (which it is), the Commission erred in suggesting that Shaw's higher cost of capital in some way off-sets the award of an additional 10% mark-up to the ILECs. The math simply does not add up.

95. If we were to apply Bell's lower cost of capital and Bell's additional 10% mark-up on the cost components identified by the Commission to Shaw, this would result

[26] Decision, paragraph 84.
[27] Decision, paragraph 82.

in TPIA rates for Shaw that are 6% higher than those approved by the Commission in the Decision. Looked at another way, Shaw would need a cost of equity[28] of 20% (rather than its currently approved cost of equity of 13%) to achieve the same financial result as Bell's 11% currently approved cost of equity, coupled with an additional 10% mark-up. This shows very clearly that Shaw's higher cost of equity, which is approximately 2% higher than Bell's, does not off-set the additional 10% mark-up on FTTN services awarded to the ILECs.

96. In addition to the errors of fact made by the Commission in this determination, the Commission has breached the terms of the Policy Direction, which the Commission is bound to comply with in accordance with section 47(b) of the *Telecommunications Act*, which provides that:

> 47**.** The Commission shall exercise its powers and perform its duties under this Act and any special Act
>
> (*b*) in accordance with any orders made by the Governor in Council under section 8 or any standards prescribed by the Minister under section 15.

97. Section 1(b)(iv) of the *Policy Direction* contains the following principles:

> (*b*) the Commission, when relying on regulation, should use measures that satisfy the following criteria, namely, those that
>
> (iv) if they relate to network interconnection arrangements or regimes for access to networks, buildings, in-building wiring or support structures, ensure the technological and competitive neutrality of those arrangements or regimes, to the greatest extent possible, to enable competition from new technologies and not to artificially favour either Canadian carriers or resellers;

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[28] We note that the Decision refers to cost of capital. However, it is actually the cost of equity, which constitutes one component of the cost of capital, that differs between the cable carriers and the ILECs.

98. The tariffs approved by the Commission in the Decision relate to network access services. Nonetheless, the Commission has failed to ensure competitive or technological neutrality and has artificially favoured the ILECs over Shaw and other cable carriers by permitting an additional 10% mark-up on ILEC fibre-related access costs - but denying it to cable carrier fibre-related access costs.

99. The issue of the 10% additional mark-up for ILECs underscores the general point that ILEC rates are generally much higher than the cable carrier rates. The Commission imposed arbitrary adjustments to Shaw's Cost Study and disregarded legitimate costing evidence that had been submitted. These adjustments, combined with the impact of not granting the 10% additional mark-up for fibre services to cable carriers, underscore the Commission's apparent desire to micro-regulate the residential wholesale Internet market in a manner that disadvantages certain competitors over others and tries to dictate competitive outcomes. In Shaw's respectful submission, these determinations in the Decision constitute errors of fact and are inconsistent with a number of regulatory principles in the *Policy Direction*, which the Commission is legally bound to apply.

CONCLUSION

100. For all of the forgoing reasons, Shaw respectfully asks the Commission to review the Decision and make the following variations requested in this application:

- Revise Shaw’s traffic growth projections to reflect the forecasts in Shaw’s Cost Study – #% for the 3rd year, #% for the 4th year and #% in years 5 to 10.
- Revise Shaw’s TPIA subscriber growth forecasts back to the level of #% of Shaw’s total Internet customers by the end of the 10 year study period in Shaw’s Cost Study which reflects Shaw’s actual experience.

- Revise Shaw's forecast for retail subscriber growth back to reflect the forecasts in Shaw's Cost Study – #% in the 1st year, #% in the 2nd year, #% in the 3rd year and #% for years 4 to 10.
- Revise Shaw's Carrier Service Group (CSG) costs back to those set out in Shaw's Cost Study, which are based on Shaw's actual costs of resources devoted to TPIA Service. The Commission's decision to apply Rogers' and Videotron's costs to Shaw is unsupported by any evidence.
- Revise Shaw's bad debt ratio back to the level set out in Shaw's Cost Study.
- Revise paragraph 109 of the Decision by restoring the Cost Study start date back to 1 September 2010 for all purposes, including with respect to capital unit cost changes.
- Vary the Decision so as to apply the same additional 10% mark-up on Shaw's services, which require the deployment of fibre deeper into the network, as the Commission applied to the ILECs' FTTN services.

101. Make Shaw's TPIA Service rates interim immediately, pending the Commission's final determination of this Application, and make any new rates approved as a result of this Application effective as of the date that the rates are made interim.

102. All of which is respectfully submitted by Shaw Cablesystems G.P.

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