December 15, 2015

Ms. Janice Charette  
Clerk of the Privy Council and Secretary to the Cabinet  
Langevin Block  
80 Wellington Street  
Ottawa, Ontario K1A 0A  
By email to: ic.telecomsubmission-soumissiontelecom.ic@canada.ca

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Dear Ms. Charette:

Corning Incorporated (“Corning”) hereby respectfully submits the following comments in response to Industry Canada Notice No. DGTP–002–2015, Petition to the Governor in Council Concerning Telecom Regulatory Policy CRTC 2015–326, as published in the Canada Gazette, Part 1 dated November 20, 2015 (the “Notice”). Corning, a world leader in the production and sale of optical fiber and holder of more than 350 patents in the field, strongly discourages the Canadian government from imposing an unbundling requirement on fiber-to-the-home (“FTTH”). If the Canadian Radio-television and Telecommunications Commission’s (“CRTC”) decision is allowed to stand, it will reduce investment in digital infrastructure and thereby limit the ability of Canadians to enjoy the benefits of fiber broadband networks of the telcos and cable companies.

In 1970, Corning invented the first commercially viable low-loss optical fiber, a breakthrough innovation that changed the world. Today, there are more than 2 billion kilometers of optical fiber installed around the globe.  
Fiber networks have revolutionized data transmission, and in the process, brought millions of new jobs to the United States and added tens-of-billions of dollars to its GDP annually. The symbiotic relationship between fiber and Internet Protocol transmission has spurred the development of new, bandwidth-hungry applications that possess enormous promise. As a result, innovative activities that were unimaginable just a few short years ago now occur every day—literally at the speed of light.

Corning has a thorough understanding of the impact of unbundling on FTTH deployment from its experience working with the United States Federal Communications Commission (“FCC”) on these issues. In 2003, the FCC initiated a review of its policies on unbundled network elements.

In that proceeding, Corning advocated for excluding FTTH from unbundling. A study commissioned by Corning illustrated the pernicious effects of unbundling rules on incumbent local exchange carrier (“ILEC”) fiber deployment. The study, based on actual investment and expense data and real-world revenue estimates, concluded that mandatory unbundling would eliminate more than 80 percent of the FTTH overbuilds that otherwise would be economically viable.\(^3\) Mandatory unbundling would also have eliminated about $39 billion in capital expenditures by the ILECs from the economy.\(^4\) Finally, the study showed that competitive local exchange carriers (“CLECs”) faced the same or cheaper costs in deploying FTTH as did ILECs.\(^5\)

The FCC agreed with Corning and refrained from unbundling FTTH facilities.\(^6\) The FCC found the record in the proceeding convincing that the substantial revenue opportunities posed by FTTH deployment helped ameliorate many of the entry barriers presented by the cost and scale economies.\(^7\) With respect to new FTTH deployments, the FCC noted that the “entry barriers appear to be largely the same for both incumbent and competitive LECs - that is, both incumbent and competitive carriers must negotiate rights-of-way, respond to bid requests for new housing developments, obtain fiber optic cabling and other materials, develop deployment plans, and implement construction programs.”\(^8\) The FCC noted that incumbent LECs did not have a “first-mover” advantage that would compound any barriers to entry and the LECs had no advantages concerning the sunk costs of new FTTH deployments.\(^9\) The FCC also found that removing incumbent LEC unbundling obligations on FTTH loops would promote their deployment of the network infrastructure necessary to provide broadband services to the mass market.\(^10\) Accordingly, the FCC did not require incumbent LECs to provide unbundled access to new FTTH loops.

The last twelve years of investment and innovation prove that the FCC made the right decision. Since the FCC’s Triennial Review Order, the total number of fixed broadband connections in the

\(^{3}\) Comments of Corning, CC Docket Nos. 01-338, 96-98, 98-147, iii-iv, 5-9 (filed Apr. 5, 2002).

\(^{4}\) Id.

\(^{5}\) Id.


\(^{7}\) Triennial Review Order ¶ 274.

\(^{8}\) Id. ¶ 275.

\(^{9}\) Id.

\(^{10}\) Id. ¶ 278.
United States has more than quadrupled from 23 million to 94 million.\textsuperscript{11} Residential fiber connections have also reached an all-time high: as of 2014 more than 10 million homes were connected, and more than 22 million had access to a fiber connection.\textsuperscript{12} These are not just impressive statistics. Economic studies confirm that these new broadband connections are adding tens-of-billions of dollars to U.S. GDP annually.\textsuperscript{13}

The U.S. experience may be instructive as Canada now faces a decision on whether to unbundle FTTH and corresponding cableco facilities. As was true in the United States, imposing an unbundling requirement will hurt investment in FTTH throughout Canada. The CRTC’s decision imperils significant capital investments in important digital infrastructure by major network service providers. A reduction in the amount of network investment will, in turn, eliminate the job creation associated with such investment and have a strong negative secondary impact on the suppliers to network service providers. Of most concern is the impact that unbundling FTTH and corresponding cableco networks could have on innovation. The CRTC’s decision risks denying Canadians access to the most capable broadband service technically possible and to future innovative services that can only be delivered over FTTH.

Respectfully Submitted,

By: /s/ Timothy J. Regan

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