



Intervention

Submitted to the CRTC

**Re: Telecom Notice of Consultation 2015-134
Review of Basic Telecommunications Services
File number: 8663-C12-201503186**

Final Submission of OpenMedia

May 25, 2016

OpenMedia is a community-based organization that works to keep the Internet open, affordable, and surveillance free.

www.openmedia.org

OpenMedia Engagement Network P.O. Box 21674, 1424 Commercial Dr.
Vancouver, BC, Canada V5L 5G3 // [604-633-2744](tel:604-633-2744)

OpenMedia Submission

Regarding

Telecom Notice of Consultation

CRTC 2015-134

Table of Contents

Executive Summary

I. Comments on the Key Issues raised by the CRTC 2015-134 Basic Services Consultations

- A. Broadband as a necessity and the Commission's role in the provision of basic services**
- B. Towards a mandated basic service strategy**
- C. From aspirational targets to minimum basic service standards**
- D. Implementing a mandated basic service package**
- E. Satellite broadband and remote communities**

II. Comments on CRTC Proposal for a National Broadband Strategy (CRTC 2015-134-5)

Executive Summary

- ES1. OpenMedia is a community-based organization that works to keep the Internet open, affordable and surveillance free. Since 2008, OpenMedia has engaged hundreds of thousands of Canadians to identify citizen-driven priorities for a more equitable digital future. We have participated in various proceedings before the Commission to express our community's concerns and recommend common sense solutions that benefit all Canadians. Questions that are before the Commission in this matter are of great importance to the OpenMedia community, explaining why more than 45,000 Canadians have joined our Unblock Canada campaign and called on the Commission to develop a basic services framework that ensures "affordable, high-speed (broadband) Internet access for all Canadians as soon as possible".¹
- ES2. Evidence provided by various parties from all regions of Canada in this proceeding shows that significant gaps in the quality and affordability of access to broadband services limit the ability of many Canadians to benefit fully from the resources provided by the public Internet. While some coverage gaps appear to have been reduced since 2011, there is evidence to suggest service quality and affordability gaps have actually widened in some communities prone to under-investment and market failures. Lack of leadership at the federal level has motivated many communities, municipalities, and some provinces to take the lead in addressing these market failures. Nevertheless, the vast majority of the parties to this proceeding have asked the Commission to redefine broadband access as a basic service under the *Telecommunications Act* and to adopt mechanisms for resolving service quality and affordability barriers.
- ES3. Despite some agreement on the issues to be addressed, there are significant differences among the parties about the best strategies for identifying gaps, defining basic service standards, and raising the funds required to improve broadband speeds and service affordability in underserved communities. OpenMedia believes it is crucial that the Commission make the necessary adjustments to its 2011 basic services policy before problems become even more challenging 5 years from now during the next review of the Commission's basic services policies. We therefore agree with the sentiment expressed by Chairman Blais: *Carpe diem*.²
- ES4. Significant coverage, quality, and affordability gaps tend to be more pronounced in rural communities because of higher costs of service and lower incomes. Nevertheless, various parties

¹ <https://unblockcanada.ca/>

² Quoting his Excellency David Johnston's advice from more than a decade ago, in response for proposals by Rogers for an "advisory council" to study the issues discussed in this public consultation further. CRTC 2015-134, Transcript, par. 12430, April, 21, 2016.

have also shown that such gaps can be found in Canada's low-cost urban centres as well. We believe it is clear that the issues associated with Canada's digital divide, especially affordability, are not confined to rural areas.

- ES5. To help the Commission devise a balanced approach to resolving these problems, OpenMedia has used its previous submissions to stress the importance of adopting a multipronged strategy for ensuring that the service quality and affordability gaps facing rural communities and vulnerable groups do not grow in the future. We have also proposed a number of recommendations intended to make service providers more accountable for the basic service standards they offer in both rural and urban Canada. Most of these recommendations are based on consultations with the diverse array of Canadians that make up the OpenMedia community.
- ES6. OpenMedia supports calls by various rural and remote communities to mandate the large operators that dominate Canada's fixed and mobile services markets to contribute to a rural broadband network infrastructure development fund in order to address market failures in all of Canada's regions. These funds should be distributed in a manner that complements ongoing efforts by community leaders, municipalities, and provinces to improve their communications networks and hold private service providers accountable for the quality and affordability of services they deliver.
- ES7. No public funds should be allocated to upgrading outdated technologies that do not scale to meet the growing demand for fixed and mobile network resources, such as the DSL/FTTN networks of incumbents. Third-party wholesale access obligations and long-term service level agreements based on actual measured speeds and reliability indicators should be required in any initiatives that receive subsidies from the industry-funded mechanism.
- ES8. OpenMedia therefore supports calls for the development of an industry-funded mechanism that reduces affordability as a barrier by providing Canadians with very limited or no disposable income with the ability to purchase basic communications services that meet their individual needs. If targeted at the most vulnerable, such demand-side subsidies represent an effective tool for reducing affordability as a barrier to access and use of basic communications services.
- ES9. While OpenMedia agrees both supply- and demand-side strategies are necessary for ensuring that universal broadband Internet access is available to all Canadians, they are unlikely to be sufficient for addressing quality and affordability gaps in basic services. Despite OpenMedia's attempts in the interrogatories to get vital information from several of the incumbents, none of them were willing to guarantee a minimum basic level of service in any of the retail market service

packages they offer to residential and small- and medium-size businesses. Notwithstanding this reluctance, the large operators have the network control technologies in place that enable them to provide guaranteed minimum levels of service.

- ES10. Relatively low-cost broadband plans have effectively disappeared from the Canadian market. As fixed and mobile broadband access has become more essential, declining price elasticity of demand has allowed dominant operators to increase prices on the lower-cost end of the retail market. This trend may not represent a concern for Canadians with relatively high incomes, since the prices for higher speed plans have actually declined, but it represents a major barrier to access and use by those with low or no incomes. Moreover, the size of this group is likely to be too large to address through an affordability subsidy mechanism.
- ES11. For example, if we use the UN Broadband Commission's definition that basic services become unaffordable if they cost more than 5% of income and given current market prices,³ then affordability starts to become a barrier for Canadians with incomes below \$25,000 per year. This represents around a fifth of the population, or about 10 million Canadians.⁴ This number is simply too large to expect any demand-side subsidy mechanism to address this affordability barrier adequately and efficiently without distorting market forces.
- ES12. In order to provide the Commission with a path forward on an efficient regulatory solution that complements the supply- and demand-side subsidy mechanisms it may choose to adopt in this matter, OpenMedia has built on the Commission's recent decision with respect to "skinny basic" TV packages, input from our community regarding their concerns, and proposals by other parties to extend the same strategy to broadband. OpenMedia submits that a mandated broadband basic service package that includes minimum guarantees of service reliability at a reasonable price can have a large impact in terms of addressing service quality and affordability gaps identified by a wide range of parties from across Canada on the record of this proceeding.
- ES13. We thank the Commission for its thorough and insightful inquiry into this key element of OpenMedia's proposals at the oral hearing. We use the opportunity in this final submission to discuss various options and strategic considerations in the design and implementation of the basic broadband service package that the OpenMedia community have asked the Commission to mandate in this proceeding. OpenMedia submits that our proposal for a basic service package represents an opportunity for the Commission to promote market forces in delivering an adequate level of basic broadband service to all Canadians, regardless of where they live or their incomes.

³ CRTC Communications Monitoring Report (2015), Table 5.3.6.

⁴ Individuals by total income level, by province and territory. Source: [Statistics Canada](#).

I. Comments on the Key Issues raised by the CRTC 2015-134 Basic Services Consultations

A. Broadband as a necessity and the Commission's role in the provision of basic services

1. Both fixed and mobile broadband Internet connectivity have become essential in the daily lives of most Canadians. As broadband has become the enabler of other basic communications platforms over the past decade, Canadians have started to care a great deal more about the openness, quality, and affordability of their access to the Internet. In light of the importance of these issues, more than 45,000 Canadians have joined our Unblock Canada campaign, calling on the Commission to adopt basic service policies that ensure access to “affordable, world-class broadband Internet for all Canadians as soon as possible.”⁵ In addition, nearly 80,000 Canadians participated in our Internet Emergency campaign in support of the Commission's decision to extend wholesale obligations to fibre access networks when Bell appealed the decision to Cabinet – an issue our community won on May 11, 2016 when Minister of Innovation, Science and Economic Development, Navdeep Bains, upheld the landmark CRTC ruling. The Commission continues to grapple with other broadband issues of importance to Canadians, such as those related to the design of wholesale access obligations, in addition to launching a new proceeding on the use of Internet traffic management practices (ITMPs) by the fixed and mobile operators that dominate the Canadian broadband market.
2. Over the past eight years, OpenMedia has been on the front lines listening to comments and concerns by individual Canadians and independent businesses about how to strengthen and improve access to open, reliable, and affordable Internet services. To address concerns about discriminatory traffic management practices, sub-standard service, and the high price of accessing the Internet, OpenMedia has worked to increase awareness among policymakers and the public-at-large about these realities. Since our founding in 2008, well over half-a-million Canadians have spoken out through our campaigns around mobile and wireline Internet choice and affordability. Our Internet Emergency campaign and submission to the Governor in Council in the successful defence of the CRTC 2015-326 wholesale framework illustrates OpenMedia's support for common sense public policies that promote investment, competition, and openness in the provision of Internet connectivity.
3. One of OpenMedia's main goals in this proceeding is to assist the Commission in devising a regulatory bargain among competing consumer and industry interests that ensures all Canadians, regardless of income or place of residence, can access the fixed and mobile broadband services they need. OpenMedia is therefore encouraged by the Commission's recognition that the need for

⁵ <https://unblockcanada.ca/>

universal broadband has become self-evident, as well as by its call for the development of a national broadband strategy. The OpenMedia community has been calling for the development of a robust national strategy for a number of years, and OpenMedia produced two related reports outlining the concerns and solutions voiced by thousands of Canadians.

4. We support the Commission in its call for other federal agencies and stakeholder groups to join it in taking action on Canada's broadband future. On the other hand, we reject the view of some incumbents that the issues related to the digital divide in Canada can be readily addressed through market forces. Taking this view seriously might encourage the Commission to refrain from recognizing broadband access as a basic service, while letting other federal departments, provinces, and municipalities address the gaps, or set up some form of advisory council to study how best to move forward. OpenMedia disagrees that issues related to the digital divide do not warrant concerted action by the Commission; and we also note it was clearly Parliament's intention to provide the Commission with the legal authority to make determinations about the range of basic telecommunications services, in addition to mandating minimum standards of service reliability, and requiring regulated entities to contribute to resolving gaps in the quality and affordability of services the Commission determines to be basic.
5. The suggestion by some that an ad hoc advisory council should replace the Commission in designing Canada's basic services regime would be ill-advised and counter-productive, not least because doing so would seriously undermine the Commission's credibility. The creation of a substitute body would also run counter to due process, as it would do violence to the views expressed by the wide range of Canadians and communities that have participated in this proceeding. The OpenMedia community submits that it is in the public interest for the Commission to take the lead in developing innovative and effective policy solutions to address the substantive gaps in Internet service identified on the record of this proceeding.

B. Towards a mandated basic service strategy

6. We thank the Commission for its thorough and insightful inquiry during the oral hearing into OpenMedia's recommendation for the adoption of a basic service package based on minimum standards of service. In this final submission, we further explore some of the questions raised by the Commission regarding this proposed approach. OpenMedia does not suggest that this approach would be sufficient in itself to counteract rural market failures or affordability constraints on low income vulnerable populations such as Canadians with severe disabilities or children from poor families. Our proposal, which would minimize interference with market forces, would not restrict the range of services that operators can offer. For example, some operators may choose to offer even cheaper non-mandated basic service packages that do not include minimum service

quality guarantees, or services advertising ultra-fast, symmetric speeds in the hundreds of megabits per second. The point of our proposal is to extend the range of service profiles available in the market by one basic service package that obliges service providers to keep the minimum basic level of broadband services they deliver to standards the Commission considers appropriate.

7. OpenMedia supports proposals for an industry-funded mechanism at the Commission to contribute to rural network infrastructure development, as well as targeted demand-side subsidies for vulnerable groups. Our basic service package strategy complements these proposals by creating a predictable minimum standard of service and aligns the incentives of service providers with those users that require increasing reliability and symmetry in their broadband services. Our proposal provides the Commission with a simple and effective approach to balancing the interests of consumers and industry.
8. In light of the evidence on the record of this proceeding, OpenMedia supports calls by various parties for the Commission to reconsider its decision in CRTC 2015-326 not to require mandated wholesale access to fibre transport facilities. Limited capacity and the high costs of transport facilities are an often insurmountable barrier to improving speeds and affordability of access in rural communities – a scenario we illustrated in our short documentary about the connectivity challenges facing the community of Bowen Island, BC, which was submitted into the record of this proceeding.⁶
9. Lack of third-party access obligations on transport facilities may not be problematic in Canada's urban centres where duplication of facilities might be economically feasible, but there is little evidence to suggest that it is advisable or feasible to duplicate transport facilities in rural communities. In fact, there is some evidence that infrastructure competition can exacerbate coverage and capacity problems in high cost areas as cooperation and fixed cost sharing are optimal for stimulating fixed capital expenditures in the network.
10. Due to the weak business case for investing in rural communities and gaps in federal funding, OpenMedia supports the development of an industry-funded rural subsidy mechanism that contributes to initiatives by rural communities to improve broadband connectivity for their residents and businesses. The evidence shows that the most cost-effective approach to distributing rural infrastructure subsidies would be for the Commission to complement the efforts of community intermediary organizations that help identify gaps, set priorities, and hold service providers accountable after they receive public subsidies.

⁶ See <https://openmedia.org/en/state-broadband-internet-bowen-island>

11. Given the lack of accountability and the resulting patchwork of projects that leave many communities under-served, OpenMedia recommends against centralized fund allocation strategies such as a “National Contribution Fund 2.0,” deferral accounts, or the Connecting Canadians program. The history of these programs indicates that bypassing local democratic accountability in rural project design, development, and monitoring sets up the initiatives for failure. Public-private partnerships that engage local communities in identifying needs, encourage private service providers to invest, and holds those providers accountable have proven to be the most cost-effective approach to addressing rural market failures.
12. No further funds should go to upgrading outdated technologies that are not sufficiently scalable to meet the growing demand for network capacity, especially DSL and DSL-based FTTN. If there is affordable transport capacity available that scales to the growing needs of users, then rural communities will have a higher chance of building public-private partnerships needed for their communities to transition from legacy DSL and fixed wireless to the fibre networks that can meet the needs of users for increasingly symmetric speeds and minimum service level guarantees. Wholesale access obligations at a reasonable price and long-term service level agreements based on actual network performance should be preconditions for receiving any public subsidies.
13. We urge the Commission to use this opportunity to consider the evidence showing the rapid rise of quality-adjusted prices in the Canadian market over the past 5 years, particularly for lower speed/cost basic Internet service plans.⁷ This trend reflects the pricing strategies of the dominant operators, which have been made possible as Internet access at home has become more and more essential to the vast majority of Canadians.⁸ Whereas most Canadians might be able to afford paying higher rates for broadband services, those with limited or no incomes will continue to find that affordability represents a major barrier to their use of basic communications services.
14. The approach we have recommended for addressing the quality and affordability gaps identified in this proceeding is inspired by the “skinny basic” TV package adopted by the Commission, as well as by similar proposals by other parties. However, unlike some other parties that assume such a basic service package requires a subsidy, OpenMedia recognizes the importance of providing regulated entities with an attractive rate of return, and that any offering priced below cost or offering a low margin is not going to be sustainable. If minimum basic service standards are too high, operators would have incentives to charge a high price for them, while if regulated prices are treated as a ceiling that is too low, then operators will have incentives to under-provision the network capacity intended to support the basic service package. Our proposal is

⁷ CRTC Communications Monitoring Report (2015), Table 5.3.6.

⁸ In economic terms, price elasticity of demand for broadband services has declined as these services have transitioned from luxuries to becoming necessities for millions of Canadians.

designed to encourage market forces to support a wide range of options for consumers and for regulated entities to invest judiciously in basic service quality. Our approach is perfectly consistent with Canada's new wholesale access regime, and can in fact complement it by promoting competition and investment in the supply of Internet access services.

C. From aspirational targets to minimum basic service standards

15. As noted by various parties to this proceeding, coverage maps of best-effort advertised broadband speeds and platforms do not present a realistic picture of actual coverage and capacity gaps across Canada. This issue applies to both the fixed and mobile network maps produced using marketing materials from the incumbents. Furthermore, coverage maps hide potential capacity and service quality gaps in suburban and urban centres. Making policy decisions based on such maps inevitably leads to significant underestimates of gaps in basic services across all regions of Canada.
16. In our previous submissions we outlined a set of reforms to the Commission's basic services framework in response to questions in the original notice defining the scope of this review. In addition to enhancing rural connectivity and the affordability of basic services for vulnerable groups, our recommendations for reforming the basic services framework are designed to have a broad positive effect for all Canadian consumers, including small- and medium-size businesses.
17. One of the problems that arose in connection with the Commission's 2011 speed targets is that they have been interpreted by the incumbents as "best effort" advertised standards of service. This interpretation runs contrary to the determination in CRTC 2011-291 that the Commission *"further considers that the target speeds are to be the actual speeds delivered, not merely those advertised"* (para 77). The idea that the Commission intended the 5/1 Mbps targets as merely aspirational arose in part because in the same paragraph of the 2011-291 decision, the Commission provides network providers with significant flexibility to interpret them as such: *"That stated, the Commission recognizes that the broadband Internet access speeds actually experienced by users are affected by a wide range of factors, some of which are outside the control of the network provider"* (para 77).
18. In 2011, there were some factors beyond the control of network providers that affect actual speeds, and many remain relevant today: natural disasters, power outages, maintenance downtime and so on. In the intervening period, however, a wide range of network control and quality of service monetization technologies have been deployed by the large service providers that enable them to guarantee minimum levels of service over time and across applications. OpenMedia used this proceeding to engage with the dominant network providers in the

interrogatory stages to assess whether they have installed such technologies and their capabilities in terms of providing a minimum level of service guarantee. All of them indicated they have the capacity for such guarantees, and in fact do provide them to large business customers, but do not have any service offerings for the retail residential and small- and medium-sized business markets.

19. The operators generally state that the reason for not offering such services is that there is no demand by their customers for more reliable minimum basic service levels, a claim for which they offer no evidentiary support. Evidence provided on the record of this proceeding contradicts the claim that Canadians do not require a minimum level of reliability in the lower range of broadband services, for which they are paying rapidly increasing prices and getting only best-effort advertised speeds.⁹
20. Given that technological innovation in broadband network control now makes it feasible to provide minimum basic service standards that sellers can guarantee, there is now an important opportunity for the Commission to address this key shortcoming of the existing basic services framework. As a first step in this direction, OpenMedia recommends deleting the 2nd part of paragraph 77 of the 2011-291 decision to avoid including such loopholes in the design of the new basic services framework. A more credible and concrete minimum service target has the capacity to encourage service providers to become more responsive to the needs of consumers, particularly in rural communities where there are few private sector incentives to keep up with rapid growth in traffic. Prompting the incumbents to act in this manner can have a strong positive impact on the incentive to manage their installed capacity in a manner better suited to customer needs.
21. The design of Canada's basic services regime and the standards it entails can have important implications for the extent to which the Internet remains open to innovation, as well as the extent to which consumers benefit from network control technologies. OpenMedia submits that moving from a best effort to minimum service level strategy will address some of the concerns associated with service quality differentiation and paid prioritization the Commission has raised in Telecom Notice of Consultation CRTC 2016-192.
22. Despite the potential benefits arising from a new proceeding on ITMPs, OpenMedia is concerned that the Commission has gone ahead on this file before clarifying how it is going to handle the design of the new disaggregated wholesale framework, in addition to the new basic service standards and mechanisms. In terms of the wholesale framework, the sustainability of market

⁹ CRTC CMR 2015, Table 5.3.6.

competition in basic broadband services will be considerably affected by the Commission's decisions on the various appeals by Bell and the level of competitor control (at layer 2 as opposed to layer 3). Wholesale pricing decisions by the Commission will also have an impact on the quality and affordability of basic services, while the range of policy options for minimizing the harmful effects of ITMP practices will depend on the design of both wholesale and basic services regimes. This regulatory uncertainty is not in the interests of either Canadian consumers or the industry that serves them.

23. OpenMedia does not contend that it will be easy for all operators, particularly smaller ones that have yet to invest in advanced network control technologies, to offer a basic service for which they guarantee some minimum level of reliability. For larger operators accustomed to competing with each other by advertising ever higher best-effort speeds, there will also be some costs in adjusting to the new basic service regimes as they will have to reconfigure their network policy management protocols and marketing materials (more emphasis on reliability and less on hyperbole such as “fastest” speeds). On the other hand, designing business models and network management policies that improve minimum speed and network reliability have the potential to reduce customer service costs and increase retention rates, which would increase the rate of return of operators that choose to take the Commission’s lead seriously.
24. Given the advantages of cable-based broadband networks relative to the legacy networks of incumbent telephone companies, large cable providers are likely to be more willing to adopt at least one basic service package that includes minimum service quality guarantees. Some large incumbent TSPs have also conceded that they can technically offer such guarantees, but they currently deliver substantially lower median speeds than cable companies. Some smaller operators have not yet adopted advanced service quality differentiation technologies, but in the longer term it will be beneficial for their investors if they make these investments sooner rather than later.
25. We would remind the Commission here that OpenMedia has proposed not only a mandated basic service operating at a measured 5 Mbps symmetric (both downstream and upstream), but also an aspirational speed target of 25/15 Mbps. Our reason for doing so is that we want a relatively modest change in basic speeds to be brought in quickly, so as to provide relief to Canadians with as little delay as possible. On the other hand, we feel that a more ambitious aspirational target has a role to play in encouraging service providers, policymakers, and consumers to set their sights as high as possible for the longer term. As we explained at the hearing, the 5/5 basic service is intended to be realistic, in the sense of achievable in a very short time, whereas the 25/15 target is intended to frame future broadband development in terms of speeds and

symmetry that are closer to what we expect from a next-generation network (as opposed to a legacy technology like DSL).

D. Implementing a mandated basic service package

26. The Commission has heard from various parties about what they consider to be a reasonable combination of speeds and prices for basic services. Most of the dominant service providers have argued that the low prices they are offering in the market are sufficient to meet the needs of their customers. Based on this claim, they argue the Commission should continue to exclude broadband from the scope of the basic services framework and not mandate minimum service standards, nor regulate retail market prices. Given the wide range of evidence presented on the rapid increase in the prices of low-cost broadband plans and the impact on low-income individuals and communities, the perception that market forces are working well by offering a wide enough range of prices does not accord with the lived reality of millions of Canadians.
27. As broadband Internet has become more essential, the incumbents have been able to increase their prices on their "low cost" plans. It is often difficult for new customers to understand the true cost of a subscription since they typically do not include recurring modem rentals and other fees. "Low cost" plans also come with relatively low data caps that make them impractical for online uses beyond email and simple Web browsing. OpenMedia reminds the Commission of our position that data caps should be eliminated as they do not serve any meaningful role as a tool for traffic management. Some operators have started to allow customers to include unlimited data in their plans, a feature currently priced at \$30 per month (without a bundle) and \$15 a month (with a TV bundle) by two of the larger regulated entities, Bell and Telus, at the same rates. A rise in data overcharges and additional fees explains why the average per subscriber monthly revenues for basic plans (between 1.5 and 4 Mbps) increased from around \$33 in 2010 to \$48 in 2014.¹⁰ At the same time, there has been a substantial reduction in per subscriber revenues from high-end service packages offered in the market (+50 Mbps), which have declined from \$76 to \$61 over the same period.
28. These revenue trends point clearly to a significant reduction in the range of price and service quality combinations offered in the "low cost" basic range of services available in the Canadian market, a fact that casts further doubt on the claim that the variety of current offerings is good enough for all customers. This also suggests that those with lower incomes who opt for lower speed packages have been increasingly cross-subsidizing those with higher incomes who are willing and able to pay for services that advertise substantially higher speeds. In its recent

¹⁰ CRTC CMR 2015, Table, 5.3.6. i

wholesale pricing decision (CRTC 2016-117), the Commission determined that this type of cross-subsidization is “inappropriate” (paragraph 20).

29. OpenMedia submits the Commission should adopt the same perspective in this proceeding regarding the design of Canada’s basic services regime. Unless the Commission adopts a basic services framework that includes a mandate on all regulated entities to offer a basic package that includes minimum verifiable speeds at a reasonable price, the type of regressive cross-subsidization the Commission found to be “inappropriate” at the wholesale level is likely to continue in the retail market. For Canadians with average or high incomes this inequity may actually be beneficial as it allows for the benefits of having lower prices for higher speeds on the high end of the market, but unless this trend is addressed, affordability will become an even more pronounced barrier to access and use for Canadians in the lower two income quintiles.
30. The basic service package OpenMedia has proposed aims to provide relief for the two key problems identified during this proceeding by a wide range of parties from across the country. In the remainder of this section, we explore a number of different approaches to costing a basic service package that balances price and quality, based on a mandated \$30 price point and 5/5 Mbps speed levels that operators guarantee to be available at all times (in practice, 95-99% of the time to account for downtime due to maintenance, but not for congestion that arises from under-investment in or under-provisioning of network capacity).
31. As a starting point, consider the growing recognition by some operators, including Rogers and Telus, that their standard basic service packages do not meet the needs of low income Canadians. Both have suggested that the Commission should not mandate a basic service package because they are already offering, or plan to offer, basic service packages for \$10 per month providing around 10/Mbps in advertised speed to a select group of very low income consumers. Since it would not be appropriate for these companies to sell service under cost and incur a loss, the price they are proposing represents a useful benchmark for the minimum per subscriber operational costs that should be included in the design of any mandated basic service package (assuming that operators have already amortized the fixed costs of delivering these low speed services, which is reasonable under the five-year amortization assumption made by the Commission in the CRTC 2016-117 wholesale pricing model design).¹¹ We therefore submit that

¹¹ Unless of course the operators offering to provide a \$10 basic service are using this proposal as a marketing strategy to convince the Commission not to address affordability concerns and do not plan to extend the offer to all low-income Canadians. Neither the Rogers nor the Telus websites mention the availability of such offers. Basic service packages of both incumbents and service-based competitors cost between \$25 and \$40 per month, excluding non-transparent fees and data charges. As noted, average revenues from low speed packages are around \$50 per month per subscriber.

the \$10 price represents a reasonable fixed access cost for basic service at the current 5/1 Mbps standard on a best effort basis.

32. As detailed in our earlier submission, OpenMedia has asked the Commission to develop a basic service package that resolves the problems that data caps and overcharges create for Canadians with low incomes. Given that dominant operators such as Bell and Telus are allowing those with basic packages to purchase unlimited data for a price of around \$15 (with bundle) and \$30 (standalone) per month, OpenMedia submits that the bundled discount price of \$15 per month represents a just and reasonable price for variable data charges, including a reasonable rate of return for the operators. Adding this variable charge for data to the \$10 a month access charge of serving a customer on legacy DSL/FTTN or cable networks deployed many years ago allows us to conclude that a mandated package of between 5 and 15 Mbps download, with about 1 Mbps upload advertised speeds should cost around \$25 per month. While this estimate may seem over-simplified, it is perfectly consistent with the process by which the Commission adopted its \$25 basic TV package. Setting the same basic service package price of \$25 for both basic TV and basic broadband Internet access makes both technological and economic sense, as it reduces potential market distortions that might arise from the high degree of vertical integration in the telecommunications and broadcasting markets.
33. OpenMedia has also asked the Commission to require operators to guarantee a minimum level of service reliability, sustained speeds, and increasingly symmetric basic services, moving from the current 5/1 Mbps aspirational target to 5/5 Mbps and then to 10/10 with minimum guaranteed standards of service. Estimating pricing for service features not offered in the market today is more challenging, which is why OpenMedia tried to engage on this issue with the dominant network providers during the interrogatory stages of this proceeding to ask: a) if they are able to deliver retail services with minimum service quality guarantees of 5/5 Mbps; b) what they suggest as a reasonable price for this basic service package; and c) what they use as over-subscription ratios.
34. Although most answered the first question in the affirmative, none offered their perception of a reasonable price for guaranteeing the basic services they offer at these minimum standards, which the Commission has acknowledged is needed on a sustained basis for Internet applications such as video conferencing. The parties also declined to disclose their over-subscription ratios on the public record of this proceeding or to the Commission. Given this lack of important information, OpenMedia suggests an alternative approach for pricing a basic service that includes minimum service quality guarantees of 5/5 Mbps, which reconciles our proposal with the Commission's continuing deliberations on wholesale access pricing.

35. The \$30 benchmark for a basic package with a minimum guaranteed quality and rate of return for operators can serve as a proxy for validating the capacity-based wholesale prices favoured by certain parties to the CRTC 2016-117 proceeding. For any given unit of 100 Mbps of wholesale capacity, the Commission can divide the Phase II cost by the over-subscription ratio that gives it the 5 Mbps guaranteed standard, which is 20. Deducting the cost plus wholesale markup, which is currently at 15% for basic service packages, and using this target over-subscription ratio, would provide the Commission with an easy method for pricing a basic service package at the retail level that includes minimum service quality guarantees, at least in terms of download speed. Identifying pricing for increasingly symmetric services is a more challenging problem, which is why OpenMedia tried to engage the operators on this matter during this proceeding.
36. The basic service package noted above provides a balanced solution to the affordability and service quality gaps that affect all Canadians, regardless of where they live or their income. It is not, however, intended as a substitute for targeted funding mechanisms for rural areas or vulnerable communities. Indeed, our proposal will have the effect of reducing the scope for inefficient cross-subsidization from those with limited means to those benefiting from increasingly affordable Gigabit plans that certain operators are now offering for about \$150 per month, including unlimited data. These plans offer users services with advertised speeds that are 100 times higher than the advertised speeds on basic service packages offered by the same operators in the 10 Mbps speed tiers, while they are priced at only 3 times more than the average per subscriber revenues for services from packages promising between 1.5 and 4 Mbps.
37. This large discrepancy in affordability represents a critical challenge for those with low incomes or living in underserved communities to access the broadband speeds they need to enjoy an equal opportunity to participate in the social and economic activities afforded by Internet access. The lack of minimum service quality guarantees in the market represents a barrier to accessing and using many new applications, as does the strong asymmetry of last-mile speeds typical of the Canadian broadband system relative to other advanced economies. Addressing this problem by moving from aspirational targets to a minimum level of reliability will help limit implicit cross-subsidies from low-income consumers, who tend to opt for lower speed packages, to Canadians with sufficient income to pay for the new ultra-high-speed plans becoming available in urban centres.
38. We recommend implementing the mandated basic service package in stages, mandating first that all operators must offer a basic service package at the 2011 5/1 Mbps standard that guarantees service reliability and consistency of speeds 95-99% of the time for \$30 per month by January 1, 2017. Accommodations can be made for smaller incumbents and service-based competitors that rely on wholesale access, at least for the next few years. Importantly, the wholesale regime

currently under consideration should be designed in a way that allows non-incumbent competitors to control the quality of service they deliver to their customers and guarantee it as necessary (i.e. at layer 2 rather than layer 3). In order to achieve the 5/5 and 10/10 Mbps standards we have recommended, the Commission can phase them in gradually over the next 5 years, reaching the 10/10 Mbps basic service package by 2022. Given that the costs of delivering additional capacity and increasingly symmetric connections are going down relatively fast (by 26.4% per year according to CRTC 2016-117), most of the fixed capital expenditures by TSPs can be amortized in less than five years under the accelerated depreciation provisions in the tax code. The ultimate price for a 10/10 Mbps package in 2022 should not be much higher than the \$30 rate for the 5/1 Mbps package in 2017. The Commission might wish to allow the price to increase by the core inflation rate if that addresses some of the concerns of the operators that will be mandated to deliver the basic service package.

39. It is important to reiterate that the proposed approach to addressing basic service quality and affordability problems would be effective and efficient only if it does not interfere with the operation of market forces, as mandated under both Section 7 of the *Telecommunications Act* and the 2006 Policy Direction. We therefore urge the Commission not to think of our proposal as the adoption of a price regulation or a ceiling. Operators should be free to offer any best-effort packages with maximum advertised speeds that they think their consumers need, including those with lower speeds for users that do not require, or do not think they require, a minimum level of service reliability in their plan. Prices for the mandated retail package should allow operators to recover their fixed costs and realize attractive returns on their investment, while reducing their ability to engage in implicit cross-subsidization strategies that can only accentuate Canada's digital divides.

E. Satellite broadband and remote communities

40. Because it may not be possible to provide the minimum service quality guarantees we have recommended on the current generation of broadband satellites, they should be excluded for the time being from the scope of the basic services mandate. Even if resellers of satellite broadband in Canada are correct and their offerings will soon be capable of meeting the service needs of Canadians who live in the North, the affordability of these services is likely to remain a substantial barrier.
41. Federal, territorial, and regional authorities can address some of the gaps in service quality and affordability in the North by negotiating wholesale discounts and long-term service level agreements with satellite providers. However, these measures are not likely to be sufficient since

many users in remote communities will continue to depend on satellite connectivity and also have very little income to allocate to basic Internet access. OpenMedia supports calls for demand-side subsidies that allow end-users to select from competing broadband satellite providers that are likely to emerge in the next few years.

42. As in any other direct supply or demand subsidy program, satellite subsidies can become very expensive if they are not targeted toward those who need them most. On the other hand, even in areas where fixed wireless, mobile, or DSL last-mile connections are available, the availability of affordable satellite services extends the competitive options available to consumers from only one or two potential suppliers. Consequently, subsidizing satellite services in rural communities where there are other options may have some positive benefits in terms of competitive discipline. Whether this is a prudent policy strategy depends on the price and quality of satellite services, as well as the state of legacy fixed infrastructure in a given area. Where DSL networks are not capable of scaling to the needs of the community and some users are already using satellite connectivity, it is wasteful to subsidize further upgrades to legacy DSL/FTTN networks, given that FTTP deployments will be required in the longer term to support basic telephone and broadband access services as the copper plant deteriorates. We believe, in any case, that satellite-delivered Internet connectivity should be viewed strictly as a technology of last resort, as was argued forcefully in the April 28 presentation to the Commission by Vaxination Informatique.

II. Comments on CRTC Proposal for a National Broadband Strategy (CRTC 2015-134-5)

43. In CRTC 2015-134-5 (April 28, 2016), the Notice of Consultation was amended to encourage parties to “explore the elements that should be included in a national broadband strategy for Canada.” Over the course of this proceeding, it became increasingly clear that the lack of a coherent, comprehensive federal strategy to underpin our most important communications platform has become a serious liability. In the paragraphs that follow, we will provide some reasons as to why this shortcoming must be addressed urgently.
44. One of the most forceful commentaries on this issue came from Chairman Blais in his address to the oral hearing on April 18, 2016. The Chair noted that the most recent attempt to formulate a digital strategy, dating back two years, took the form of the then Conservative government’s Digital Canada 150 plan. He cited a Canadian official’s remark to a visiting dignitary who mistook the brochure-like launch document for a full-blown strategy: *“Le représentant a dû le décevoir en lui indiquant qu’il n’existait pas de docus, de tel document plus détaillé, que la brochure en telle était en fait la stratégie numérique.”*
45. Chairman Blais remarked on the lack of attention paid to a national broadband strategy by any of the major political parties, as well as on the futility of funding broadband initiatives without careful, comprehensive planning. As we become an increasingly digital society, the harms, he said, are being visited on both individual Canadians and the nation as a whole: *“Every month that goes by without a more robust Canadian broadband strategy means Canada is competitively disadvantaged as other countries move ahead and advance on their digital productivity, innovation, and competitiveness.”*
46. Although the Chair’s remarks were unprecedented, and very welcome to OpenMedia and its constituents, his speech did not mark the first time that the call for a strategy has been entertained by the Commission. Exactly seven years ago, in its “Review of broadcasting in new media” (CRTC 2009-657, June 4, 2009), the Commission gave its terse but explicit endorsement to the idea of a national digital strategy. The digital environment, it wrote, presents Canadians with “endless opportunities,” but “Canada’s ability to compete and prosper in this environment demands national leadership and a focussed agenda” (para 77). The Commission’s new media policy ended with this statement: *“Given the breadth and magnitude of the issues and their importance to Canada’s future, the Commission fully endorses the call by the NFB for the Government of Canada to develop a national digital strategy”* (para 78).

47. In the present context, our concern is development of a national broadband strategy, rather than development of what has been called in other contexts a national *digital* strategy. The distinction is important. In Canada, a national digital strategy has typically been interpreted as much broader in scope and includes, for example, mechanisms for digitizing Canadian cultural materials. While this kind of initiative is a worthwhile part of federal policy, it goes far beyond where federal policymakers must concentrate their efforts in promoting the adoption and use of broadband access to the Internet.
48. OpenMedia submits, first of all, that the ultimate policy goal of a Canadian broadband strategy must be to ensure that all Canadians are using the global public Internet in their daily lives in ways they see as important to themselves and their families - not in ways that are important to their ISPs or other service providers, or that merely fit other policy priorities set by Ottawa. Use of the Internet by ISP customers should not be taken to mean use of only portions of the Internet deemed acceptable by third parties, in the form of walled gardens or similar restrictions. Moreover, the efforts of federal policymakers must not begin and end with ensuring that Canadians have theoretical "access" to broadband, given that millions lack the digital literacy and/or disposable income to take full advantage of the resources offered by the public Internet.
49. The lack of a coherent plan to connect Canadians to the Internet, indeed the lack of any focussed attention at the federal level, has become a national embarrassment. OpenMedia recognizes that Canada's telecommunications industry, its culture, its economy, and its geography, have unique characteristics that make our country different from others and thus difficult to compare with other advanced economies. Yet despite these differences, Canada has become a strange anomaly in the global information society, in light of the fact that the number of national broadband plans adopted around the world quadrupled between 2007 and 2013, from 38 to 134. The social, financial, and technical targets set by many of these plans are highly ambitious by any measure. The European Union, for example, has called for all its citizens to have access to 30 Mbps services by 2020, and for at least half of all households to have access to 100 Mbps broadband by that same date - speeds far higher than any being discussed in this proceeding. Individual European countries have in many cases set even more ambitious targets.
50. The targets themselves do not tell the whole story. Indeed, without sufficient resources and a strong political commitment, technical targets become unrealistic or even unachievable. Notwithstanding the important differences in size between our two countries, the US National Broadband Plan provides a good object lesson for Canadian policymakers in its scope and ambition (leaving aside the merits of its recommendations). At over 350 pages, the National Broadband Plan was the result of efforts by hundreds of skilled contributors, backed by extensive consultations, including 36 public workshops held at the FCC and nine public hearings held

across the country. The FCC's Lifeline Modernization initiative, whose policy goals parallel those in the current CRTC proceeding, was developed using many of the research findings and principles that formed an integral part of the National Broadband Plan.

51. Before outlining OpenMedia's other suggestions for a broadband strategy, we have one further comment on the April 18 speech by Chairman Blais. In it he said the following: *"To be clear, while the CRTC may be taking some leadership on defining the strategy, it will not be alone implementing and financing it. The important part of the discussion over the remaining days will be to understand the role of various players, citizens, governments, industry, and the CRTC."*
52. While we agree with this observation, OpenMedia has concerns that the need for a shared effort will become a pretext for inaction on the part of one or more of the principal participants in the development of a national strategy. The Commission must not wait for the Government of Canada to commit to a meaningful strategy before making its determinations on the major issues before it in this proceeding, including the finding that broadband access to the Internet is a basic service under the *Telecommunications Act*. As the Commission heard in this proceeding, many municipal and provincial governments are already taking the lead in designing and financing broadband development initiatives to meet the needs of their local communities, because of what they see as a lack of federal leadership.
53. For its part, the Government of Canada must do a great deal more than has been attempted in recent years. The announcement that Innovation, Science, and Economic Development Canada (ISED) has earmarked \$500 million for broadband development over the next five years leaves much to be desired. Public expenditures of this kind are not prudent when decided and undertaken in the absence of any ministerial planning process available to outside scrutiny, especially given the patchwork quilt of public investment in rural broadband development under Digital Canada 150. ISED has given no indication as to how the success or failure of this pending investment will be assessed.
54. In May 2011, OpenMedia published a study entitled "Casting an Open Net: A Leading-Edge Approach to Canada's Digital Future." In the first chapter, "An Action Plan for a Connected Canada," we outlined a series of recommendations for a national strategy (referred to as "digital policy" in the study), based on in-person consultations with Canadians in several cities, online consultations, and advice from academic experts. We highlight several of these recommendations in the following paragraphs, updated or qualified as appropriate.
55. **Guiding principles.** The overriding policy goal of a national broadband strategy must be to bring fast, affordable, ubiquitous Internet service to all Canadians. Policymakers must make the hallmarks of success actual adoption of broadband and use of the public Internet, not the mere

physical availability of connectivity in a given locale. The strategy must also be based on explicit recognition of the principle of openness as applied to a) implementation of the strategy, such that its details and measures of success are open to outside scrutiny; and b) to the operation of local access and transport networks by ISPs, such that all Canadians are free to make use of online resources in any way they see fit.

56. OpenMedia is pleased and encouraged by the Commission's launch on May 18 of its proceeding on the ITMP framework and use of data caps (CRTC 2016-192), and we are hopeful that the outcome of this proceeding will include a stronger, more explicit implementation of the network neutrality principle. However, even if the Commission chooses to adopt OpenMedia's proposal for a basic service package and a stronger ITMP framework, reversing Canada's decline as a broadband leader may require structural remediation. Given the high degree of vertical integration in the Canadian telecommunications and broadcasting markets, OpenMedia believes that the development of a national strategy should begin by considering the costs and benefits of the structural separation of network infrastructure from other operations of the dominant operators.
57. **Future-proof technology.** The Canadian market has suffered for many years from lack of competition and low levels of service innovation. In order to promote the long-term welfare of broadband users, federal policymakers must ensure that, wherever possible, the delivery platforms directly or indirectly subsidized from public funds are capable of reaching Gigabit speeds right from their initial deployment. Except in some rural and remote areas, meeting that standard will require FTTP. No national broadband strategy should fund or encourage the continued use of legacy platforms, especially xDSL. Incentives should be provided to include fibre as a component of any network construction or upgrade process, and the broadband policy framework should include incentives for the development of high-grade transport facilities and not just local access networks.
58. **Role for wireless.** One of the major policy challenges in ensuring fast, affordable Internet access to all Canadians is striking an appropriate balance between reliance on wireline and mobile wireless networks. Policymakers must encourage the deployment and use of affordable mobile wireless options as part of a comprehensive strategy. At the same time, mobile wireless must not be treated as a panacea, given its limitations compared to wireline. First, Canadian wireless plans are very expensive compared to those in other jurisdictions, in large part because of a lack of meaningful competition. Second, mobile devices are not a full substitute for wireline connectivity for many applications. Third, as network use grows in volume, reliance on wireless will be severely restricted for many users because of the widespread application by the incumbents of low data caps and high overage charges. Nevertheless, mobile wireless will have an increasingly important role to play as an enabling technology for the Internet of Things, in addition to more

conventional messaging applications. OpenMedia encourages federal policymakers to reconsider the benefits that could be realized from a wireless regime that includes MVNOs, so as to promote investment and competition in ways that have worked very well in various countries in Europe and East Asia.

59. **Open-source measurement.** Independently of the user and technical goals that form part of a broadband strategy, the long-term success of a broadband strategy depends crucially on constant monitoring and improvement, and adaptation to changes in the market and consumer behavior. Any strategy must provide for regular data collection and analysis, and, given the great complexities inherent in digital communication technologies, the data itself must be open-source. Only by treating broadband development as a collaborative endeavour will policymakers provide accountability for their decisions, as well as a more robust empirical basis for policymaking.
60. **ISP compliance and audits.** The success of a national strategy will also depend on the willingness of the incumbent ISPs to meet the goals set by policymakers. The only meaningful way to assess how well goals are being met is through regular measurements of network performance. This process will not attain any degree of objectivity, accuracy, or reliability without the use of regular third-party ISP performance audits. The Commission and other federal agencies should give serious consideration to setting up a comprehensive program for more extensive monitoring and compliance aimed at a range of indicators, including traffic management practices, the use of data caps, advertised versus actual speeds, and billing practices. A Canadian strategy should also do a much better job of educating consumers about their broadband options, and helping them choose ISP plans and identify ISP service issues.
61. In closing, we reiterate what we said earlier in this section: the ultimate policy goal of a Canadian broadband strategy must be to ensure that all Canadians are using the global public Internet in their daily lives in ways they see as important to themselves and their families. In the comments here, and in our earlier contributions, OpenMedia has provided feedback on Canada's broadband future from thousands of our constituents, the largest source of public participation in this proceeding. What our community wants to see is very clear: innovative, affordable, and reliable broadband service for all Canadians, from a range of providers, to help this country restore its once enviable leadership position. We are entirely in agreement with the observation made by Chairman Blais that this may very well be "the last best chance to get it right." Getting it right will require a concerted effort by the Commission along with a new and inspired sense of leadership from the Government of Canada. The time has come to move ahead with this all-important task. Canadians deserve nothing less.

END OF DOCUMENT