



January 11, 2019

The Broadcasting and Telecommunications Legislative Review Panel
 c/o Innovation, Science and Economic Development Canada
 235 Queen Street, 1st Floor
 Ottawa, Ontario K1A 0H5

Subject: [Review of the Canadian Communications Legislative Framework](#)

The Canadian Electricity Association (CEA) welcomes the opportunity to comment on the Review of the Canadian Communications Legislative Framework consultation published online September 24, 2018. We have limited our response to questions dealing with the Telecommunications Act.

[The Canadian Electricity Association](#)

The CEA is a trade association representing a broad range of companies that generate, transmit, distribute, and market electricity to industrial, commercial, and residential customers across Canada. Canada's electrical grid is 80% non-emitting and getting cleaner every year. CEA members, the Canadian Electrical Utilities (CEUs) are key to the electrification of Canada's economy and the country's clean growth future.

Electric utilities need telecommunications networks to: 1) maintain the secure and dependable tele-protection systems, 2) monitor and control electric infrastructure, and 3) enable the safe and efficient dispatch of their field workforce for routine and recovery operations.

Utilities typically make use of both commercial services and private networks. This combination often provides the best overall cost, performance, resiliency, and coverage. CEA members operate infrastructure across Canada in the largest cities and, due to remote electrification mandates and distant generation assets, in the most remote populated regions. They require a range of telecommunications options that can overcome the challenges posed by this diverse geography.

[CEA Summary Response](#)

The Canadian Electricity Association (CEA) holds that that CEUs have an important partnership role to play in the rollout of innovation in the telecommunications space. We look forward to working with the Telecommunications industry to achieve that future as long as it does not come at the expense of electricity rate payers; or compromise the ability of CEUs to energize the Canadian Economy. As such, CEA encourages the panel to carefully consider all relevant





discussions about any amendments to the Telecommunications Act for passive infrastructure defined in the consultation as including poles, ducts and rights-of-way. CEA believes a good and just role for the CRTC is the setting of industry standards that do not allow one incumbent telecommunications carrier to create exclusion zones for their competitors. This is a role well suited to the expertise of the CRTC as well as ISED.

We also remind the panel that innovation in telecommunications is not just “5G”. Innovation can also come from reimagining of older technology, such as LTE or designing new market structures. New developments in public safety broadband networks (PSBN) and private virtual network operators (PVNO) are two examples of such and where CEUs are eager to work with wireless carriers to provide next generation services and deployments using non-5G technology.

These examples are some of the reasons why on October 30th, 2018 CEA submitted a request to the CRTC for our members to own their own SIM cards and negotiate access to multiple existing radio access networks via a PVNO (Private Virtual Network Operator). CEA was advised by the CRTC that this issue would be best addressed in the upcoming wireless consultation. Our concern is that the consultation, as stated, is to focus on 5G issues but the PVNO is not a 5G issue. Our industry is looking for assurances that the forthcoming consultation will include room for our PVNO request given that it is not 5G.



CEA response to questions as set out in the terms of reference

1. Universal Access and Deployment

1.1- Are the right legislative tools in place to further the objective of affordable high quality access for all Canadians, including those in rural, remote and Indigenous communities?

1. Yes, the current legislative regime which was affirmed by the Supreme Court of Canada's 2003 decision *Barrie Public Utilities v. Canadian Cable Television Association* which leaves the regulation of utility pole access and rates under the authority of provincial/territorial utility regulators is balanced, effective and reasonable. Electricity regulators, due to their mandate to see that electricity is effectively delivered to Canadians at a reasonable cost are the best suited technically and constitutionally authorized (as per Section 92 of the Canadian Constitution) to recognize and govern given jurisdictional differences. This is especially important as it relates to rural and remote indigenous communities, as it ensures that needs "on the ground" are addressed.

1.2 Given the importance of passive infrastructure for network deployment and the expected growth of 5G wireless, are the right provisions in place for governance of these assets?

2. Yes, the correct provisions are in place. CEA is aware that some telecom carriers and the CRTC are requesting that the CRTC's mandate expand to include regulatory authority over what the Broadcasting and Telecommunications Legislative Review Panel refers to as passive infrastructure (defined by in the consultation as including poles, ducts and rights-of-way). CEA is unequivocally opposed to this. CEA encourages the panel to carefully consider all relevant discussions about any amendments to the Telecommunications Act for 'passive infrastructure'.

3. CEA's primary disagreement with this recommendation is that it represents a further regulatory burden on the electricity sector without a commensurate increase in service, decrease in other regulations, or ability to better serve our rate payers. If the CRTC has regulatory authority over telecom pole attachments, Canadian Electrical Utilities (CEUs) would still have their full suite of rate hearings with their provincial regulators, of which pole attachment costs for all pole attachers (including both telecom and non-telecom attachers) would remain a component because attachments impact the operations of the grid, while adding an additional level to their rate process at the federal level. Furthermore, the CRTC will not improve the ability of the electricity sector to deliver reliable, affordable, and sustainable electricity, because that is not their mandate and so there is a serious question about regulator suitability.



4. CEA believes that there are two issues behind the request to change the CRTC mandate: (1) access to attachment real estate, and (2) rents collected by the real estate owner. The issue of access is, in our opinion, immaterial because CEA members are not aware of any instance where access has been denied for anything other than technical reasons. Examples of which are 1) need to preclude additional structures on an already 'at max' burdened pole; and 2) requirement of the CEU to reserve space on the pole for its own uses such as advanced metering infrastructure (also called AMI) equipment. CEA believes a good and just role for the CRTC is the setting of complimentary industry standards with the provinces/territories that do not allow one any carrier (both ILECs and CLECs) to create exclusion zones for their competitors. This is a role well suited to the expertise of the CRTC as well as ISED.
5. Supporting the CEA's contention that regulatory oversight of the CEU's pole infrastructure is best left in the hands of provincial electricity experts are the facts that pole attachment costs are designed specifically to address that those costs are CEU specific, non-trivial, non-linear (cost for additional attachments beyond the first increase faster than the sum of attachments, e.g. 2 attachments is more than twice as expensive to manage than one), and site specific. No 'postage stamp' approach to regulation of access and rates can address these issues fairly. This is evidenced by the Ontario Energy Board (OEB) decision that the best way to manage telecom attachments in its rate regulated market was to grant Ontario based local distribution companies (LDCs) the ability to charge market rates for certain types of pole access for telecom attachments.
6. The reason for the OEB decision was that since actual costs (vs. estimated) are best known by the local utilities, the attachment agreements should be negotiated at the LDC level; not at the national level. The consequence of improperly low rates is the inappropriate allocation of expenses to LDC rate payers, and other stakeholders such as municipalities as well as the potential for deterioration of the LDC's ability to deliver reliable, safe, and cost-effective electricity.
7. In testimony to the Parliamentary Committees, Telecommunications providers and the CRTC have argued that Canada is too large and complex a place for local agreements. It is the CEA's position that this argument is flawed. Dealing with complexity and geographic diversity is an inherent reality for national level corporations such as the large telecommunications companies. Regional variation in costs for CEUs cannot be satisfied by a one-sized-fits all approach. The CRTC should have a role to play in setting correct industry standards but not as a national regulator of support structures.



8. CEA is also concerned with the language used to describe our assets as “passive infrastructure.” Utility poles are not passive; they are dynamic, carry a valuable commodity that energizes the economy, and are maintained by a fleet of highly trained professionals. For comparison, oil and gas infrastructure is not considered ‘passive infrastructure’ even though it delivers many similar functions. It can be easy to think of utility poles as simple landscape features but that is only because CEUs are so good at managing the grid that its maintenance is almost always seamless. It is important to remember that this electrical infrastructure is what will power Canada’s Clean growth future with a grid that is already 80% non-emitting and getting cleaner every year. It is this grid that will allow electrification of other sectors, such as transportation, to work toward climate change emission reduction targets and as such all actions including the improper regulation of telecom attachments that could potentially damage the efficacy of the grid should be avoided.

2. Competition, Innovation, and Affordability

2.1 Are legislative changes warranted to better promote competition, innovation, and affordability?

9. No, the current legislative regime is adequate and appropriate. Leaving the regulation of utility pole access and rates under the authority of provincial/territorial utility regulators is effective and reasonable. These regulators are the best suited, and constitutionally authorized (as per Section 92 of the Canadian Constitution) , to recognize and govern for jurisdictional differences. This is especially important as it relates to rural and remote indigenous communities, as it ensures that needs “on the ground” are addressed.
10. We would ask for some regulatory changes which could enable CEUs to get the best possible security, network resiliency, coverage, and pricing for wireless and wireline services. If the CEU owns and controls all aspects of the data pathway between itself and its endpoints, then the utility is best positioned to ensure the best security, resiliency, coverage, and cost. To that end in October of 2018, CEA requested numbering resources to allow CEUs to control and operate their own SIM Cards, Packet Gateways, and related infrastructure. We want to be able to join private infrastructure with commercial networks to improve security, network resiliency, coverage, and cost. To be clear, this would not be a competitive service against existing wireless carriers but instead a new way of accessing their cellular networks to provide better services to Canadians. For more information please see our detailed response to question 5.1



3. Net Neutrality

3.1 Are current legislative provisions well-positioned to protect net neutrality principles in the future?

11. CEA has no comment on Net Neutrality

4. Consumer Protection, Rights and Accessibility

4.1 Are further improvements pertaining to consumer protection, rights, and accessibility required in legislation?

12. CEA believes that consumer protections for large industrial clients could be improved. Please see our detailed response to question 5.1 as to how new market architecture will better serve Canadians by allowing industry to better access competitive market offerings for wireless communications.

5. Safety, Security and Privacy

5.1 Keeping in mind the broader legislative framework, to what extent should the concepts of safety and security be included in the Telecommunications Act/Radiocommunication Act?

13. Safety and security of the electricity grid is paramount, especially as the use of cellular in smart grid technologies grows from tens of thousands to millions of connected devices.

14. Our members are working hard to deploy the next generation of smart grid infrastructure in order to best enable the provision of safe, secure, reliable and clean electricity to fuel Canada's clean growth future. A significant challenge facing the smart grid is resiliency given ever increasing demands for wireless communication. For example if a severe weather event or unplanned maintenance causes a cellular outage then utility control systems and their smart devices cannot communicate.

15. Canadian Electrical Utilities (CEUs) can manage this today but as more internet of things (IoT) devices and distributed energy resources (DER) are brought online the management of the grid is becoming more and more complex and requires commensurate increases in resiliency and security.

16. For an example of what increased resiliency could mean to Canadians, if a neighbourhood loses power due to adverse weather, CEUs know the best way to bring the power back is in stages because it is safer and does not cause difficulty managing excessive loading rates



(from zero to 100%). Currently this is difficult but could be easily accomplished in the future by having control systems in grid elements talk to the CEU network to bring individual transformers online one at a time. Or, at an even more granular level, smart homes could talk to the CEU network to prioritize the energization of medical equipment before the rest of the home. These are the kind of services a smart grid could perform but until CEUs can improve their wireless service resiliency, as adverse weather that first knocks out the power is likely to have similarly affected at least one of the local cellular service providers, the CEUs will not be able to deploy these kinds of innovations effectively. If, however the CEU could access multiple cellular networks and move communications seamlessly from downed cellular networks to up ones then the resiliency of the smart grid will be greatly improved.

17. Wireless network security is also an issue that CEUs take very seriously. The fear is that if the wireless network of one carrier is compromised, the CEU grid (which is a critical infrastructure) would go down as well. This could happen in two ways, 1) the CEU equipment would not be able to communicate because the network is down, or 2) even more damaging would be if the network keys were compromised through an attack on the wireless carrier which could give system access to malicious actors. It is because of the latter that CEUs are hesitant to have massive smart grid rollouts if they come with similarly sized security risks. However, if CEUs could access wireless services while still owning their own network keys, the smart grid would be far more secure and resilient as the CEU could switch from a down network (for example one suffering a cyber-attack) to an operating one. An advantage of retaining their own network keys is that CEUs network switching would be nearly instantaneous because they would not have to establish a new network connection, only direct packets through the new gateway.
18. This inability to switch cellular networks is because utilities cannot own their own SIM cards which would allow them to temporarily change cellular networks (CEUs recognize that while dual SIM card modems exist, they remain an overly complex, and overly expensive solution). Once smart devices are deployed, it is cost prohibitive to physically change the SIM card of each device to change cellular providers. The SIM card is effectively in a "lock-in" position with specific cellular provider. ISED and the CRTC have done a good job protecting individual wireless customers from uncompetitive business practices but industrial customers haven't seen a similar benefit yet.
19. Technology today has advanced, enabling utilities to operate their own internal LTE COREs and use their own SIM cards to access existing cellular networks (the Radio Access Networks), to the point where LTE networks can be setup in an afternoon with plug and play solutions.



And as access to better market competition between providers benefits everyday Canadians so would CEUs benefit from that same competition between existing providers by escaping SIM card “lock-in” which would enable CEUs to provide a more resilient and secure smart grid to Canadians.

20. This is why on October 30th 2018, CEA submitted a request to the CRTC for our members to own their own SIM cards and negotiate access to multiple networks via a PVNO (Private Virtual Network Operator). CEA was advised by the CRTC that this issue would be best addressed in the upcoming consultation. Our concern here that the consultation, as stated, is to focus on 5G issues but the PVNO is not a 5G issue. Our industry is looking for assurances that the forthcoming consultation will include room for our PVNO request given that it is not 5G.

6. Effective Spectrum Regulation

6.1 Are the right legislative tools in place to balance the need for flexibility to rapidly introduce new wireless technologies with the need to ensure devices can be used safely, securely, and free of interference?

21. Provincial and Territorial regulators have done well balancing the need for rapidly introducing new wireless technologies, with the need to ensure devices can be used safely and securely while free of interference to the operations of CEUs.
22. There are improvements that can be made with the network registration regulations. Most CEUs make use of Commercial Wireless Services. Changing carriers does come at a high cost and choosing a specific carrier before deployment requires additional engineering effort. And, grid resiliency is reduced if CEU cannot make use of all installed Radio Access Network (RAN) infrastructure. CEA has made a request to CRTC to allow Canadian Electric Utilities to own SIM cards. By controlling our own SIM cards, CEU will be able to access all carriers on contracted wholesale basis. CEUs would get the best possible coverage, network resiliency, and pricing from carriers willing to enter into service agreements.

7. Governance and Effective Administration

7.1 Is the current allocation of responsibilities among the CRTC and other government departments appropriate in the modern context and able to support competition in the telecommunications market?



23. The current legislative regime which leaves the regulation of utility pole access and rates under the authority of provincial/territorial utility regulators is effective and balanced. These regulators are the best suited, and constitutionally authorized, to recognize and govern for jurisdictional differences (as per Section 92 of the Canadian Constitution). This is especially important as it relates to rural and remote indigenous communities, as it ensures that needs “on the ground” are addressed.

7.2 Does the legislation strike the right balance between enabling government to set overall policy direction while maintaining regulatory independence in an efficient and effective way?

24. The current legislative regime, affirmed by the Supreme Court of Canada in 2003, which leaves the regulation of utility pole access and rates under the authority of provincial/territorial utility regulators is effective and balanced. These regulators are the best suited, and constitutionally authorized (as per Section 92 of the Canadian Constitution) to recognize and govern for jurisdictional differences. This is especially important as it relates to rural and remote indigenous communities, as it ensures that needs “on the ground” are addressed.

All of which is respectfully submitted



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