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Re: Canada Gazette Notice No. SLPB-002-19: Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band

Attached, please find the reply comments of Rogers Communications Canada Inc. (Rogers) in response to *Canada Gazette*, Part I, June 22, 2019, *Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band* (SLPB-002-19).

Rogers thanks the Department for the opportunity to provide input on this important issue.

Yours very truly,

Howard Slawner
Vice President – Regulatory Telecom
HS/pg

Attach.

Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band
SLPB-002-19

Reply Comments of
Rogers Communications Canada Inc.
September 20, 2019

Executive Summary

E1. The consultation record shows that stakeholders continue to see the 3500 MHz band as key for the initial deployments of advanced 5th generation (5G) wireless technology, which has the potential to revolutionize how we work, study and play. As Canada's largest wireless provider, largest single network operator, and the leader in the Machine-to-Machine market, Rogers continues to invest heavily in advanced communication networks and requires access to additional 3500 MHz spectrum for flexible use.

E2. The key policy objective that the Department must consider in this consultation is what is the best outcome to ensure the benefits of wireless competition for all Canadians. The 3500 MHz spectrum is not a separate rural band for small, fixed operators and an urban band for regional, mobile providers but, rather, is critical for creating a true 5G national network. While smaller operators may eventually be able to deploy 5G in a patchwork of facilities-based networks, national carriers like Rogers will immediately begin deploying flexible use 3500 MHz as an overlay band over their entire mid-band mobile footprints. In 5G networks, millimetre wave spectrum will provide for massive throughput hotspots and ultra low latency applications and 600 MHz spectrum for a wide-area coverage layer, but it is the 3500 MHz band that will form the backbone for supporting new, advanced services. Large, contiguous swaths of mid-band spectrum of up to 100 MHz covering the entire nation are vital for bringing consistent 5G experiences to Canada.

E3. No alternative proposal has been made in this consultation that is superior to Innovation, Science and Economic Development Canada applying a 60 MHz spectrum cap to individual operators and an 80 MHz spectrum cap to joint networks where multiple carriers combine their spectrum into one network. Without a network cap, network sharing partners can bypass individual caps and use their combined balance sheets to great effect and undermine the Department's stated competition objectives. Bell and Telus' bidding behaviour in previous auctions, even uncoordinated, overwhelmingly shows patterns of attempting to circumvent aggregation and competition rules by bidding individually at auction and then immediately combining their spectrum following the auction. Whether they attempt to secure spectrum only in their individual wireline footprints or each acquire national spectrum coverage, the end result is always the same, combining spectrum following the auction within their joint mobile network.

E4. Set-asides are unnecessary and counterproductive given the Department's stated competition objectives. Set-asides will only fragment the 3500 MHz spectrum for no competitive benefit for Canadians and deny consumers the full benefit of new 5G services; they should not be adopted in any configuration. A well-designed

spectrum cap is sufficient to provide access to regional mobile operators and rural fixed providers without the negative competition impacts and auction distortions that spectrum set-asides would produce.

E5. In any case, Shaw, Videotron, and Eastlink have the customer base, knowledge, facilities and access to capital to compete vigorously with the three national carriers. Regional competitors now have comparable spectrum portfolios in absolute terms to national operators, especially in mid-band spectrum, and deeper portfolios in the relative terms of subscriber per MHz. They no longer require massive subsidies from the Canadian taxpayer in the form of spectrum set-asides. In deep rural and remote areas, small fixed providers will be able to secure spectrum in the Tier 4 licence areas that are of less interest to the regional mobile providers who will be deploying their set-aside 600 MHz spectrum.

E6. Moving away from set-asides will create sustainable, fair, and efficient spectrum pricing for all competitors. Set-asides create unfair subsidies to some of Canada's largest telecommunication companies that earn billions in annual revenues. Set-asides also create the unintentional but well-documented outcome of higher cost open spectrum – costs that are ultimately paid for by Canadian consumers. Driving up of open prices by bidders who have no intention of winning such spectrum has happened in multiple auctions in a row, which is at odds with the government's stated consumer policy objectives.

E7. Large 3500 MHz flexible use spectrum imbalances could lead to first mover advantages in new 5G services that will be challenging to overcome, even with the subsequent release of 3800 MHz spectrum. Set-asides would only geographically fragment the 3500 MHz spectrum for no competition benefit for Canadians and should not be adopted in any configuration. While spectrum imbalances have also been a concern in previous auctions, the 3500 MHz policy is critical as the distribution of this spectrum will set the terms for competition in new 5G services, which benefit greatly from access to larger amounts of spectrum. Only a combination of individual and joint network spectrum caps, with no set-aside, will result in an outcome that will empower every carrier – both national and regional – and hasten the adoption of 5G in line with the competition objectives that the Department has itself set out.

E8. The 3500 MHz network spectrum cap must also be applied to all transfers and subordination applications for 10 years to prevent individual bidders from combining the spectrum immediately following the flexible use auction. The 3500 MHz spectrum cap can be modified with the release of additional spectrum as part of the upcoming 3800 MHz consultation. Indeed, the 3500 MHz auction should be seen as simply the first part of a series of actions in the broader 3300-4200 MHz band. Both

the 3500 MHz network cap and assignment round must be designed to account for future releases in the broader band. By putting in place the mechanisms to rationalize the greater 3300-4200 MHz band following any subsequent spectrum awards, such as the 3800 MHz band, the Department will ensure multiple facilities-based networks will be able to eventually secure the 100 MHz bandwidths necessary to deliver the full benefits of 3500 MHz 5G services.

E9. Finally, the record shows that the technical auction rules remain unclear or are not yet settled and adjustments will need to be made. The Department must provide an opportunity for all stakeholders to participate in a meaningful process to clarify and resolve any outstanding technical issues with the auction format and rules following the publication of the Consultation's decision. Further, ISED should follow international best practice and produce a single, consolidated document with all the technical rules for the 3500 MHz auction. Being able to rely on a single authoritative set of rules will improve the efficiency and integrity of the auction.

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Introduction

1. Rogers Communications Canada Inc. (Rogers) welcomes the opportunity to reply to comments filed by other parties in response to *SLPB-002-19: Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band*[1] (the Consultation), posted on Innovation, Science and Economic Development Canada's (ISED or the Department) website on August 8, 2019.

2. Rogers stated its position on all of the issues raised in the Consultation in its comments of August 2, 2019. This reply is limited to comments on proposals made by other parties. Failure to address any specific issue raised by other parties should not be taken by the Department as Rogers' acquiescence with the position.

Rogers' Reply to Comments of Other Parties

> Q1A: ISED is seeking comments on its proposal to implement pro-competitive measures in the 3500 MHz auction.
>
> Q1B: ISED is seeking comments on the use of a set-aside, an in-band spectrum cap, or a combination of both, including the amount of spectrum that should be applied for the use of a set-aside, and/or the amount of spectrum that should be subject to an in-band spectrum cap. Provide supporting rationale for your responses.

3. In reviewing all the submissions on the Department's proposals to ensure long-term competition in the Canadian wireless industry, nearly every stakeholder puts forth arguments to ensure that they themselves will receive the most 3500 MHz spectrum in their service areas – either directly or, inevitably, in combination with their joint network partner. However, the Department needs to evaluate these competing, self-interested views with a holistic lens on the impact that the 3500 MHz auction policy is likely to have on all aspects of competition. Rogers' pro-competitive proposals are evidently the only ones not designed to specifically ensure that we have access to more 3500 MHz flexible use spectrum than any of our facilities-based competitors.

4. If the Department wishes to create successful competition within the 3500 MHz band that both protects national network competition and creates opportunities for regional players, it should implement per bidder (60 MHz) and per network (80 MHz) spectrum caps and absolutely not adopt a spectrum set-aside in any region. The network spectrum cap should not allow the combining of more than 80 MHz of 3500 MHz flexible use spectrum, through transfers or subordination, for 10 years following the issuance of flexible use licences. A well-designed spectrum cap that ensures sufficient spectrum for regional players, while at the same time taking into account

[1] ISED, *SLPB-002-19: Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band* (Consultation); http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11439.html.

the impact of spectrum sharing on competition amongst the national operators, is critical to supporting long-term competition in the Canadian wireless industry.

5. The Rogers proposal will allow balanced – though not equal – 3500 MHz flexible use spectrum for at least three facilities-based networks and four retail providers in all service areas. Auctioning on a Tier 4-basis will allow the regional mobile operators to secure spectrum in urban and suburban areas, where all their deployments are focused, while allowing rural fixed operators to compete for spectrum in the remote areas they are most interested in acquiring. When the 3800 MHz band is made available in 2022, the cap can be adjusted or adapted to encompass the additional spectrum. After all, the 3500 MHz auction is the first part of a broader distribution of the 3300-4200 MHz band.

6. Implementing pro-competitive auctions rules that do not consider actual downstream market outcomes could result in a significant and asymmetric concentration of spectrum holdings during the initial deployment phase of 5G services in Canada. This would have a negative impact on the successful development of multiple, competing 5G networks to the detriment of all Canadians. Flexible use 3500 MHz spectrum cannot be viewed as a rural band (catering to small fixed operators) or an urban band (catering to regional mobile providers), but as necessary to create true national 5G networks. National carriers will overlay flexible use 3500 MHz over their entire mid-band mobile network footprint. While mmWave spectrum is critical for ultra-high capacity and ultra-low latency and 600 MHz as a coverage layer, access to large, contiguous swaths of 3500 MHz spectrum that covers the entire nation is vital for bringing advanced 5G services to Canada.

Belus Joint Network

7. When evaluating any proposals by the other two national operators, the starting position must be the national Bell-Telus (Belus) joint mobile network. Bell and Telus have cross-subordinated to each other every mobile spectrum band currently in operation in Canada. As Rogers has previously shown, the Belus network has one of the richest spectrum positions in the world; to proceed with rules that treat these operators as separate bidders makes no sense and would be detrimental to competition.

8. While we have previously highlighted our competition concerns related to the Belus network in Canada, it is instructive that during ISED'S 3500 MHz licensing consultation the European Commission has found that a network sharing agreement between two national Czech mobile operators restricts competition and thereby

harms innovation in breach of EU antitrust rules.[2] As the EU Competition Commissioner stated:

> *"Operators sharing networks generally benefits consumers in terms of faster roll out, cost savings and coverage in rural areas. However,* ***when there are signs that co-operative agreements may be harmful to consumers, it is our role to investigate these and ensure that markets indeed remain competitive****. In the present case, we have concerns that* ***the network sharing agreement between the two major operators*** *in Czechia* ***reduces competition in the more densely populated areas of the country****."* [Emphasis added.]

9. Although there are some minor differences between the Czech situation and Canada's, the harm to competition and consumers is similar. To ensure mobile wireless markets indeed remain competitive in Canada, the Department must finally address this issue. In the short-term, Rogers' proposal to have a 60 MHz individual cap and an 80 MHz joint network cap for the 3500 MHz auction is critical to maintaining and enhancing long-term wireless competition in the mobile 5G era.

10. Bell states it is "neither necessary nor appropriate to implement spectrum set-asides and/or spectrum caps in the auction process for the 3500 MHz band in order to foster competition in the Canadian wireless market."[3] Telus states general support for the *Spectrum Policy Framework for Canada's* reliance on market forces and open auctions, providing economic evidence on how set-asides have been distorting to competition and are unnecessary but supporting a 50 MHz spectrum cap (per operator) for the 3500 MHz auction.[4] Neither party mentions their long-standing spectrum sharing agreement, where each party essentially only deploys Radio Access Network (RAN) equipment in their traditional wireline footprints. However, the effective outcome of both of their proposals is to ensure at least 100 MHz of flexible use 3500 MHz for the Belus network, which would offer speed and capacity benefits that could not be matched by any other network until at least the 3800 MHz auction and very likely thereafter. The Department should reject both proposals as entirely self-serving and bad for Canadian wireless consumers and competition policy.

11. Shaw also highlights the auction competition concerns with respect to the Belus network, stating, "Knowing they have reciprocal access to each other's RAN capacity and physical infrastructure through the Reciprocity Agreement, Bell and Telus have established a pattern of acquiring and dividing spectrum along their traditional incumbent wireless (and wireline) territories." Even uncoordinated, recent

[2] European Commission, *Antitrust: Commission sends Statement of Objections to O2 CZ, CETIN and T-Mobile CZ for their network sharing agreement*; https://ec.europa.eu/commission/presscorner/detail/en/ip_19_5110.
[3] Bell Comments, para 9.
[4] Telus Comments, para 51-53.

auction bid data provides evidence of Bell and Telus bidding behaviour attempting, again and again, to secure complementary spectrum – either on a geographic or frequency basis, depending on the circumstances of the award – with the obvious goal to cross-subordinate to their network partner for national coverage. Unless measures are taken by the Department to prevent it, flexible use 3500 MHz licences are likely to be cross-subordinated to the Belus network shortly after the auction, hurting facilities-based competition. The Department should reject any rules that have the effect of favouring the Belus network.

12. Further, Telus supports many of its arguments by comparing the post-transition 3500 MHz holdings of incumbent Fixed Wireless Access licensees while making no mention of their sale of 3500 MHz licences in 123 Tier 4 service areas to Xplornet.[5] In fact, Telus' last sale of 118 licences to Xplornet took place in 2016, meaning Telus completely exited the band two years after Industry Canada (as ISED was then called) announced plans to make the band mobile. Had Telus not sold their 3500 MHz Fixed Wireless Access licences, today they would be the third largest 3500 MHz licensee by MHzPops and would have retained nearly all of their spectrum under the transition rules. To claim they are singularly aggrieved and disadvantaged amongst national operators is disingenuous and transparently self-serving.

Regional Mobile Operators and Rural Fixed Operators

13. Shaw, Quebecor, Eastlink, Xplornet, SaskTel, Ecotel, BCBA, and EORN are all generally supportive of set-asides and spectrum caps, while Cogeco, TekSavvy, Iristel, and Canwisp all want further measures to protect themselves from the large regional mobile operators.[6] However, no convincing evidence is provided that a 3500 MHz set-aside is actually justified or warranted. This is especially so when most set-aside proposals would result in the two national mobile networks (the Rogers and Belus networks) being severely constrained in their 3500 MHz flexible use holdings to the detriment of all Canadian wireless consumers.

14. The proposals and arguments put forward by the potential set-aside-eligible bidders range from having less than optimal policy outcomes to being flagrantly self-serving and having massively negative policy outcomes. The potential for long-term harm to Canadian wireless policy – and in the context of 5G's profound industrial impact, Canada's overall economic growth – cannot be overstated. Below is a representative sample of proposals for set-asides, which clearly highlight why they are bad for Canadians.

[5] Industry Canada, *Fixed Wireless Access (3500 MHz) – Transferred Licences*; https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10437.html.

[6] Shaw Comments, para 15; Quebecor Comments, para 16; Eastlink Comments para 11; Xplornet Comments, para 66; SaskTel Comments, para 52; Ecotel Comments, para 11; BCBA Comments, para 10; EORN Comments, para 13; Cogeco Comments, para 23; TekSavvy Comments, para 9; Iristel Comments, para 5; Canwisp Comments, para 113.

- Eastlink proposes a 100 MHz set-aside,[7] where an ideal outcome for Eastlink would be 100 MHz for the regional operator (i.e., itself) and 100 MHz for open bidders (i.e., 50 MHz for the Rogers network and 50 MHz for the Belus network). No discussion or justification is provided why ISED should support an approach in which no national network be able to provide 5G coverage with an equal, or even comparable, amount of 3500 MHz spectrum. Grossly asymmetric 3500 MHz flexible use holdings are bad, regardless of which network has access to twice as much spectrum as all others.

- Cogeco presents the outcomes of previous auctions where set-asides (and poorly constructed spectrum caps) that resulted in massively-inflated spectrum costs for national operators – such as Rogers and Telus paying 77% of the 600 MHz auction costs despite 43% of spectrum being set aside – as being a positive key reason to have yet another set-aside.[8] Inflated costs for competitors is perhaps a strategic benefit for Cogeco but not one for Canadian consumers, who ultimately pay for those inflated spectrum prices. Further, Cogeco is a former 3500 MHz licensee that sold its holdings in 2016[9] (i.e., like Telus, after the mobile policy direction was announced) and is now advocating for set-asides for which they would be eligible, as well as a cap within the set-aside to effectively guarantee themselves spectrum. As discussed below, Cogeco also wants the transfer rules for set-aside spectrum loosened, which would incentivize speculators in the set-aside band and may orphan spectrum that would otherwise be quickly deployed by national networks.

- TekSavvy highlights that the AWS-3 auction allowed set-aside-eligible bidders to acquire spectrum at what they state was a “reasonable price” as good policy.[10] This implies they also think national operators paying spectrum prices 2600% higher than what they view as a “reasonable price”, and the impact that has on consumer prices, is a good policy outcome. Further, in response to Q3B, 4A, and 9A, TekSavvy advocates for additional rules to specifically benefit small regional carriers who also hold spectrum licences in the adjacent Wireless Broadband Service band (WBS, 3650-3700 MHz) in order to effectively create 100 MHz channels in the 3500 MHz and WBS bands. However, TekSavvy does not identify themselves as holding WBS licences in 16 Tier 4 service areas, nor do they provide any evidence to justify providing themselves (and other WBS licensees) with a network advantage. We further find it egregious that TekSavvy would propose auction policies so they could acquire spectrum at below market rates (3500 MHz) and not pay any licensing fees at all (WBS), while also advocating that the Department take back more spectrum from 3500 MHz

[7] Eastlink Comments, para 13.
[8] Cogeco Comments, para 35.
[9] Industry Canada, *Fixed Wireless Access (3500 MHz) – Transferred Licences*.
[10] TekSavvy Comments, para 10.

licensees that have invested in network infrastructure deployments and fully meet their conditions of licence.[11]

- Xplornet, a set-aside-eligible bidder in the 600 MHz auction, wants a 3500 MHz set-aside for which they would qualify but no spectrum caps.[12] As they will be the largest, single-operator, post-transition 3500 MHz licensee, even making such a flagrantly self-serving proposal seems incredulous, much like Telus' claim they should have been eligible for the 600 MHz set-aside and (potentially) for a set-aside in the 3500 MHz auction.[13]

15. While the above examples of set-aside supporters are amongst the most egregious, none of the proposals made by any stakeholder supporting such a policy would result in a positive long-term outcome for Canadian wireless competition. Instead they all focus on using regulatory measures to secure the largest amount of spectrum at the lowest possible prices for themselves. As seen below in Q1C, regional mobile operators want set-aside rules to benefit themselves versus national operators and rural fixed operators, while rural fixed operators want rules to benefit themselves against mobile operators (national and regional), with limited thought for impact on urban and suburban mobile consumers. An individual spectrum cap of 60 MHz and joint network spectrum cap of 80 MHz, which includes all post-transition 3500 MHz spectrum, provides the guaranteed spectrum access to smaller fixed and mobile operators that the Department wants while not unduly constraining the national, world-class networks that Canadian businesses and consumers want.

16. Where set-aside proponents do argue for "more reasonable" proposals (or, rather, crafted to appear more reasonable to ISED), such as a 50 MHz set-aside, they are grounded in efforts to continue subsidizing some of Canada's largest telecommunication conglomerates and not in a fact-based analysis nor based on any long-term benefit for Canadian wireless policy.

17. For instance, Shaw submits an expert report supporting the use of set-asides in the upcoming 3500 MHz auction, which is an almost exact copy of a similar report submitted as part of Shaw's 600 MHz consultation submission in 2017. In 2017 (and 2019), Shaw's expert argued that "set-asides are desirable in settings with concentrated markets and concentrated spectrum holdings".[14] The expert then argued that both conditions existed and that this concentration in low-band spectrum holdings would be best addressed using of set-asides in the 600 MHz auction. While not accepting the view on low-band holdings (as they were not adjusted to account

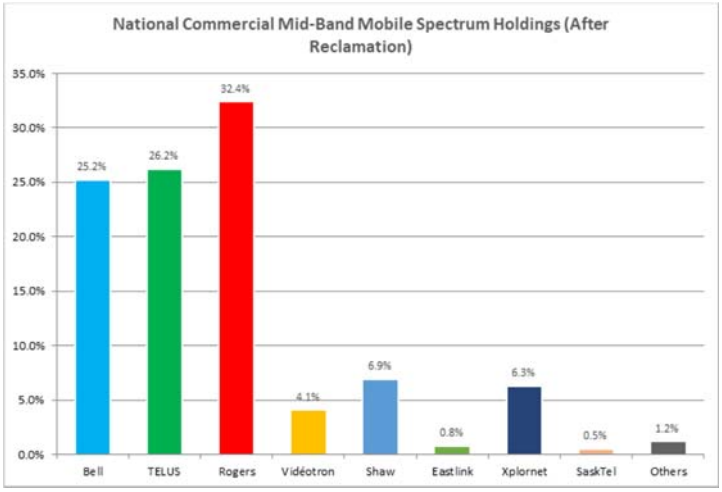
[11] TekSavvy (para 11) state the ISED site database indicates Inukshuk has 488 separate 3500 MHz sites. However, the site database provides flawed information that can be challenging to interpret. To correct the record, Inukshuk and its sub-licensees had over 3,600 sectors deployed in 3500 MHz at end of August 2019, many in rural areas.
[12] Xplornet Comments, para 66.
[13] Telus Comments, para 99.
[14] Shaw, *Cramton Expert Report*, pg 4.

for differences in network coverage nor subscriber bases), we highlight that while the 2019 paper maintains that set-asides work best in situations where spectrum holdings are concentrated, the Shaw expert does not argue nor provide any evidence that mid-band spectrum holdings are, in fact, concentrated.

18. This bears repeating for absolute clarity. Shaw's own expert does not believe Canadian mid-band spectrum holdings are concentrated. It therefore fails to justify the use of a set-aside of 3500 MHz spectrum.

19. In its own submission, Shaw desperately tries to show signs of concentration by calculating spectrum holdings at the national level (see Figure 1 below).[15] However, Shaw deliberately misrepresents the data, as only Rogers, Bell, and Telus operate national networks. As such, national operators' spectrum holdings on a Canada-wide population-weighted basis will always be greater than those of any individual regional player. Stated more directly, Rogers provides national network coverage from coast to coast while Shaw provides limited coverage in just three provinces. Any meaningful assessment of spectrum holdings needs to be done at a regional level.

Figure 1. ***Shaw Figure 3: National Mid-Band Spectrum Holdings (Weighted MHz/Pop)***



Notes: As per Shaw footnote, "Includes BRS, WCS, PCS, AWS-1 and AWS-3 spectrum holdings."

20. As the table below shows, the strongest regional players in each Tier 2 service area have substantial holdings of mid-band spectrum. Indeed, SaskTel has access to a higher share of mid-band spectrum in Saskatchewan than any single national mobile operator, yet continues to advocate for a set-aside to secure guaranteed subsidized spectrum for itself.[16] Further, the regional players hold more mid-band spectrum (combined) than Rogers in five Tier 2 service areas. This is a direct result of the set-

[15] Shaw Comments, Figure 3, para 37.
[16] SaskTel Comments, para 11.

asides and spectrum caps in previous auctions (AWS-1, AWS-3 and 2500 MHz), which reserved substantial amounts of mid-band spectrum for regional players.

Table 1. Comparison of Regional Mid-Band Spectrum Holdings (Weighted MHz/Pop)

Tier #	Name	Rogers	Bell	Telus	SaskTel	Videotron	Eastlink	Shaw	Xplornet	Other
2-001	NFLD	23%	25%	21%			15%		16%	
2-002	NS	23%	21%	22%			15%		16%	2%
2-003	NB	24%	24%	20%			15%		16%	
2-004	EQ	25%	18%	31%		18%			5%	3%
2-005	SQ	26%	17%	33%		18%			2%	4%
2-006	EO	26%	17%	32%		12%		4%	5%	4%
2-007	NQ	16%	23%	18%		21%			14%	4%
2-008	SO	30%	25%	23%				12%	2%	8%
2-009	NO	24%	23%	24%			10%		14%	5%
2-010	MB	23%	21%	34%					18%	2%
2-011	SK	23%	4%	28%	30%				17%	
2-012	AL	27%	18%	28%			0%	14%	9%	3%
2-013	BC	30%	20%	28%				13%	4%	4%

Notes: PCS, AWS-1, AWS-3, AWS-4, WCS, BRS included. Inukshuk WCS spectrum split 50/50 between Rogers and Bell. AWS-4 subordinate licences are included with Telus and Xplornet holdings. Other includes Tbaytel, Cogeco, and other smaller regional operators. Licences held on a smaller tier than Tier 2 are population weighted to Tier 2 region.

21. Table 1 highlights that the strongest regional operator in each service area already holds sufficient amounts of mid-band spectrum. The overall spectrum portfolios of the regional mobile operators are almost on par with those of the national operators – while supporting a fraction of the customers – and, therefore, there is no need to prop them up even further with another set-aside.

22. Proposals from regional operators like Shaw and Videotron[17] for a set-aside of 50 MHz are thus self-serving, as they aim to address a problem that does not exist (i.e., concentration in mid-band holdings). Set-asides would be particularly harmful in regions where spectrum availability is limited due to Xplornet's existing holdings, potentially ensuring an outcome where one of the national networks cannot win a critical mass of spectrum, thus initially depriving millions of Canadians the benefits of 5G. The "foreclosure" issue raised in the Shaw expert report is fully addressed through our proposed spectrum caps, which provide a basic level of protection against extraordinarily asymmetric outcomes. This so-called "foreclosure risk" is further diminished by the fact that regional operators such as Shaw, Videotron, and

[17] Videotron Comments, para 24.

SaskTel are well capitalised firms that are well capable of competing for spectrum in the open market without special assistance.

23. While Rogers does not generally support set-asides or caps that interfere with the operation of market forces and artificially distort outcomes, which provide an unfair subsidy to one or more competitors at the expense of others, the best auction policy for the 3500 MHz band is to adopt a 60 MHz spectrum cap for individual bidders and an 80 MHz for joint networks. The use of an individual and network spectrum cap, which fully accounts for all post-transition holdings, enforced on transfers and acquisitions of 3500 MHz flexible use spectrum for 10 years following the issuance of flexible use licences, will ensure the best possible long-term outcome for all Canadians. In conjunction with the use of Tier 4 licensing, our proposed competition measures balance the needs of all facilities-based competitors, including national network operators, regional mobile operators, and rural fixed providers. Our proposal also avoids unfair subsidies for some of Canada's largest telecommunications firms and eliminates incentives for set-aside-eligible bidders to spitefully increase open spectrum costs and, thus, the cost of Canadians' mobile services.

24. The United States' Federal Communications Commission (FCC) has recently proposed a 40 MHz cap to apply for all bidders for "PAL" licences in the CBRS band at 3.5 GHz. Like Canada, this may be seen as the first of a two-part process of releasing C-band spectrum, as the FCC is currently in discussion with satellite operators regarding the clearance of spectrum above 3.7 GHz for mobile. It is important to note that, at a time of potential consolidation (T-Mobile-Sprint merger) and new entry (Dish), the FCC has identified a cap rather than a set-aside as the best approach for this award. The proposed cap is smaller than we have proposed for Canada, which makes sense as only 70 MHz of PAL spectrum plus a further 30 MHz of "GAA" (quasi-unlicensed) spectrum is initially available in the U.S., compared to the initial 200 MHz in Canada.

Q1C: ISED is seeking comments on its proposal to limit the eligibility criteria to bid on set-aside spectrum licences to those registered with the CRTC as facilities-based providers* that are not National Mobile Service Providers, and that are actively providing commercial telecommunication services to the general public in the relevant Tier 2 service area of interest, effective as of the date of application to participate in the 3500 MHz auction.

25. Both Telus and Bell, along with Rogers, do not support the use of a set-aside in the 3500 MHz band, which would result in another substantial and unwarranted taxpayer subsidy to the regional carriers. It could also create asymmetric network competition and harm the early deployment of 5G services in Canada. Most stakeholders propose tightening the eligibility criteria to increase auction fairness and competition

within any set-aside. However, upon review of all the proposals made by stakeholders – proposals we ourselves considered but ultimately rejected – the best way to achieve the Department's stated 3500 MHz auction policy goals is to increase competition within the set-aside, if ultimately adopted. As such, the Department should adopt its proposed eligibility criteria but designate set-aside-eligible bidders as set-aside-eligible in all service areas in order to increase auction fairness and competition within set-aside spectrum.

26. Telus similarly proposes to expand the set-aside eligibility criteria in order to allow set-aside-eligible bidders to bid for set-aside spectrum Canada-wide.[18] In an expert report attached to Telus' submission, Ostrovsky provides further arguments that support Telus' (and Rogers') proposal.

> One of the features that contributed to such pre-determined outcomes at artificially low prices (as well as the concentrated holdings) was the highly unusual restriction that set-aside blocks in a given region were only available to regional incumbents already active in that region (in the wireless or wireline markets). This feature is anticompetitive both within the context of the auction itself, and from the point of view of subsequent market structure. From the point of view of the auction, this feature resulted in a very low number of bidders eligible to bid for set-aside blocks in many regions, all but guaranteeing low competition and very low prices for these blocks (which is exactly what happened in the auction). In the context of subsequent market structure, **this feature essentially segments the regional markets among different providers and makes it difficult for one regional provider to enter another, new market. Segmenting the markets, and not competing on each other's turf, is a canonical anticompetitive measure employed by oligopolists in many industries – but typically regulators try to prevent such behavior and find ways to disrupt it**, instead of facilitating and encouraging it, as the 600 MHz auction inadvertently did. While the goals of the regulator were to foster competition, the actual implementation of the auction in many cases ended up with the opposite results.[19] [Emphasis added.]

27. The Telus expert report is absolutely correct in its findings that further tightening the eligibility criteria, as proposed by a number of stakeholders, is indeed anti-competitive and only serves to further segment the market between regional operators. Tightening the eligibility criteria would only cement the current market structure, reduce auction efficiency, and increase the subsidy for well-capitalized regional mobile providers. Making set-aside-eligible bidders able to bid for set-aside

[18] Telus Comments, para 108.

[19] European Commission, *Antitrust: Commission sends Statement of Objections to O2 CZ, CETIN and T-Mobile CZ for their network sharing agreement*; https://ec.europa.eu/commission/presscorner/detail/en/ip_19_5110.

spectrum outside their operating territories, however, will decrease the incentive to park points in open spectrum and unfairly increase the costs for national operators and, by extension, the costs for all Canadian consumers.

28. A number of stakeholders propose that satellite television service providers should not be considered as providing a relevant local telecommunication service,[20] with Iristel and Quebecor specifically highlighting Shaw's 600 MHz auction behaviour as price driving in the set-aside and the reason some set-aside spectrum ultimately went unsold. Shaw, however, proposes that, in addition to ISED's proposed criteria, only applicants already providing commercial mobile wireless services should be permitted to bid on set-aside spectrum.[21] Such a proposal preserves Shaw's ability to bid on set-aside spectrum everywhere while limiting the ability of fixed service operators to compete in their local service areas against Shaw, and is inherently self-servingly. While we support efforts to limit gaming behaviour by those providing satellite television, such as the 600 MHz auction bid data shows, this proposal will not address the reduction in competition resulting from market segmentation.

29. Similarly, Bell, Cogeco, and Xplornet's proposal to have set-aside eligibility tied to existing deployments on a Tier 4 basis, as opposed to the Department's proposed Tier 2, should also be rejected.[22] While we agree with Xplornet that, "Initial deployments of mid-band spectrum will be to upgrade current network facilities – not to expand to new territories",[23] this is a reason to not adopt a set-aside, as national mobile operators are the ones that will be overlaying mobile 5G services over their current mid-band mobile networks. Were the Department to adopt proposals restricting set-aside-eligibility to deployment on a Tier 4 basis, this would simply lock in market segmentation at a more granular level.

30. Finally, TekSavvy and Canwisp propose to generally restrict regional mobile operators from any set-aside while BCBA suggests not allowing them to bid on spectrum in regional areas.[24] The Department should reject these proposals as having perverse policy outcomes, creating potential coverage gaps in national 5G networks and slowing overall 5G deployment if no major facilities-based network secures spectrum.

31. Clearly, the best option for the 3500 MHz auction is to have no set-aside. If the Department ultimately adopts one, set-aside-eligible bidders should only be able to bid on set-aside spectrum in all service areas to enhance competition in the auction (and potentially beyond it) and reduce incentives to price drive open spectrum costs.

[20] Bell Comments, para 36; Quebecor Comments, para 34; Iristel Comments, para 11; Eastlink Comments, para 19.
[21] Shaw Comments, para 136; Quebecor Comments, para 35; Iristel Comments, para 10.
[22] Bell Comments, para 38; Cogeco Comments, para 99; Xplornet Comments, para 80.
[23] Xplornet Comments, para 81.
[24] TekSavvy Comments, para 26; Canwisp Comments, para 25; BCBA Comments, para 19

Q1D: ISED is seeking comments on its proposal that any set-aside licences acquired by set-aside-eligible bidders would not be transferable to set-aside-ineligible entities for the first five years of the licence term.

32. Nearly every stakeholder is in general support of the Department's proposals that any set-aside licences acquired by set-aside-eligible bidders not be transferable to set-aside-ineligible entities for the first five years of the licence term, with only Bell opposing.[25]

33. Notwithstanding Rogers' general objection to set-asides, we continue to support the Department's moratorium proposals but, further, the moratorium should also extend to the transfer of set-aside spectrum to all entities, including set-aside-eligible ones. Similarly, Telus recommends that the proposed five-year coverage requirements be assessed before the expiry of the prohibition on licence transfers (or subordinations) to set-aside-ineligible operators to further discourage speculation.[26] The Department should also amend the transferability rules to prevent any abuse of Rogers' proposed 60 MHz individual operator or 80 MHz joint network spectrum cap (whether through a permanent transfer or subordinate licences) for 10 years. This spectrum cap can either be adjusted or removed following the release of the additional spectrum in the 3300-4200 MHz band.

Q1E: ISED is seeking proposals for other eligibility criteria along with supporting rationale.

34. All stakeholders provide alternative proposals or modifications for eligibility criteria in their response to Q1C.

Q1F: ISED is seeking comments on the inclusion of grid-cell and sub-divided licences towards the spectrum cap, and the proposal to allow the return of these licences in order to increase a licensee's eligibility to bid on additional spectrum within the related licence area.

35. Many stakeholders, including Rogers, support the inclusion of grid-cell and sub-divided licences towards the cap and the proposal to allow the return of licences in order to increase a licensee's eligibility to bid on additional spectrum covering the

[25] Telus Comments, para 109; Shaw Comments, para 137; Quebecor Comments, para 36; Xplornet Comments, para 88; Eastlink Comments, para 21; SaskTel Comments, para 72; TekSavvy Comments, para 28; Ecotel Comments, para 26; Iristel Comments, para 14; BCBA Comments, para 25; Canwisp Comments, para 28; Bell Comments, para 39.

[26] Telus Comments, para 110.

entire related licence area.[27] Bell argues these licences should count but be population-weighted to the nearest 10 MHz, SaskTel and Quebecor state only blocks that cover more than 50% and 75%, respectively, of the Tier 4's population should count, while Canwisp and BCBA want the ability for grid-cell licensees to bid on entire licence areas and return the grid-cell licence in the event they win.[28] The Department should reject these proposals, as they would allow grid-cell licensees to either circumvent a spectrum cap in areas that already have business interests or a 100% risk-free opportunity to increase their coverage area.

36. For clarity, we still support current 3500 MHz licensees being able to bid on sub-divided spectrum within any Tier 4 service area where they do not meet the relevant threshold.

Q2: ISED is seeking comments on its proposal to use Tier 4 service areas for the 3500 MHz licensing process.

37. All public mobile network operators support the Department's proposal to use Tier 4 service areas for the 3500 MHz licensing process. While Bell, Xplornet, and Eastlink provide general support for Tier 4, Telus and Iristel (like Rogers) note that Tier 3 would be appropriate for spectrum with these propagation characteristics, with Quebecor and SaskTel stating their general preference for mobile spectrum being licensed on a Tier 2 basis.[29] Ecotel, who has a preference for Tier 5, also states their support for Tier 4.[30]

38. The Department should strongly reject all proposals to use smaller than Tier 4 licence areas, including ISED's pending Tier 5 service area. Cogeco, TekSavvy, BCBA, and Canwisp – all fixed service providers – call for at least some use of Tier 5 service areas to license the flexible use 3500 MHz band, acknowledging the significant interference mitigation challenges but simply waving them away and providing no proposals or evidence on how they could be solved.[31] (TekSavvy, with very limited facilities-building experience, does not even mention the challenges of coordination and interference mitigation.)

[27] Telus Comments, para 111; Eastlink Comments, para 22; TekSavvy Comments, para 29; Ecotel Comments, para 28.
[28] Bell Comments, para 46; SaskTel Comments, para 74; Quebecor Comments, para 39; Canwisp Comments, para 29; BCBA Comments, para 29.
[29] Bell Comments, para 48; Eastlink Comments, para 23; Xplornet Comments, para 91; Telus Comments, para 113; Iristel Comments, para 17; Quebecor Comments, para 43; SaskTel Comments, para 77.
[30] Ecotel Comments, para 36.
[31] Cogeco Comments, para 110; BCBA Comments, para 32; Canwisp Comments, para 30; TekSavvy Comments, para 34.

39. As Rogers previously highlighted in our comments on the *Consultation on a New Set of Service Areas for Spectrum Licensing*, Tier 5 service areas should absolutely be restricted to frequencies above 6 GHz, and likely millimetre wave (mmWave) bands and above, unless and until better coordination tools and advancements in technology make interference mitigation technically and economically feasible in low and mid-band spectrum. These interference challenges at 3500 MHz are non-trivial as we have first-hand experience of interference at distances over 40 km, in some cases as far as 80 km.

40. The potential for interference risks from using sub-Tier 4 service areas with the introduction of flexible use licences and new deployments of new fixed and mobile 5G NR equipment would be significant. The interference case Xplornet raises,[32] which took place in 2013, was the result of fundamentally incompatible technologies. With the advanced new services expected for 5G, including autonomous vehicles, public safety and health services, and mission-critical IoT applications, the 3500 MHz band (and broader 3300-4200 MHz band) is wholly inappropriate to trial the introduction of Tier 5 service areas, even in rural areas. Even EORN, who is in favour of creating ad hoc sub-Tier 4 service areas for some licence areas, highlights that Tier 4 licensing is the clear choice for the 3500 MHz band due to "existing 3500 licences are in Tier 4 service areas, the complexity of managing the transition licences, and the objective of providing services for flexible use in both urban and rural licences".[33]

Q3A: ISED is seeking comments on its proposal to include all remaining spectrum (including partially encumbered Tier 4 areas) as part of the auction as shown in table A1 of annex A.

41. There was near unanimous support for including all remaining spectrum, including partially encumbered Tier 4 areas, as part of the auction. The only submission to not offer support was Xplornet, who proposes that blocks encumbered by existing partial-tier licences not be auctioned in the main process and, instead, be allocated through an application process subsequent to the main auction but before the assignment stage takes place.[34] The Department should reject Xplornet's proposals, which essentially are designed to allow it to bid on full tier licences prior to committing to returning their current partial-tier licences as well as provide Xplornet with an additional level of interference protection over all other 3500 MHz licensees.

[32] Xplornet Comments, para 61.
[33] EORN Comments, para 18.
[34] Xplornet Comments, para 102-103.

42. While interference between legacy and modern deployments has been a reality (and will continue to be so with 5G NR rollouts), these should be resolved through standard engineering practices, similar to how Inukshuk has handled challenges with many small rural operators. The better long-term solution to minimize interference complexity for all network operators in the 3500 MHz band is to license the spectrum on no smaller than a Tier 4 basis, enhance the Spectrum Management System database information, and ensure compliance of small operators in uploading technical data.

Q3B: ISED is seeking comments on its proposal to consider all spectrum acquired through the auction and only Tier 4 licences that will be issued through the transition process, simultaneously in the assignment round of the auction, in order to determine the specific frequency assignments of all licences in the 3500 MHz band.

43. The Department's proposal to consider all spectrum acquired through the auction and Tier 4 licences issued through the transition process simultaneously in the assignment round of the auction to determine the specific frequency assignments of all licences is supported by most stakeholders, including Bell, Telus, Shaw, Quebecor, Cogeco, Eastlink, SaskTel, and Ecotel.[35] However, Xplornet, TekSavvy, Canwisp, and BCBA all propose some variant of being allowed to retain their current holdings and/or being automatically assigned spectrum adjacent to the WBS band (3650-3700 MHz).[36] The Department should reject such proposals, especially ones that are intended to allow certain operators to create a head start 100 MHz 5G channel for themselves at the expense of others, regardless of their size. These operators will be retaining most (or all, in many cases) of their spectrum through the transition from fixed to much more valuable flexible use licences. The Department should also be leery of WBS spectrum holders looking to create a permanent exclusive right to lightly licensed spectrum for which they have never paid any acquisition costs nor annual fees. Further, many of them will be upgrading legacy network equipment and moving frequencies that will not impact their costs. However, Rogers is supportive of the Department using auction revenues to provide financial support to all displaced operators in the 3500 MHz band.

44. Upon reviewing submissions, Rogers reiterates our view that it is important that the 3500 MHz auction provides a path for all facilities-based operators to eventually achieve blocks of up to 100 MHz of contiguous spectrum (or two blocks that are

[35] Bell Comments, para 49; Telus Comments, para 119; Shaw Comments, para 140; Quebecor Comments, para 47; Cogeco Comments, para 117; Eastlink Comments, para 25; SaskTel Comments, para 81; Ecotel Comments, para 39.
[36] Xplornet Comments, para 106; TekSavvy Comments, para 40; Canwisp Comments, para 36; BCBA Comments, para 36.

sufficiently close that they can be aggregated) in the greater 3300-4200 MHz band, so they are able to deliver the full benefits of 5G to Canadians. The Department should implement rules that would not just consider all spectrum acquired through the current auction and Tier 4 licences issued through the transition process simultaneously in the assignment round of the 3500 MHz auction but would also encompass spectrum won in the future 3800 MHz band. Assignment rules should not be created to provide de facto permanent authorizations for current WBS users, as such actions could permanently fragment the 3300-4200 MHz band.

Q3C: ISED is seeking comments on the proposal that licensees who acquire multiple flexible use Tier 4 licences in a given area, either as a result of the auction or as a result of the transition process, be assigned contiguous spectrum, and that this also apply to partial area licences acquired through the auction.

45. There is unanimous support for the Department's proposal that licensees who acquire multiple flexible use Tier 4 licences in a given area, either as a result of the auction or as a result of the transition process, be assigned contiguous spectrum, and that this also apply to partial area licences acquired through the auction.[37] Telus, similar to our submission, also highlights the importance of frequency contiguity not only within a service area, but across service areas (geographic contiguity).[38]

46. Rogers continues to support frequency contiguity but again highlights that the Department must consider the assignment round of the 3500 MHz auction as simply Part A of the assignment round of the greater 3300-4200 MHz band and take into consideration contiguity of the assignment round of the future 3800 MHz auction as Part B. Further, we fully support the Department, to the maximum extent possible, assigning licensees the same spectrum blocks in all adjoining service areas to simplify frequency coordination and interference management for operators.

Q3D: ISED is seeking comments on the proposal to classify all partial tier licences as encumbered blocks.

47. There is unanimous support for the Department's proposal to classify all partial tier licences as encumbered blocks. We support Telus' request for ISED to publish details regarding the nature and extent of encumbrances in a timely manner to help

[37] Bell Comments, para 49; Telus Comments, para 122; Shaw Comments, para 140; Quebecor Comments, para 48; Cogeco Comments, para 117; Xplornet Comments, para 107; Eastlink Comments, para 26; SaskTel Comments, para 83; TekSavvy Comments, para 43; Ecotel Comments, para 40; Iristel Comments, para 20; BCBA Comments, para 43; Canwisp Comments, para 49.
[38] Telus Comments, para 123.

support bidder preparation.[39] However, the Department should reject Iristel's proposal to create "unencumbered Tier 5 licences in those Tier 4 areas where the location of the encumbrance allows for this".[40] As highlighted above, Tier 5 service areas are only suited for 6 GHz and above, and probably mmWave frequencies, based on current technology and interference management tools. Tier 5 services areas should not be used for the 3500 MHz band, nor any mid-band spectrum (or lower) for the foreseeable future.

Q3E: ISED is seeking comments on the proposal to bundle the remaining portions of the encumbered areas offered in the auction as a combined encumbered block of 20, 30, 40 MHz or more, depending on the number of 10 MHz blocks being bundled. In particular the bundle would include the tier areas where existing sub-divided or grid cell licenses are encumbering the majority of the tier. This would apply where the geography of the remaining portions is the same or similar, and/or the remaining area covers a relatively small population. Comments on the proposed list of encumbered service areas where multiple blocks may be combined for the purpose of the auction are also sought.

48. Stakeholders are of mixed views on the Department's proposal to bundle the remaining portions of the encumbered areas offered in the auction, where the geography of the remaining portions is the same or similar and/or the remaining area covers a relatively small population, as a combined encumbered block.

49. Quebecor, Xplornet, and Ecotel offer general support while Telus and Shaw request further clarification on the criteria to be used to assess candidate markets for bundling in order to assure contiguity of auction allocations before they would support additional bundling.[41] Rogers continues to support the proposal, as combining all encumbered spectrum in a tier into a single encumbered block will best help facilitate contiguity of holdings acquired in the 3500 MHz and 3800 MHz auctions and Tier 4 flexible use licences acquired as part of the 3500 MHz transition process.

50. SaskTel proposes only licences that are identical in terms of bandwidth, geographical coverage, and population coverage be candidates for bundling.[42] Conversely, Cogeco states ISED's classification of encumbered spectrum is too restrictive and proposes very lightly encumbered areas (defined as areas where less than 15-25% of area population is not available) should not be classified as

[39] Telus Comments, para 125.
[40] Iristel Comments, para 21.
[41] Quebecor Comments, para 51; Xplornet Comments, para 110; Ecotel Comments, para 42; Telus Comments, para 126; Shaw Comments, para 143.
[42] SaskTel Comments, para 91.

encumbered.[43] The Department should reject both these positions as being overly restrictive or liberal in evaluating the impact of encumbrance for interference management or network design.

51. BCBA, Canwisp, and TekSavvy believe bundling may make encumbered blocks too expensive, while Iristel argues that bundling may lead to a bidder acquiring more spectrum then they need.[44] The Department should also reject these arguments, as the proposed encumbered bundles are either for small populations (meaning still low absolute costs) or small amounts of spectrum (close to the minimum required to provide a competitive service). Thus, the concerns are not relevant in the specific bundles proposed by the Department, especially if auctioning them unbundled could potentially frustrate the ability for the Department to assign contiguous spectrum in the licence area.

Q3F: ISED is seeking comments on the proposal that the bundled encumbered blocks would not count towards the spectrum cap during the auction, but that any transfers of the licences post-auction would be subject to the spectrum cap and the conditions of licence as described in section 11.2.

52. Similar to the position on bundling, stakeholders are of mixed views on how to apply a spectrum cap to encumbered blocks. Most submissions, including those from Shaw, Cogeco, Eastlink, SaskTel, TekSavvy, Ecotel, BCBA, and Canwisp suggest that bundled encumbered blocks should count (at least partially, in some cases) toward any spectrum cap.[45] Conversely, Quebecor and Xplornet more generally support ISED's proposals, while Bell supports encumbered blocks not counting towards the cap and further believes any transfer of encumbered spectrum post-auction should not be impacted by a cap.[46] Telus' support of the Department's proposal is contingent on it applying only to "the proposed scenarios (i.e., licences in low-population service areas which have the majority of their population encumbered)".[47]

53. Rogers continues to support the Department adopting a dual operator and network spectrum cap for the 3500 MHz band and counting bundled encumbered blocks awarded through the auction towards the cap. For clarity, encumbered blocks held

[43] Cogeco Comments, para 127-130.
[44] BCBA Comments, para 45; Canwisp Comments, para 45; TekSavvy Comments, para 46; Iristel Comments, para 22.
[45] Cogeco Comments, para 139-142; Shaw Comments, para 143; Eastlink Comments, par 27; SaskTel Comments, par 92; TekSavvy Comments, para 48; Ecotel Comments, para 43, BCBA Comments, para 46; Canwisp Comments, para 55.
[46] Bell Comments, para 54-55; Quebecor Comments, para 52; Xplornet Comments, para 112.
[47] Telus Comments, para 127.

by any licensee as part of the transition process should not count towards a potential spectrum cap during the auction process if the Department adopts its proposal to not guarantee contiguity to sub-divided licences awarded as part of the transition process. Encumbered blocks should be included in spectrum holding calculations in a post-auction transfer to ensure the policy goals of a potential spectrum cap are achieved.

Q4A: ISED is seeking comments on its proposal to use generic licences.

54. There was general support for the Department's proposal to use generic licences in the auctioning process.[48] Rogers continues to view the use of generic licences as greatly simplifying the auction process, and guaranteeing a contiguous assignment with existing holdings in the 3500 MHz band, which is of the upmost importance for maximizing the utility of the spectrum.

55. TekSavvy supports the use of generic licences but only if the Department creates three categories of spectrum blocks (unencumbered blocks overlapping LTE band 42; unencumbered blocks overlapping LTE band 43; and encumbered blocks) and excludes those blocks transitioned to flexible use entirely from the auction process.[49] As above, the Department should fully reject all efforts by TekSavvy (and anyone else) to create special auction rules that will favour them in creating a 100 MHz bandwidth (using 3500 MHz and WBS spectrum) in the middle of the greater 3300-4200 MHz band as entirely self-serving and detrimental to the long term ability of multiple operators to achieve 100 MHz contiguous bandwidths. WBS licence holders, like TekSavvy, should not be able to use 3500 MHz auction rules to create a de facto permanent authorization for lightly licensed WBS spectrum.

Q4B: ISED is seeking comments on its proposal to categorize all blocks won by set-aside-eligible bidders as set-aside blocks.

56. There is general support from most stakeholders on ISED's proposal to categorize all blocks won by set-aside-eligible bidders as set-aside blocks in the event that the Department elects to adopt a set-aside, including potential set-aside-eligible bidders and set-aside-ineligible bidders (notwithstanding objections to the Department

[48] Bell Comments, para 56; Telus Comments, para 128; Quebecor Comments, para 53; Shaw Comments, para 144; Cogeco Comments, para 143; Xplornet Comments, para 113; Eastlink Comments, para 28; SaskTel Comments, para 94; Iristel Comments, para 24; Ecotel Comments, para 46; BCBA Comments, para 50; Canwisp Comments, para 63.
[49] TekSavvy Comments, para 51.

imposing a set-aside).[50] Only Bell and Xplornet oppose the proposal, and are both of the view that only spectrum up to a potential set-aside amount should be considered set-aside and all other spectrum should be open spectrum not subject to transfer restrictions.[51]

57. Upon review of all submissions, we continue to support the Department's proposals but reiterate the need to extend the moratorium on the transfer of set-aside spectrum to all entities, including set-aside-eligible ones, to limit spectrum speculation and help ensure that the spectrum is obtained by operators who will move quickly to deploy services and benefit Canadian consumers.

Q4C: ISED is seeking comments on its proposal to create separate categories for encumbered and unencumbered blocks, as well as open and set-aside blocks.

Q4D: ISED is seeking comments on its proposal to create separate categories for unencumbered and for various encumbered block in a service area.

58. Most stakeholders generally support the Department's proposal to create separate categories for encumbered and unencumbered spectrum, and – if a set-aside is implemented – open and set-aside blocks.[52] Telus states that a spectrum cap will allow for balanced competition for encumbered and unencumbered spectrum and place the rural spectrum in the hands of the operators that intend to put it to use the soonest as opposed to regional operators who may warehouse rural spectrum without any near-term obligation to deploy it.[53] Potential set-aside-eligible bidders are generally in favour of guaranteeing themselves large amounts of subsidized spectrum. Rogers continues to view spectrum caps as the best policy for balancing the needs of all competitors, including national operators, regional competitors, and rural providers, as long as the spectrum cap consists of both an individual and joint network spectrum cap.

59. The Department should reject Quebecor's proposal to consider "lightly encumbered blocks" (defined by Quebecor as covering more than 75% of the Tier 4 population) as unencumbered during the clock rounds.[54] As we highlight in our comments, any impaired block, regardless of how small the impairment is in population terms,

[50] Telus Comments, para 132; Shaw Comments, para 145; Quebecor Comments, para 54; Eastlink Comments, para 29; SaskTel Comments, para 96; TekSavvy Comments, para 54; Ecotel Comments, para 47; BCBA Comments, para 51; Canwisp Comments, para 62.
[51] Bell Comments, para 58; Xplornet Comments, para 114.
[52] Bell Comments, para 59; Telus Comments, para 130; Shaw Comments, para 146; Xplornet Comments, para 121; Eastlink Comments, para 30; Ecotel Comments, para 48; Iristel Comments, para 26; BCBA Comments, para 52; Canwisp Comments, para 63.
[53] Telus Comments, para 140.
[54] Quebecor Comments, para 55.

should not be subsumed in the unencumbered category in order to reduce risk for bidders in the clock phase. Even if the impairment seems small on a population basis, the actual valuation impact could still be significant if these grid licences cover particularly vital hotspots (roads, railways and agglomerations) or the potential to create interference with adjacent (spectrally or geographically) licensees, which may not be able to be fully expressed in the assignment phase as proposed by Quebecor.

60. Xplornet repeats their proposal to not include blocks encumbered by existing partial-tier licences in the auction, instead allocating them in a separate process following the main auction, and to not create separate categories of licences as part of the auction but to designate them as set-aside or open after the auction has concluded.[55] We find this proposal to be inconsistent (and incompatible) with Xplornet's other proposals to only treat spectrum won up to a possible spectrum set-aside amount as set-aside and the rest as open spectrum. It is unclear how in licence areas where multiple set-aside-eligible bidders, in aggregate, win more spectrum than a potential set-aside that the Department or licensees would be able to determine which spectrum would be designated set-aside. Such a potential outcome is another reason to not impose a spectrum set-aside in the 3500 MHz auction, and certainly not to adopt Xplornet's proposals.

Q5:	ISED is seeking comments on the use of anonymous bidding during the auction.

61. Although there is some level of general support for the use of anonymous bidding during the auction, several stakeholders, similar to Rogers, urge the Department to provide aggregate demand information for each product individually to reduce exposure risk for both open and set-aside eligible bidders. As Bell states, "This would help bidders mitigate the exposure risk that arises with a clock auction (and is absent from a combinatorial clock auction), where a bidder wins some, but not all of the licences needed for its business plan and is left with an inefficient number of spectrum licences that cannot be used effectively."[56] Shaw, a potential set-aside-eligible bidder, also recommends that the Department release aggregate demand for each product category at the end of each clock round, as ISED has done in prior anonymous auctions.[57] Clearly, the Department must improve the information available to all bidders, especially in the event of a set-aside.

[55] Xplornet Comments, para 116.
[56] Bell Comments, para 60.
[57] Shaw Comments, para 148.

62. Eastlink states their general opposition to anonymous bidding as, in their view, it disadvantages smaller, regional service providers.[58] However, should the Department elect to adopt a set-aside, which we oppose, providing aggregate demand information for each product (open and set-aside) to all bidders, as well as aggregate information for the entire service area, will benefit both set-aside-eligible and set-aside-ineligible bidders alike.

Q6: ISED is seeking comments on its proposal to use a clock auction format for the 3500 MHz spectrum auction.

63. There is broad support for ISED's proposed clock auction format,[59] especially when compared to combinatorial clock auction (CCA) formats. We agree with Telus' view that the proposed clock auction rules address some of the gaming behaviours observed in the recent 600 MHz auction but that a clock auction without a set-aside would be even more effective at preventing similar gaming.[60]

64. However, as can be seen in the responses below and to questions on Annex C and specific rules and processes in both the clock and assignment rounds, many of the auction rules remain unclear or are not yet settled. These comments clearly highlight that the rules will need to be revised and adjustments will need to be made. We stress the importance of the Department providing an opportunity for all stakeholders to participate in a meaningful process to clarify and resolve outstanding technical issues with the auction format and rules following the publication of the Consultation's decision.

65. Further, ISED should follow international best practice and produce a single, consolidated document with all the technical rules for the 3500 MHz auction. Having the auction rules exist across several different documents (e.g. Consultation, Licensing Framework, Questions, etc.) as in previous auctions allows for discrepancies and conflicting statements to slip into the auction process, requiring participants to guess which interpretation is intended by the Department. Being able to rely on a single authoritative set of rules will improve the efficiency and integrity of the auction.

66. Canwisp supports the use of a Clock Auction format for the 3500 MHz auction but believes the intra-round bidding and bid queuing features should be eliminated,

[58] Eastlink Comments, para 32.
[59] Bell Comments, para 61; Telus Comments, para 144; Shaw Comments, para 149; Quebecor Comments, para 60; Cogeco Comments, para 145; Xplornet Comments, para 121; Eastlink Comments, para 34; Ecotel Comments, para 51; Iristel Comments, para 29; BCBA Comments, para 55.
[60] Telus Comments, para 145-146.

allowing for a much simpler auction process.[61] TekSavvy submits that the reasons cited by ISED to justify the introduction of an intra-round bidding process are unwarranted and will discourage several smaller entities from participating in the auction.[62] The Department should reject these views. Any additional complexity is manageable and, at the margins, intra-round bidding may promote more efficient outcomes at fair market prices. As Telus states, intra-round bidding may reduce incentives to price drive rivals, as bidders may be stuck purchasing an unwanted block if their rivals decide to reduce demand at an intra-round bid level, so bid increments will likely remain modest.[63]

67. However, given there is some additional complexity with the proposed intra-round bidding rules flowing from the potential gap between expressed and processed demand, we also reiterate the point (made by most other stakeholders) that the provisions for intra-round bidding must not be used as an excuse for using large price increments. As discussed below, these provisions should be seen as a means to address one of the concerns often voiced in relation to simple clock auctions – namely that bids may not be binding as demand can be withdrawn at any point – and to discourage strategic bidding rather than as a way of dealing with the risk of overshoot as a result of increasing prices too quickly.

68. Overall, TekSavvy favours a simple clock auction format without retention, where bidders would be free to change their demand even if this creates unsold lots. The Department should reject this proposal. TekSavvy claims that a simple change in the activity rule can address the overshoot problem. If two or more bidders reduce demand for a product simultaneously and this leads to unsold lots, their eligibility for the next round would be adjusted upwards to give them an opportunity to bid for these now unsold lots again.[64]

69. Rogers strongly opposes a clock auction without retention. What keeps bidders honest in ISED's proposed clock auction with retention is the possibility of getting retained on a product in any one round. This ensures that every bid comes with a commitment to acquire the blocks bid for. Removing the retention rule means that any bid submitted before the final clock round does not entail an actual financial commitment as it can be changed freely in the next round. This increases the risk of strategic play which has the potential to distort relative prices and may lead to an inefficient allocation.

70. We are particularly concerned that such a dramatic rule change would incentivize set-aside-eligible bidders to engage in bidding behaviour similar to that observed in

[61] Canwisp Comments, para 73.
[62] TekSavvy Comments, para 62.
[63] Telus Comments, para 147.
[64] TekSavvy Comments, 64.

the recent 600 MHz auction. This could lead to a large number of unsold lots and distorted prices for other bidders.

71. Cogeco generally supports the use of the clock auction format but proposes a number of modifications, including allowing for switch bids and for all-or-nothing bids, waivers, withdrawals, and adding an "extended round" after the clock rounds end for bidders to acquire any blocks unsold in the clock rounds.[65] While we think there may be some merit to the switch bids or adding an extended round, the Department should reject all the other proposals.

72. Cogeco advocates an extended sealed-bid round in which all unsold lots (regardless of whether they are set-aside or open) would be open for bidding by all bidders. We think that such a sealed bid round could be a valuable addition to the auction design, as it reduces the risk of unsold spectrum – particularly if ISED implements a substantial set-aside, which we oppose. A simple Vickrey-nearest sealed bid auction by Tier 4 service area would work well in this context.

73. With regards to switch bids, these could play a positive role in facilitating switching between categories within a service area. While switch bids were barely used in the U.S. 600 MHz auction, the FCC appears to see some merit in this type of bid as they were included in the rules for the recent 24 GHz auction and will be used again in the upcoming 37-39 and 47 GHz auction. Rogers supports the use of switch bids for the 3500 MHz auction, as it provides bidders with more control and thus reduces risk when switching between categories within a service area. We note that switch bids would work particularly well with our proposed eligibility points regime which would assign the same eligibility points to similarly encumbered categories (see below response to Q18).

74. As discussed below in Q7, experience in the FCC 600 MHz auction has shown that the additional complexity introduced by all-or-nothing bids outweighs their potential usefulness, as they were barely used in that auction. They should not be adopted for the 3500 MHz auction and the Department should reject all proposals to include such all-or-nothing bids.

75. The Department should also reject Cogeco's proposal to include activity waivers in the clock auction as they have the potential to subvert price discovery. In particular, waivers have the potential to distort relative prices in the auction and reduce the informational content of the aggregate demand figures released by ISED at the end of a round. All bidders must submit a bid in every round to ensure that price movement reflects actual demand and that aggregate demand information is meaningful. To the best of our knowledge, no regulator has ever allowed waivers in the context of a clock auction. Instead, round "extensions" have sometimes been offered as an alternative to waivers as a way to provide extra protection to bidders

[65] Cogeco Comments, para 208.

against the risk that they fail to submit a bid in normal time owing to technical failures. Under this approach, operators are provided with a limited number of extension rights, which are deployed automatically to extend the round (by, say, one hour) in case a bidder fails to submit their bid in the normal time. This approach is clearly superior to waivers in an auction with clock bidding, as it does not affect price and demand discovery.

76. Cogeco further proposes that bidders be allowed to withdraw their demand, even if this leads to unsold lots. The Department should strongly reject any such proposal. The rules proposed in the Consultation strike a balance between retained demand, when it is needed to prevent unsold spectrum, and allowing bidders to drop or switch demand whenever there is alternative demand. Granting withdrawals would undermine this balance. We are particularly concerned that withdrawals could be abused by bidders deliberately to create unsold lots that a bidder might then win at a substantial discount in Cogeco's proposed follow-up sealed bid auction. While we support opportunities for bidders to buy genuine unsold lots – especially in the case that ISED imposes a set-aside – we strenuously object to proposals that could compromise the efficiency and integrity of the main auction.

Q7:	ISED is seeking comments on the proposed structure of the clock stage and on the proposed methodology for calculating processed demands and posted prices after each clock round, as described in annex C.

77. Most stakeholders have some concerns with the proposed structure of the clock stage and on the proposed methodology for calculating processed demands and posted prices after each clock round. While Shaw, Quebecor, and SaskTel are generally supportive of the proposed rules, Canwisp, BCBA, Iristel, and TekSavvy are generally opposed to the format and suggest modifications.[66] Taken altogether, comments by stakeholders clearly highlight that the auction rules will need to be revised and adjustments will need to be made. Rogers would like to again emphasize that all bidders should have an opportunity to carefully analyze and comment on the revised rules.

78. Bell proposes the Department consider three rule changes,[67] the first the Department should adopt but not the second or third. Bell's proposed rules are:

[66] Shaw Comments, para 150; Quebecor Comments, para 61; SaskTel Comments, para 109; Canwisp Comments, para 77; BCBA Comments, para 57; Iristel Comments, para 29; TekSavvy Comments, para 72.
[67] Bell Comments, para 67-73.

- **Rule 1:** a bidder's activity should be set equal to the eligibility points associated with its processed demand or the eligibility points associated with its requested demand, whichever is larger;
- **Rule 2:** allow optional "all-or-nothing" bids by individual product; and,
- **Rule 3:** allow optional overall "all-or-nothing" bids.

79. We strongly support Rule 1. The Consultation proposes to determine the eligibility for the next round based on processed demand, i.e. after all requested reductions and increases have been applied either in full or partially (or not at all). This could lead to situations in which a bidder inadvertently loses eligibility if they attempt to switch between products. The possibility of such an 'accidental' loss of eligibility could lead some bidders to park extra eligibility points in unwanted service areas strategically to insure themselves against this. Adopting Bell's proposed Rule 1 will provide bidders with control over their eligibility and eliminate the risk that they experience an unrequested reduction in eligibility. This small rule change would remove an incentive for (undesirable) parking and may therefore promote more straightforward bidding by auction participants.

80. The Australian Communications and Media Authority (ACMA) adopted a similar overall clock auction format for its 3.6 GHz auction in 2018.[68] The Australian regulator (who, like the Department, were advised by Power Auctions) also initially proposed the same activity rules as in the Consultation. However, after receiving input from industry during its consultation process, the ACMA decided to apply the same fix as Bell proposes with Rule 1. Our understanding is that the auction proceeded smoothly with this fix in place.

81. Whereas Rule 1 would unambiguously improve the auction process, we oppose Bell's Rules 2 and 3 as they would unnecessarily complicate the auction and may introduce opportunities for gaming that could compromise the integrity of the 3500 MHz auction. The Department should reject the proposals for Rules 2 and 3.

- **All-or-nothing bids for individual products (Rule 2).** This rule was used in the U.S. 600 MHz auction. However, such bids were barely used by bidders. The FCC abandoned all-or-nothing bids for individual products in the most recent completed clock auction (Auction 102) and the upcoming Auction 103 in December 2019. This suggests their usefulness was limited in practice and does not justify the additional complexity they introduce.
- **Overall all-or-nothing bids (Rule 3).** Such bids have never been adopted in FCC-style clock auctions, nor any other spectrum auctions of which we are

[68] ACMA, *3.6 GHz band legislative instruments consultation*; https://www.acma.gov.au/theACMA/3_6-ghz-band-legislative-instruments-consultation.

aware. These types of bids are completely untested in this setting and we are concerned that they could be exploited for strategic play. For example, if a bidder wants to signal a complete switch into or out of its footprint, it would want this switch to be "clean" so its intentions are clear for all other bidders to see, especially for its joint network partner(s). Under the current rules, the bidder is not guaranteed a clean switch and so the signal may not go through cleanly. An overall all-or-nothing bid would ensure that the switch only happens if it can be executed "cleanly", which reduces the potential for obfuscation and provides the bidder with the opportunity to try the same switch again next round. This also increases its usefulness for bidders that may be looking to divide the country in two and, thus, have the incentive to abuse such a rule. The Department should strongly reject any such proposal.

82. We also note that the FCC has just published its plans to award Priority Access Licenses (PAL) in the CBRS framework at 3550-3650 MHz.[69] The FCC proposes to use the same clock auction format it used for the 600 MHz auction and the 24 GHz auction, but with two important modifications.

i. Bidders can exceed their eligibility in a round up to an "upper activity limit", but processed demand in a given round is capped by the bidder's current eligibility. The FCC acknowledges the issue raised by Bell above that a bidder can inadvertently lose eligibility as a result of bid processing. However, rather than using the simple fix proposed by Bell and implemented by the ACMA in Australia, the FCC proposes to allow bidders to exceed their eligibility in any round by between 20 to 40% so as to reduce the likelihood of an accidental loss of eligibility.

   In our view, this proposed fix is inferior to Bell's simple solution as it makes bidding far more complex for bidders who will need to decide on which blocks to bid for in addition to their preferred demand at current clock prices simply to insure themselves against an accidental loss in eligibility. If bidders then get stuck on some of the additional demand, this could lead to an inefficient allocation. Further, the FCC's proposed fix does not provide bidders with full control over their eligibility and a bidder may still lose eligibility by accident. We urge ISED to implement the simple tried-and-tested fix suggested by Bell rather than experiment with an inferior untested alternative.

ii. The PALs are offered at the county level, but bidders have an opportunity to submit aggregate bids for the same number of lots in a CMA. These CMA-level bids should not be confused with package bids, but rather be interpreted as group bids. The key point about CMA-level bids is that they allow bidders to withdraw lots across the counties in the CMA even if this creates unsold lots in

[69] FCC, *Comment Sought on Competitive Bidding Procedures for Auction 105*; https://www.fcc.gov/auction/105.

some of them. Specifically, “a reduction of one block would be applied even if that creates excess supply in other counties of the CMA. Once the first unit of a CMA-level bid to reduce demand has been applied, the ‘no excess supply’ rule then would be in effect for any further reduction”. This means that a bidder could withdraw its demand across all counties in a CMA over several rounds as long as there is still excess demand for at least one county.

We strongly oppose this type of bid for the Canadian 3500 MHz auction as it would allow bidders to renege on their previously expressed demand and financial commitments to buy spectrum and has the potential to create a large number of unsold lots. Coupled with a sealed bid round for unsold spectrum as suggested by Cogeco (see our response to Q6 above), this type of bid would incentivize strategic play. To re-iterate, what keeps bidders honest in the clock auction proposed by ISED is the fact that any bid comes with a commitment to buy the underlying spectrum if demand from other bidders is insufficient to cover the available supply. Any bid or rule change designed to undermine the possibility of winning the spectrum bid for in a round has the potential to introduce incentives for strategic play.

83. Telus also highlights specific concerns with the proposed methodology for calculating processed demands. We support Telus’ request for clarification on the impact of switching in later rounds where sequential processing may not permit bidders from moving to their desired product at current prices even if overall demand has not been reduced.[70] However, the Department should reject Telus’ proposal to provide a number of activity waivers.[71] As we highlight above, waivers have the potential to distort prices in the auction and reduce the usefulness of the information available at the end of a clock round. All bidders must submit a bid in every round to ensure that price movement reflects actual demand.

84. Eastlink states their two primary concerns with the format are ensuring national operators are unable to influence the price of regional operators and that the rules “discourage bidders from ‘parking points’ in service areas they are not really interested in”.[72] The Department should strongly reject all proposals by possible set-aside-eligible bidders to guarantee themselves spectrum at a massive discount to open spectrum as completely self-serving and potentially harmful to the majority of Canadian wireless consumers. Should the Department adopt the possible set-aside eligibility criteria as proposed, this will allow set-aside-eligible bidders to drive open spectrum costs or allow some set-aside eligible bidders to asymmetrically price drive set-aside spectrum. Such behaviour was seen in the 600 MHz auction, for example by Quebecor in British Columbia until Round 40 and by Shaw in the Atlantic

[70] Telus Comments para 157-159.
[71] Telus Comments, para 161.
[72] Eastlink Comments, para 35.

Provinces (and elsewhere) until Round 29. While ISED has proposed rules to limit open spectrum price driving behaviour and reduce excessive parking by set-aside-eligible bidders, which we fully support, the best way to counter such malignant behaviour is to not adopt a set-aside.

Q8: ISED is seeking comments on the proposed range of percentage increments.

85. Several stakeholders raise similar general concerns as Rogers over the negative impact that large bid increments may have, especially in service areas with high starting prices or ones that may climb to high price levels in later rounds. The concerns over pricing impacts of the proposed increments include national, regional, and small rural operators, including Telus, Shaw, SaskTel, Iristel, and the BCBA.[73] In fact, the only submissions that provide a direct response to Q8 and do not raise this concern are Canwisp and TekSavvy,[74] parties with limited to no spectrum auction experience and should be rejected by the Department.

86. Most stakeholders limit their responses to general guidance for the Department not to use larger increments, either at all or not in later rounds. Rogers believes that our proposals offer a clear, tangible enhancement to the auction process, consistent with the consensus views of stakeholders. As we propose in our comments, ISED should commit to not using increments larger than 10% in the most valuable service areas, establishing a maximum absolute $/MHzPop increment not to be exceeded for any product, and rounding up to a smaller amount (e.g. $500) for lower value service areas to prevent relative price inflation.

87. In the event that the Department adopts a set-aside, they should firmly reject Eastlink's recommendation to not adopt pricing rules that will provide more balanced pricing between open and set-aside spectrum. As has been proven repeatedly in the auction bid data going back to 2008's AWS-1 auction, when given the opportunity, set-aside-eligible bidders will strategically park points in open spectrum to drive the cost for set-aside-ineligible bidders and, thus, the costs for most Canadian wireless consumers. Any rules that reduce the incentive for set-aside-eligible bidders to game the auction rules and price drive spectrum costs should be adopted fully by the Department. A better policy outcome still, is that the Department should simply not adopt unnecessary and competition distorting set-asides.

[73] Telus Comments, para 163; Shaw Comments, para 151; SaskTel Comments, para 116; Iristel Comments, para 33; BCBA Comments, para 61.
[74] Canwisp Comments, para 78; TekSavvy Comments, para

Q9A: ISED is seeking comments on the proposed structure of the assignment stage, including the order of the assignment rounds, treatment of existing holdings, the combination of service areas into a single assignment area and parallel bidding.

88. All stakeholders agree that spectrum contiguity is important to maximize the benefits of 5G services. However, most responses are also fixated on the short-term and do not provide any meaningful input into long-term competition issues for this band. The importance of spectrum assignments and contiguity across the entire 3300-4200 MHz band warrants repeating that the Department must consider the 3500 MHz and 3800 MHz awards as two auctions for one band. ISED cannot rely on the secondary market alone to achieve long-term contiguity as trades may not be in the interest of all parties, even if they are in the long-term interests of all Canadians.

89. In particular, network operators may be reluctant to trade if the current assignment provides them with a strategic competitive advantage over their competitors in order to prevent other networks from achieving contiguous bandwidths of up to 100 MHz, which is optimal to provide 5G services in mid-band spectrum. This could lead to situations in which such a party (or joint network partners) blocks other operators or networks from achieving a more efficient assignment, which would ultimately be to the detriment of all consumers and harmful for 5G competition in Canada. To avoid such a situation, ISED should rerun the assignment stage for the entire 3300-4200 MHz to ensure that all operators get a chance of optimizing their position in both sub-bands after the 3800 MHz auction.

90. Telus proposes an assignment stage modelled on the recent Irish and Austrian auctions in which bidders bid for packages of assignments across a number of regions, thereby maximizing contiguity across service areas.[75] The auctioneer would determine a set of assignment options across all regions that maximise cross-regional contiguity across all bidders. Such a proposal has some merit, especially combined with our proposal to ensure long-term contiguity across the entire 3300-4200 MHz range. To ensure effective facilities-based competition at the launch of mobile 5G in the 3500 MHz band, joint network operators who obtain more than 60 MHz should initially be placed at the bottom of the 3500 MHz band, so they are not positioned to block others from matching their initial advantage later.

91. The Department should reject Canwisp's proposals to exclude fixed service licensees that secure flexible use licences through the transition process from participating in the assignment round.[76] Were the Department to adopt such a measure, it could negatively impact the availability of contiguous spectrum for all other licensees and increase interference management complexity. The Department

[75] Telus Comments, para 175.
[76] Canwisp Comments, para 80.

should also reject the proposals from Canwisp's proposals to treat different portions of the 3450-3650 MHz band as separate products in the assignment round or treat set-aside-eligible and set-aside-ineligible bidders (should ISED adopt a set-aside, which we strongly oppose) differently, the latter proposal the BCBA and TekSavvy also makes.[77]

92. There is no basis for special treatment of small regional incumbents in the 3500 MHz band. Virtually no regional provider will have to return any significant amount of spectrum when exchanging their fixed wireless access 3500 MHz licences for much more valuable flexible use licences, even with the Department declaring the transition a fundamental reallocation of spectrum to a new service. Further, many small regional providers will likely be decommissioning legacy WiMax and other technologies to move to modern 4G LTE and 5G NR networks and will be able to easily accommodate any frequency shift with the generous transition timelines the Department has provided in rural areas. Finally, guaranteeing regional carriers (of varying size) that are currently also accessing WBS spectrum a 100 MHz bandwidth would violate the intent of Rogers' proposed 3500 MHz network cap of 80 MHz and further complicate the eventual rationalization of the broader 3300-4200 MHz band.

93. Indeed, the Department should provide a firm commitment to the defragmentation of the 3500 MHz band and 3800 MHz band, where technically possible and economically feasible, in order to maximize the spectrum efficiency of the greater 3300-4200 MHz band. Such a commitment to band defragmentation and spectrum continuity will benefit all operators and ensure the full benefits of mid-band 5G services can be enjoyed by all Canadians.

Q9B: ISED is seeking comments on the proposal to apply bidder optimal core prices and to use the "nearest Vickrey" approach in determining the assignment prices.

94. There is broad support and no objections to the Department's proposals of applying bidder optimal core prices and using the "nearest Vickrey" approach for determining assignment prices.[78]

[77] Canwisp Comments, para 81-82; BCBA Comments, para 61; TekSavvy Comments, para 75.
[78] Bell Comments, para 79; Telus Comments, para 181; Shaw Comments, para 153; Quebecor Comments, para 65; SaskTel Comments, para 125; TekSavvy Comments, para 77; Iristel Comments, para 35; Canwisp Comments, para 84.

Q10: ISED is seeking comments on the proposed affiliated and associated entities rules that would apply to bidders in the 3500 MHz auction.

Q11: ISED is seeking comments on the proposed rules prohibiting collusion and other communication rules, which would apply to bidders in the upcoming 3500 MHz auction.

95. Iristel, who supports a set-aside (which Rogers strongly opposes), identifies the policy flaw with affiliated and associated entities for the proposed open spectrum lots. While Iristel does not call out the joint Belus network by name, they highlight the same competition concerns that Rogers raises regarding mobile network partners bidding separately on non-set-aside licences and combining spectrum following the auction. Iristel states they are specifically "concerned that the rules regarding Associated entities could result in the manipulation of bidding to allow aggregation in excess of what is permitted by the licensing framework", behaviour which, "does not further telecommunications policy with regards to competitiveness and affordability, and is not in the best interest of the consumer."[79]

96. To ensure fair (though not equal) facilitates-based competition, the Department must use a 60 MHz spectrum cap for an individual bidder and an 80 MHz cap on any combination of 3500 MHz spectrum for a shared network for at least 10 years after the issuance of flexible use licences (to be reviewed with the release of additional 3300-4200 MHz spectrum). The associated entity rules should be amended to recognize existing relationships between the national carriers, as done in international jurisdictions. ISED should also restrict the transferability and subordination of licences between licence holders in the future. As previously explained, if licence holders wish to combine spectrum after the auction, they should not be allowed to combine more than 80 MHz and no more than 80 MHz should be permitted to be deployed on a single radio until 3800 MHz flexible use licences are awarded and 3300-4200 MHz spectrum caps can be re-evaluated.

97. Shaw presents completely unfounded concerns about national carriers using set-aside-eligible entities to gain access to set-aside spectrum,[80] concerns for which they provide no evidence and has no precedent in Canada. In fact, recent evidence shows that it is set-aside-eligible bidders that look to abuse set-aside eligibility and caps to speculate on spectrum at auction to the determinant of wireless consumers and Canadian taxpayers, for example, see the Shaw-Videotron 700 MHz and 2500 MHz transaction and the recent Eastlink-Bell AWS-3 transaction. While we do not consider Shaw's scenario as remotely plausible, such a theoretical possibility is just one more reason the Department should not implement a set-aside in the 3500 MHz auction, nor in future spectrum auctions.

[79] Iristel Comments, para 36.
[80] Shaw Comments, para 156.

98. Ecotel and Cogeco both present misguided concerns about Inukshuk's fixed spectrum holdings and recommend that they be taken into account.[81] Rogers agrees that post-transition holdings for all operators should count towards an in-band cap. Such action is necessary, in particular, to prevent Xplornet, which will be the single largest spectrum holder through the transition process, from abusing the auction's competitive measures.

99. Cogeco elaborates on their concerns, with associated entities being able to bid up to the cap separately and then subordinating to each other to "create a joint network benefiting from spectrum far in excess of any cap, as long as they demonstrate they will continue to provide services (i.e. not networks) independently."[82] We, again, highlight that this is the exact pattern of Bell and Telus with spectrum auctions since the AWS-1, circumventing spectrum caps and combining their spectrum for the Belus joint network to the clear detriment of competition and consumers. However, Cogeco's proposals will do nothing to prevent such an outcome. The right policy solution is to implement an 80 MHz spectrum cap for joint networks to ensure that spectrum aggregation limits are not abused and result in the unintended consequences of benefitting one or more bidders in auctions.

Q12: ISED is seeking comments on its proposal to issue new flexible use spectrum licences in the 3500 MHz band with a 20-year licence term and the proposed wording of the condition of licence above. Licence terms for all flexible use licences, regardless of when they are converted from fixed to flexible use, will terminate on the same date as licences issued through the auction process.

100. There is unanimous support from all network operators who provide comment for the Department's proposal to issue new flexible use spectrum licences in the 3500 MHz band with a 20-year licence term and that the licensees will have a high expectation that new licences will be issued for a subsequent term through a renewal process.[83] Rogers continues to support these proposals, which provides licensees with a greater degree of certainty with respect to the ongoing viability of their operations, for network planning purposes, and in order to secure additional funding for their substantial ongoing investments.

101. Bell does not support the Department's proposal to have all flexible use licences terminate on the same date, whether issued through the auction process or converted from fixed to flexible use, 20 years after the initial licence issuance date

[81] Ecotel Comments, para 56; Cogeco Comments, para 217.
[82] Cogeco Comments, para 224.
[83] Bell Comments, para 82; Telus Comments, para 186; Ecotel Comments, para 59; Quebecor Comments, para 68; Cogeco Comments, para 68; Xplornet Comments, para 129; Eastlink Comments, para 39; SaskTel Comments, para ; TekSavvy Comments, para 80; Iristel Comments, para 38; Canwisp Comments, para 87; BCBA Comments, para 67.

for auctioned licences.[84] They highlight that some licences will not become usable for two to three years depending on the transition timelines. They propose licences be issued for 20 years from the time the spectrum becomes usable (i.e., unique expiry dates) or, in the event the Department prefers co-terminus expiry dates, that the expiry date for all licences be set to 20 years from the end of the longest protection period. With the substantial investments involved in acquiring the spectrum licences and deploying and operating network infrastructure, while respecting the Department's stated proposal to align expiry dates, Rogers would support all flexible use licences having an expiry date 20 years from the end of the longest protection period. This approach achieves both the policy goals of promoting investment incentives and aligning expiry dates to streamline future spectrum administration.

Q13: ISED is seeking comments on the proposals on the condition of licence related to transferability and divisibility, and the proposed wording above.

102. Stakeholders were generally supportive of the Department's proposals on the condition of licence related to transferability and divisibility with some minor modifications to provide clarification on obligations attached to fixed and flexible licensees and incumbent and new entrant mobile operators.[85] Only Bell opposes the proposed prohibition on the transfer of potential set-aside spectrum and enforcement of a potential spectrum cap during the initial 5 years. In the event that the Department adopts a set-aside or spectrum cap, Bell proposes that flexible use licences obtained via the transition process (not the auction) not be subject to these potential spectrum aggregation rules during the initial 5 years.[86] We agree with Bell that no licences obtained via the transition process should be subject to any set-aside rules. However, the spectrum cap rules – both Rogers' proposed individual and joint network spectrum caps – should be applied to both auctioned and transition spectrum for 10 years following the issuance of flexible use licences to ensure facilities-based competition will thrive in the 3500 MHz band, subject to review when additional 3300-4200 MHz spectrum becomes available.

103. Similar to Rogers, Cogeco also proposes that subordinate licences should count towards a subordinate licensee's spectrum cap.[87] While Cogeco uses a different example than Rogers, the functional outcome is the same – preventing a single joint network (such as the Belus joint network) from using subordination to circumvent in-

[84] Bell Comments, para 83.
[85] SaskTel Comments, para 135; Telus Comments, para 109; Quebecor Comments, para 69; TekSavvy Comments, para 81; Ecotel Comments, para 60; BCBA Comments, para 68; Canwisp Comments, para 88; Xplornet Comments, para 130.
[86] Bell Comments, para 86-67
[87] Cogeco Comments, para 250.

band spectrum caps and negatively impact wireless competition, thus harming all Canadians. Rogers fully endorses all proposals that will prevent harm to facilities-based competition by parties gaming spectrum auction caps but believes they must be in place for 10 years (subject to review to in the 3800 MHz licensing consultation) to be truly effective.

104. However, the Department should reject Cogeco's proposal to relax transferability rules on small amounts of set-aside spectrum.[88] The restrictions on transferability of set-aside spectrum is to disincentivize set-aside-eligible bidders from acquiring any spectrum that they do not intend to deploy. When combined with Cogeco's request for a cap within a set-aside, proposing the lifting of transferability restrictions on small amounts of set-aside spectrum amounts to a self-serving opportunity for speculation. It also serves as yet another piece of evidence that it is past time to retire the use of set-asides.

Q14: ISED is seeking comments on the proposed deployment condition of licence as stated above as well as on the proposed levels of deployment.

105. There was general, though not unanimous, support amongst submissions for the general deployment requirements. However, the Department's proposed additional coverage requirement for incumbent mobile network operators to match current LTE networks is seen as extremely unreasonable and unrealistic by most stakeholders. In fact, every network operator that provides mobile LTE wireless services to the general public, including Bell, Telus, Shaw, SaskTel, Eastlink, Quebecor, and, Iristel, all oppose the Department's proposal asymmetrical deployment obligations.[89]

106. This obligation is even more asymmetrical within mobile LTE providers. As Bell and Telus highlight, national operators have been building out LTE networks since 2011, including in rural areas, and will be effectively punished for providing LTE coverage to 99% of Canadians using a variety of spectrum bands, including sub-GHz spectrum.[90] SaskTel provides an excellent visual representation of coverage differences between 850 MHz and 3500 MHz and highlights that in order to match low band coverage in rural and remote areas, not only will new towers be required to be built but also buildings, access roads, power lines, and backhaul facilities.[91] Further, as Bell states, with the transition timelines, flexible use licensees may not even have access to their spectrum for 3 years, which further drastically reduces the

[88] Cogeco Comments, para 253.
[89] Bell Comments, para 89; Telus Comments, para 191; Shaw Comments, para 166; SaskTel Comments, para 143; Eastlink Comments, para 40; Quebecor Comments, para 71; Iristel Comments, para 40.
[90] Bell Comments, para 89-92; Telus Comments, para 191-192.
[91] SaskTel Comments, para 151.

time to deploy new 5G services.[92] This further rewards operators who have not built out LTE networks outside of urban centres, as transition times in urban areas are just 6 months. The reduced timelines for rural access to flexible use spectrum is also a strong reason for the Department to reject Xplornet's proposal to equal current 3500 MHz coverage with next generation technology within 5 years, as it is completely unrealistic.[93]

107. Regional mobile operators are already incented to overlay their primarily urban LTE networks with 3500 MHz and yet Shaw, Quebecor, and Eastlink, the largest of the 2008 "new entrants", all simply call for the elimination of the LTE deployment requirement. In contrast, Bell and Telus propose the elimination of the LTE deployment requirement in combination with increasing the general deployment requirements in order to incent rural deployment, while Iristel and SaskTel propose modifications to deadlines or coverage requirements for the LTE requirement.[94]

108. These modifications all have merit and any would be an improved policy outcome over the Department's initial proposal. However, we still recommend the Department require network operators to provide coverage to 90% of the population within their mobile LTE network footprint as provided by their PCS, AWS, and BRS spectrum bands within 10 years of the initial licence issuance date and 13 years to cover 97% of the population. Combined with the general deployment requirements that require deployment at Tier 2, 3, and 4 levels over the life of the licences, this modified LTE coverage requirement will achieve the Department's goals of getting mobile 3500 MHz spectrum deployed in both urban and rural areas where it is both technically possible and economically feasible.

109. The Department should also strongly reject Canwisp's proposal to have coverage requirements extend to a Tier 5 basis with an implied obligation, if not outright requirement, for mandatory subordination.[95] The Department has already proposed very aggressive deployment requirements in a band that will not propagate as far as sub-1 GHz spectrum or even most other mid-band spectrum. Further, as Rogers highlights above and in our recent comments in the *Consultation on a New Set of Service Areas for Spectrum Licensing*, Tier 5 is not suited in bands below 6 GHz and probably not below mmWave bands. Combined with a subordination obligation (implied or explicit), this would result in severe interference and coordination challenges that would negatively impact large amounts of Canadians.

[92] Bell Comments, para 95.
[93] Xplornet Comments, para 134.
[94] Bell Comments, para 92; Telus Comments, para 193.
[95] Canwisp Comments, para 89.

Q15: ISED is seeking comments on the proposed conditions of licence outlined in annex H that would apply to flexible use licences.

110. A number of submissions again state their objections to the proposed deployment obligations that were raised in response to Q14,[96] objections that Rogers supports. However, the Department should reject proposals by Canwisp and TekSavvy to modify coverage requirements to include additional reporting requirements on service parameters.[97] Market forces and deployment requirements will ensure that licensees put the spectrum to its best use and continuously expand networks and service provision to new areas wherever it is technically possible and economically feasible without creating an additional reporting burden for licensees.

Mandatory Roaming

111. Telus and Bell again repeat their calls for the review and removal or modification of the mandatory roaming condition of licence,[98] which the Department should continue to firmly reject. As the Department is fully aware, and contrary to Bell's claims,[99] Client Procedures Circular (CPC) 2-0-17 *Conditions of Licence for Mandatory Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements* covers important areas not duplicated by the CRTC Telecom Regulatory Policy 2015-177, including the mandated roaming requirement itself. CPC-2-0-17 further includes a roaming request process backed-up by commercial negotiation timelines and arbitration if the two parties cannot come to a roaming agreement. This end-to-end process benefits millions of Canadian mobile customers by balancing the objective of encouraging the "deployment of advanced networks that provide the greatest choice of basic and advanced services available at competitive prices to the greatest number of Canadians"[100] with the fact that operators may require access to wholesale roaming services on a reasonable basis as they continue to expand their networks in an orderly manner. The mandatory roaming condition of licence therefore remains every bit as necessary today as when it was first introduced.

112. As we highlight in our comments, unlike MVNOs, who build little to no facilities themselves, Canadian wireless carriers who roam, including Rogers, have invested billions of dollars into their networks during the mandatory roaming regime. The conditions of licence ensure such investment by only entitling roaming to carriers who build and operate their own home network. Furthermore, roaming carriers are

[96] SaskTel Comments, para 164; Eastlink Comments, para 42;
[97] Canwisp Comments, para 94; TekSavvy Comments, para 87.
[98] Telus Comments, para 198; Bell Comments, para 101.
[99] Bell Comments, para 102.
[100] ISED, *CPC-2-0-17 — Conditions of Licence for Mandatory Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements, Issue 1*; http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10563.html#Roaming.

only entitled to services they deliver themselves and at a level of quality they provide their own customers. This necessitates continuous investment by Rogers, Canada's largest, single operator network, and all roaming carriers.

113. ISED must therefore maintain the current mandatory regime. Again, for clarity, TRP 2015-177 does not duplicate conditions of licence. The mandated roaming requirements remain essential, especially in light of the Belus joint network, whereby each partner only builds out their Radio Access Network to an area roughly equal to their own wireline footprint. Contrary to Bell's assertion,[101] mandated roaming is not at odds with facilities-based competition but their joint network arrangement is. It has allowed Bell and Telus to avoid investing billions of dollars into the Belus network. The same will be true if Bell and Telus will be permitted to build out their 5G RANs only in their own wireline footprints and share with each other (although Rogers is opposed to this). Mandated roaming is one of the few policies that mitigates the economic advantage their joint network creates and should be maintained, as well as apply to 5G networks if Bell and Telus will be permitted to extend their joint network arrangement to the deployment of 5G.

Research and Development

114. Rogers fully supports the comments of Bell, Telus, Quebecor, and Shaw in their call for the elimination of the research and development (R&D) condition of licence requirement.[102] The R&D requirement is no longer appropriate in today's mature wireless industry where carriers require greater flexibility over investment decisions. Further, there is a large administrative burden associated with the gathering, auditing and generating of R&D reports. At a minimum, Rogers supports Bell's proposal to reduce the requirement to a lower percentage or discontinue using the SR&ED definition of eligible R&D claims.[103] Even these minimal changes would help prevent the R&D requirement from overly distorting the marketplace and the investment decisions of licensees and thereby free up more capital to invest in the expansion of wireless coverage in remote areas and in 5G services.

[101] Bell Comments, para 111.
[102] Shaw Comments, para 169; Bell Comments, para 99; Telus Comments, para 218; Quebecor Comments, para 78.
[103] Bell Comments, para 100.

Annual Reporting

115. Bell, Telus, and Quebecor all propose modifications or removal of the annual reporting condition of licence in order to help reduce administrative burdens for both the Department and licence holders.[104] Rogers supports the proposed alternative models for reporting requirements such as moving to an "as-requested" or "Periodic Reporting" model, where carriers are only obligated to provide only those documents specifically requested by ISED each year; or, increasing the length of time between the provision of certain reports. These changes would reduce the regulatory and engineering burden on operators, as well as the Department, while still ensuring ISED can adequately monitor spectrum licensees to fulfill its mandate.

Spectrum Subordination

116. The Department should reject Ecotel's proposal to force subordination agreements upon licensees that acquire exclusive usage spectrum licences at significant and ongoing costs.[105] Licensees also expend considerable resources in network planning and deployments wherever it is economically feasible and market-demand exists, and any mandatory process could result in challenges to the Department's current policy of setting deployment targets for spectrum licences. If a spectrum licence was involuntarily sub-divided, it could result in interference and serve as an impediment to the future deployment plans of the primary licence holder, including other spectrum sharing arrangements.

117. There is also no evidence for the need for mandatory subordination. As ISED is well aware, Rogers has entered voluntarily into multiple agreements subordinating spectrum to small regional carriers serving rural and remote areas over the years, including to Ecotel itself.[106] These agreements have resulted in the provision of wireless services using Rogers' licensed spectrum in communities, including remote Indigenous communities served by local, community-based carriers, that could not otherwise have been economically served, including 3500 MHz spectrum held through Inukshuk. Rogers remains open to entering into similar arrangements with our spectrum licences to extend coverage further. However, these negotiations should remain on a voluntary basis to ensure that the primary licensees' deployed wireless networks and future deployment plans are not negatively impacted to the detriment of current and future wireless consumers.

[104] Bell Comments, para 117-120; Telus Comments, para 222; Quebecor Comments, para 79.
[105] Ecotel Comments, para 63.
[106] ISED, *Subordinate Spectrum Licences Held by Rogers Communications Canada Inc. to Ecotel Inc.*; http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11340.html.

Q16A: ISED is seeking comments on its proposal to amend all FWA conditions of licence based on the proposed conditions of licence in annex I.

Q16B: ISED is seeking comments on its proposal to apply this amendment on June 5, 2019, plus one year—June 5, 2020.

118. There is general support for the Department's proposal to amend all FWA conditions of licence based on the proposed conditions of licence as outlined in Annex I, as well as the timing of the amendment. Rogers supports Xplornet's proposal to issue first-come-first-serve licensees who win a complementary partial tier licence(s) in the auction that together cover the entire tier, a new, single tier 4 licence, subject to conditions of licence associated with the auction.[107]

Q17: ISED is seeking comments on the proposed opening bids as presented in annex D.

119. Stakeholder comments show mixed support for the Department's proposed opening bids as presented in annex D of the Consultation. Ecotel, SaskTel, Xplornet, and the BCBA support ISED's proposal.[108] Bell recommends that if there is no set-aside, then opening bids for areas over 2M Pops should be reduced to the same level as the 2500 MHz opening bids; however, if a set-aside is included, Bell supports the proposed opening bids.[109] Eastlink also supports the opening bid prices if there is a set-aside.[110] We continue to fully support the proposed bid prices in the event that the Department elects to adopt a set-aside for the 3500 MHz auction, which we strongly oppose, to ensure Canadian taxpayers receive a fairer return and limits the windfall for regional carriers' shareholders.

120. Cogeco and Quebecor propose a reduction in opening prices for service areas over 2M Pops, while Telus proposes opening bid prices based on the 2500 MHz auction, scaled to comparable OECD opening price benchmarks.[111] TekSavvy notes that opening bid prices are based on Tier 4 licensing areas for spectrum, which they suggest are too expensive for smaller operators, while Iristel proposes opening prices be reduced by half to increase participation by small WISPs and mobile providers, and Canwisp requests the use of bidding credits for rural service

[107] Xplornet Comments, par 139.
[108] Ecotel Comments, para 71; SaskTel Comments, para 168; Xplornet Comments, para 141; BCBA Comments, para 73.
[109] Bell Comments, para 123.
[110] Eastlink Comments, para 43.
[111] Cogeco Comments, para 257; Quebecor Comments, para 84; Telus Comments, para 235.

providers.[112] Only Telus provides any evidence to support their argument,[113] which suggests that the proposed national average $/MHzPop of $0.133 opening price is substantially lower than five of the 11 auctions closing prices – also the markets most comparable to Canada. With limited evidence provided in any of the submissions proposing reduced opening bid prices, Rogers continues to support the Department's proposal as accurately reflecting the value and importance of the 3500 MHz spectrum to 5G deployments.

121. We note that the FCC has recently proposed an opening bid price for 3.5 GHz CBRS spectrum of only US$0.02 per MHzPop. This is obviously significantly lower than the proposed reserve price for Canadian 3500 MHz spectrum. However, there is no equivalence, as the CBRS spectrum in the U.S. is associated with much tighter restrictions on power limits and other access restrictions, which will limit its usefulness for mobile deployment relative to the spectrum being released in Canada. The Department should therefore not consider the FCC opening bids for CBRS as relevant information when deciding on the opening prices for its own auction.

Q18: ISED is seeking comments on the proposed eligibility points for spectrum licences in the 3500 MHz as outlined in annex D, and pre-auction deposits as outlined above.

122. Stakeholders generally support the Department's proposed approach to setting eligibility points for spectrum licences in the 3500 MHz auction across service areas, and pre-auction deposits, with some minor adjustments proposed.

123. Telus proposes that within Tier 4 service areas with a total population below 100,000, eligibility points be the same for both encumbered and unencumbered products in order to help bidders manage bidding complexity.[114] Rogers supports changes to eligibility points to allow for switching between encumbered and unencumbered blocks within one region, supporting price discovery and local deployment plans. However, we still recommend the Department assign the same eligibility points to any product with a population availability of at least 50% in a service area and half the eligibility points to any product with a population availability of less than 50%. It is the size of the impairment, not the population of the service that is the critical factor in setting eligibility.

124. Cogeco and Shaw propose eligibility reductions to top service areas by licensing on a Tier 5 level or rebalancing amongst eligibility points amongst the top 18

[112] TekSavvy Comments, para 90; Iristel Comments, para 46; Canwisp Comments, para 99.
[113] Telus Comments, Table 3: Reserve Prices and End Prices in 5G 3.x GHz auctions 2017-2019, pg 82.
[114] Telus Comments, para 241.

markets, respectively,[115] both proposals the Department should reject. As highlighted above, propagation characteristics support the use of Tier 3 licence areas and the use of Tier 5 licence areas would create significant interference management complexity in Canada's most populous areas, negatively impacting large numbers of Canadians. Further, while eligibility points are indeed heavily weighted to the Top 3 markets, this should help prevent parking points and switching between regions that is primarily driven by strategic gaming behaviour.

125. Bell proposes that final payments should be due 30 days after the spectrum is put into service to account for the fact that spectrum in some areas will not be usable until after the protection period. In the alternative, they recommend that final payments should be due on January 31, 2021, or 30 business days after the announcement of provisional winners, whichever is later, to ease end of (calendar) year financial accounting for businesses but still meeting end of (financial) year accounting for the government.[116] Rogers supports both these proposals, especially the primary one of making the final payment once the spectrum becomes available at the end of a transition period. This will allow network operators to more effectively allocate capital required for network improvements, customer service and the development of new products and services.

126. Xplornet proposes that set-aside-eligible bidders only be required to provide pre-auction deposits representing 50% of the amounts proposed in annex D.[117] The Department should reject this proposal, in addition to rejecting the use of a set-aside. Set-aside-eligible bidders are either well-capitalized, large regional conglomerates (such as Shaw, Videotron, and Xplornet) or will be potentially bidding on small, inexpensive packages (such as regional WISPs); either way, they do not require additional subsidies.

Q19: ISED is seeking comments on the proposed renewal process for spectrum licences in the 3500 MHz band.

127. There is widespread support for the Department's proposal that licensees will have a high expectation of renewal at the end of the initial licence term.[118] Bell further recommends that ISED modify the wording so that licensees will have a high expectation of renewal at the end of the initial terms, as well as all subsequent terms, assuming compliance with conditions of licence, the absence of a fundamental reallocation of spectrum to a new service, or the absence of an

[115] Cogeco Comments, para 268; Shaw Comments, para 171.
[116] Bell Comments, para 125-127.
[117] Xplornet Comments, para 141.
[118] BCBA Comments, para 75; Telus Comments, para 242; Xplornet Comments, para 142; SaskTel Comments, para 170; TekSavvy Comments, para 92; Canwisp Comments, para 102.

overriding policy need, as this will provide licensees with more certainty.[119] Rogers supports this modification to provide operators additional certainty in the significant investments required to deploy advanced wireless networks.

128. Rogers thanks the Department for the opportunity to share its views and participate in this process.

[119] Bell Comments, para 128.