



Montreal, October 2nd, 2017

(by email: ic.spectrumbauctions-encheresduspectre.ic@canada.ca)

Senior Director
Spectrum Licensing and Auction Operations
Innovation, Science and Economic Development Canada
235 Queen Street
Ottawa, Ontario
K1A 0H5

**RE: Consultation on a Technical, Policy and Licensing Framework for spectrum in the 600 MHz Band
(Canada Gazette, Part I, Gazette Notice SLPB-005-17, posted on August 4, 2017)**

Dear Sir / Madam,

1. Ecotel Inc. ("Ecotel") is pleased to submit these comments to Canada's Minister of Innovation, Science and Economic Development in response to the Consultation on a Technical, Policy and Licensing Framework for spectrum in the 600 MHz Band.
2. Ecotel is a Canadian infrastructure based Mobile Network Operator (MNO) that is fully registered with the ITU, GSMA and CRTC bodies.
3. Ecotel's primary mission is to design, deploy and operate highly secured private LTE cellular networks targeted to mission critical and specialized industrial applications for the Oil, Mining and Utilities markets.
4. Autonomous Truck control system, PLC and SCADA Services, Sensors/Flow meters, real time monitoring and Trucks Collision avoidance systems are just a few of these mission critical applications which benefit from the superior and advanced robustness, security, reliability and performance provided by the LTE wireless technology.
5. In addition to our industrial focus, Ecotel also deploys and operates costs effective LTE cellular networks aimed at providing Data & Voice mobility services to remote & rural communities or enterprises.

ECOTEL

877-376-3776

MONTRÉAL - 2570 Letourneux, suite 3, Montréal, QC, H1V2P4

info@eco-tel.co

www.eco-tel.co

6. Ecotel is the licensee of PCS spectrum in the Province of Québec, and is currently deploying private LTE solution for industrial applications and will shortly offer public LTE coverage in unserved rural areas.
7. Ecotel is continuously seeking access to new spectrum and, in addition to existing spectrum licenses owned, Ecotel also negotiates spectrum subordination agreements with other carriers in different locations in Canada though so far with mixed success as detailed later in this submission.
8. Ecotel is pleased with the proposition to make available 70 MHz of spectrum in the 600 MHz band. The proposed band plan is already defined at 3GPP as band 71 and standardization completion is expected this fall. Band 71 is also in the process to be defined as a 5G band in 3GPP release-15 planned in about 12 months from now. As a result, it is expected that band 71 will enjoy a great equipment ecosystem allowing economies of scale.
9. Ecotel looks forward at this new spectrum band being auctioned in a near future and would like to be an active player in the auction. However, the proposed rules do not allow a small carrier like Ecotel to take advantage of the set-aside spectrum nor do they offer the possibility to bid on tier-4 license areas or even smaller areas and address the needs of rural and remote areas.
10. The proposed tier-2 license areas will only allow existing carriers to increase their current spectrum portfolio and will prevent smaller carriers like Ecotel, whose business plans specifically target rural and remote areas, to bid in the upcoming spectrum auctions.
11. Allowing access to tier 4 markets will promote innovation and opportunistic ideas within different sectors such as mining, gas and oil. If it is the Department's goal to promote innovation, then license areas based on these small markets need to be offered in the upcoming spectrum auction.
12. Let's see the reality as it is. Canada's ranking with regards to global innovation is highly affected by the smaller markets. The Department needs to open the rural and remotes areas markets via their spectrum auction.
13. Ecotel emphasizes that we need to place innovation and the current smaller market needs at the forefront of our objectives when allocating new spectrum licenses.
14. 5G is not ready yet and will not be ready until 2020 because 4G LTE works and will evolve into 4.5G LTE-Advanced and 4.9G LTE-Advanced-Pro way before 5G takes off. Smaller markets are eager for solutions that available today and by allowing access to

spectrum on a per tier-4 basis, the Department will foster additional markets within Canada.

15. Ecotel details below its concerns and provide specific answers to ISED's questions as per the Consultation on a Technical, Policy and Licensing Framework for spectrum in the 600 MHz Band.

Q1A—ISED is seeking comments on its proposal to implement a set-aside as a pro-competitive measure in the auction process for the 600 MHz band.

16. Ecotel agrees with the implementation of a set-aside.

Q1B—ISED is seeking comments on its proposal to set aside 30 MHz of spectrum in the 600 MHz band for eligible entities and to have open bidding (no pro-competitive measures) on the remaining 40 MHz in the band.

17. Ecotel agrees with 30 MHz set aside out of 70 MHz.

Q1C—ISED is seeking comments on its proposal to limit the eligibility criteria to bid on set-aside spectrum to those registered with the CRTC as facilities-based providers, that are not national incumbent service providers, and that are actively providing commercial telecommunication services to the general public in the licence area of interest, effective as of the date of application to participate in the 600 MHz auction.

18. Ecotel agrees with an eligibility criteria that includes registration with the CRTC as facilities-based providers, and not being an incumbent service provider. However, a requirement that commercial telecommunication services to the general public are provided in the license area of interest means that proposed set-aside is meant only to increase the spectrum portfolio of players already offering services in specific tier-2 areas. Put it another way, any small carrier that already offers services in remote areas that represent a small subset of a tier-2 license would potentially never be big enough to satisfy the definition "actively providing" services in their regions of interest. As a result, such a small carrier looking for spectrum to enter new markets would potentially not be eligible to set-aside.

19. On the other side, with the proposed rules, even if a small carrier would remain eligible to bid on a entire set-aside tier-2 license, such a license would be way to big and to expensive, and would refrain the small carrier from bidding in this auction for 600 MHz spectrum.

20. Ecotel is of the view that licenses should be offered per tier-4 (as discussed at question Q2) and that set-aside should also be available for small carriers for any tier-4 licenses covering rural and remote areas.

Q1D—ISED is seeking comments on its proposal to limit the transferability of the set-aside spectrum for the first five years of the licence term.

21. Ecotel agrees with the proposal.

Q1E—ISED is seeking comments on its proposal to auction the set-aside spectrum as three separate paired blocks of 5+5 MHz.

22. Ecotel agrees with the proposal.

Q2—ISED is seeking comments on its proposal to use Tier 2 service areas across the country, except in the three Territories (Yukon, Northwest Territories and Nunavut) where Tier 4 service areas would apply.

23. Ecotel believes spectrum licenses should be auctioned on a per tier-4 basis.

24. Ecotel understands that for a complete new spectrum auction, managing bid packages on a national basis with tier-4 licenses could represent a challenge though AWS3 auctions in US have used with success licenses areas on the basis of the 734 Cellular Market Areas. However, having tier-4 licensing, especially for rural and remote areas, would allow parties taking part in the auction to focus on the markets they really want to cover.

25. Tier-4 license areas would allow Ecotel and other small carriers to focus on specific markets where they want to offer services and not have to take an entire tier-2 to do so.

26. As it is today, Ecotel could never bid on a tier-2 license area that include bigger markets with denser population areas, and where LTE networks are generally already deployed because the cost of getting such a tier-2 license with deployment conditions would never fit within Ecotel's business plan.

27. Having tier-4 license areas would encourage smaller and potential niche carriers to obtain the spectrum they need in specific remote areas while letting the densest markets to bigger carriers where their business plans better suits the type of requirements for such bigger markets. It is clearly not Ecotel's interest to deploy and cover population in areas well served by other carriers.

28. Covering rural and remote areas is just not part of any Incumbents' and 2008 New Entrants' business plans. We can try to force them to cover these small markets through deployment level license conditions, but we can expect them to do whatever they can to delay meeting the requirements as much as possible. This is just not part of their business plans. Just as an example, Ecotel would be curious to know how many

Incumbents and 2008 New Entrants made applications to cover rural and remote markets as part of the Connect to Innovate program. We believe the Department should consider number of applications as an indicator. If the conclusion is that, even with the help of the Government, they were not eager to deploy in small markets, chances are this is just not part of their business plans and will never be.

29. As it is proposed now, Ecotel would not be in a position to bid on tier-2 license areas. Still, should the Department decide to keep tier-2 license areas for the proposed spectrum auction, Ecotel strongly recommends that at minimum the Department shorten the timeframe for deployment level conditions per tier-3 and per tier-4.
30. Ecotel believes that shortening deployment license conditions on the basis of tier-4 would be an incentive for carriers to either deploy, enter into agreement for subordination or transfer parts or the entirety of a tier-4 license area for which they have no business plans or that would be too far away for them to efficiently support.
31. In addition to this, Ecotel is of the view that ISED should start contemplating additional license conditions to facilitate or mandate subordination agreements in locations where licensed spectrum is not put to use and even though the deployment condition within a bigger license area is reached. In addition to our recommendations above, this would allow other entities to take advantage of the unused spectrum and offer LTE services to remote public and industrial customers.
32. Today, subordination arrangements are sometimes possible. In fact Ecotel was successful in implementing such arrangements with Rogers for specific remote locations in Quebec, Labrador and Nunavut.
33. However, this long process is not business-as-usual type of arrangements, not to say difficult or impossible with certain carriers. Ecotel made several other requests for subordination or transfer to incumbents and new entrants, only to receive denials.
34. We recently made requests to Bell to have access through subordination or transfer PCS spectrum in Quebec that we know has never been used in a remote location we are contemplating. This was refused without justification for Bell.
35. We made other requests to other carriers that were also refused or left without answers.
36. Facing the difficulties of having access to spectrum in remote regions that we know remains unused and sometimes has never been put to use and will not be put to use in a foreseeable future, we believe spectrum subordination and spectrum transfer must be incentivized through the right license conditions or even mandated.

37. As we explained above, one cannot assume that parties interested in serving unserved areas and that would like to access spectrum in order to offer services can participate in spectrum auctions with tier-2 and even tier-3 licenses since these licenses extend way outside the specific regions they want to cover and current deployment levels would obliged them to cover urban markets that are not part of their business plans and that are served by Incumbents and 2008 New Entrants. If auctions were based on tier-4 license areas this would certainly be another story for Ecotel.
38. In sum, Ecotel requests that auctioned spectrum uses tier-4 licensing areas instead of tier-2. Ecotel would be an active player in the upcoming spectrum auctions if licensing areas were based on tier-4.

Q3—ISED is seeking comments on:

- a) the proposal to use generic licences; and**
- b) the proposal to categorize all blocks won by set-aside-eligible bidders as set-aside blocks.**

39. Ecotel agrees with the proposal.

Q4—ISED is seeking comments on:

- a) the use anonymous bidding during the auction; and**
- b) the information that will be disclosed to bidders during the clock rounds, as described in annex A (which would also apply to the CCA with a modified activity rule set out in annex B) and annex C.**

40. Ecotel does not have specific comments to add.

Q5—ISED is seeking comments on:

- a) The advantages and disadvantages of the three auction formats being considered for the 600 MHz auction:**
 - I. Combinatorial clock auction, using the WARP-based activity rule (annex A);**
 - II. Combinatorial clock auction, using the GARP-based activity rule (annex B);**
 - III. Enhanced combinatorial clock auction (annex C).**
- b) Where there is a preference for one of the options, respondents are asked to provide a rationale and explanation.**

41. Ecotel believes that proposed auction formats remain complex and put small players at disadvantage. Other formats should be proposed especially in the context of licensing tier-4 areas for rural and remote areas.

Q6—ISED is seeking comments on:

- a) The proposal that winners of more than one block in a single service area be assigned contiguous blocks; and**
- b) The proposed structure of the assignment stage, including the order of the assignment rounds and the combination of service areas into a single assignment round.**

42. Ecotel does not have specific comments to add.

Q7—ISED is seeking comments on the proposed methodology for incrementing prices during the clock rounds, as described in annex A.

43. Ecotel does not have specific comments to add.

Q8—ISED is seeking comments on the proposed Affiliated and Associated Entities rules that would apply to bidders in the 600 MHz auction.

44. Ecotel agrees with the proposed rules.

Q9—ISED is seeking comments on the proposed rules prohibiting collusion and other communication rules, which would apply to bidders in the upcoming 600 MHz auction.

45. Ecotel agrees with the proposed rules.

Q10—ISED is seeking comments on its proposal to issue spectrum licences in the 600 MHz band with a 20-year licence term and the proposed wording of the condition of licence above.

46. Ecotel agrees with a 20-year licence term.

Q11—ISED is seeking comments on the proposals on the condition of licence related to transferability and divisibility, and the proposed wording above.

47. Ecotel agrees with the proposal.

Q12—ISED is seeking comments on the proposed deployment condition of licence as stated above.

48. As mentioned in preceding paragraphs, Ecotel is of the view that license areas should be per tier-4.

49. Should the Department decide to keep tier-2 licensing, though preventing small carriers to participate in the auction, Ecotel would agree with a 3-step deployment conditions as proposed. However, we believe the timeframe for tier-3 and tier-4 levels

are too generous, especially for a low band spectrum that can cover way more than existing mid-band spectrum. As a result, Ecotel believes that tier-3 deployment levels should be reached within 8 years of the initial issuance instead of 10 years, and tier-4 deployment levels should be reached within 12 years of the initial issuance instead of 20 years.

50. As we also mentioned earlier in our submission, shortening deployment license conditions on the basis of tier-4 would be an incentive for carriers to either deploy, enter into agreement for subordination or transfer parts or the entirety of a tier-4 license area for which they have no business plans or that would be too far away for them to efficiently support.

Q13—ISED is seeking comments on proposed conditions of licence outlined in annex G that would apply to licences issued through the proposed auction process for spectrum in the 600 MHz band.

51. Ecotel agrees with the remainder of proposed conditions.

Q14—ISED is seeking comments on the proposed opening bids as presented in table 1.

52. As discussed in previous paragraphs of the present submission, licenses should be offered on the basis of tier-4 areas, which, as a consequence, would implicitly lower the entry price for Ecotel for tier-4 license areas of interest.

53. Tier-2 licensing comes with the implicit obligation for Ecotel to bid on big markets, which does not suit Ecotel's business plans. Ecotel would then need to pay way more for markets that we do not need, and then seek to resell those specific markets after winning the licenses. This would be inefficient and create a financial risk Ecotel would not be in a position to take. As a result, Ecotel could not bid on proposed licenses if tier-2 areas are kept.

54. As a consequence of using tier-4 licensing instead of tier-2, opening bids for tier-4 areas would be accordingly adjusted and Ecotel would then be in agreement with such an approach.

Q15—ISED is seeking comments on the proposed eligibility points for spectrum licences in the 600 MHz as outlined in table 2, and pre-auction deposits as outlined above.

55. Ecotel does not have specific comments to add.

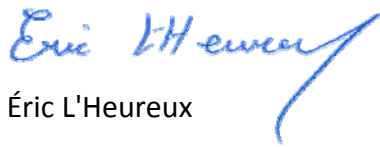
Q16—ISED is seeking comments on the proposed renewal process for spectrum licences in the 600 MHz band.

56. Any unassigned spectrum after this upcoming residual spectrum auction should be made available on a per tier-4 basis, on a first come, first served rule and with the proper license fees regime.

57. Ecotel agrees with the remainder of proposed renewal process.

58. Ecotel thanks the Department for the opportunity to provide these comments.

Yours truly,



Éric L'Heureux

President and CEO