



Montreal, July 25th, 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
6th floor
Ottawa, Ontario
K1A 0H5

**RE: Consultation on a Licence Renewal Process for Advanced Wireless Services and other Spectrum
(Canada Gazette, Part I, Gazette Notice SLPB-002-17, posted on June 15, 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 Licence Renewal Process for Advanced Wireless Services and other Spectrum.
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. Ecotel is currently deploying private LTE solution for industrial applications and will shortly offer public LTE coverage in undeserved rural areas.
7. Ecotel is continuously seeking access to new spectrum and, in addition to existing spectrum licenses owned, Ecotel also negotiated spectrum subordination agreements with other carriers in different locations in Canada.
8. The equipment ecosystem for AWS-1 and PCS G-block are quite mature with nearly 2000 handsets, tablets, routers and other devices supporting both bands globally.
9. With such an extensive ecosystem, solutions exist today, ready for deployment that Ecotel can use to provide services to mobile, IoT and industrial customers located in remote areas in Canada.
10. Most of the remote locations where Ecotel is looking to deploy LTE infrastructure today do not have cellular coverage.
11. The locations are most of the time too far away from the densest areas within a tier-2 or tier-3 license and are not covered since the tier-2 or tier-3 coverage license condition is reached.
12. As a result, Ecotel strongly recommends that the Department, as part of this renewal process, includes new deployment conditions per tier-4 license area and also increases the proportion of population that must be covered within each tier-4 license area.
13. Ecotel believes that implementing new deployment license conditions on the basis of tier-4 with increased population covered requirements 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.
14. While the deployment condition is per tier-4, any future subordination or license transfer could also be achieved with smaller areas than tier-4, similar to the ones used by Stat Can's 25-km²-cell grid.
15. Deployment license conditions on the basis of tier-4 with increased population covered requirements become even more important with the current Department's proposition to renew existing licenses with terms of 20 years instead of 10 years. Ecotel believes it is fair to provide 20-year terms to current licensees provided that

deployment conditions are adjusted so that remote populations are covered way before this new 20-years term expires.

16. In that regard, Ecotel believes that deployment conditions on the basis of tier-3 license areas would not be enough to stimulate the deployment in remote areas. Should the Department decide to implement tier-3 deployment license conditions, Ecotel would then recommend that the requirement for population covered be higher (25% to 33% more than what is proposed in Annex B of the Consultation document).
17. Finally, Ecotel believes ISED should start contemplating additional license conditions to facilitate or force subordination agreements between MNOs in locations where licensed spectrum is not put to use and even though the deployment condition within a license area is reached. In addition to our recommendations above, this would allow other MNOs to take advantage of the unused spectrum and offer LTE services to remote public and industrial customers.
18. Below are specific answers from Ecotel to ISED's questions as per the Consultation on a Licence Renewal Process for Advanced Wireless Services and other Spectrum.

A. ISED invites comments on the assessment of the AWS-1, G Block and I Block equipment ecosystems.

19. As per our comments on paragraphs 8 and 9 above, AWS-1 and PCS G-block both have quite an extensive ecosystem. This is not the case though for I-block for which the ecosystem still needs to be developed. This block was proposed at 3GPP by Ligado several years ago to be combined with L-band but the project is on-hold since 2014.

B. ISED invites comments on the proposal to renew AWS-1, G Block and I Block licences that have met their conditions of licence.

20. Ecotel believes that only licenses that have met all of their conditions should be renewed. ISED should quickly make the unused spectrum available to other MNOs as some Canadian customers in remote areas still have no coverage. Moreover, spectrum subordination should be mandated between MNOs in locations where the spectrum is available and unused.

C. ISED invites comments on the likely timeframe for availability of equipment capable of providing access to licensed spectrum on an opportunistic basis.

21. Ecotel does not currently deploy such solutions as cognitive radios or dynamic spectrum access. Dynamic spectrum access is often not compatible with private networks not connected to a centralized database.

D. ISED invites comments on the proposal to renew AWS-1 and G Block licences that have complied with their conditions of licence for a new term of 20 years and I Block licences that have complied with their conditions of licence for a new term of 10 years.

22. As per our comment on paragraph 15 above, Ecotel believes that 20-years terms are fair provided that deployment conditions be adjusted on a per tier-4 basis with increased population covered requirements, so that remote populations are covered way before this new 20-years term expires. Mandated subordination among MNOs should also be added as license condition.

23. For I-block, since the ecosystem is still to be developed, Ecotel agrees with a 10-years term.

E. ISED invites comments on the proposal to apply deployment levels at the Tier 4 population coverage level, within eight years of the new licence term, as described above and provided in annex C, to the AWS-1 and G Block licences issued through the renewal process.

24. Ecotel strongly agrees with deployment conditions based on tier-4 licenses areas.

25. Ecotel believes that implementing new deployment license conditions on the basis of tier-4 with increased population covered requirements 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.

26. While the deployment condition is per tier-4, any future subordination or license transfer could also be achieved with smaller areas than tier-4, similar to the ones used by Stat Can's 25-km²-cell grid.

27. However, Ecotel believes 8 years to reach the new milestone is too long. A term of 5 years would provide a better incentive for carriers to consider new business arrangements and subordination agreements to achieve the population coverage level in a shorter term. Otherwise, such arrangements would take place later than sooner and most of the remote locations in Canada will not be covered before a long time again. Ecotel has customers in remote areas waiting to have an LTE coverage due to the lack of available spectrum.

28. If ISED decides to keep such as long delay to reach coverage level, Ecotel believes ISED should start contemplating additional license conditions to facilitate or force subordination agreements between MNOs in locations where licensed spectrum is not put to use and even though the deployment condition within a license area would already be reached. This would certainly contribute to offer coverage in the most remote parts of our country within a shorter time frame.
29. Ecotel believes that deployment conditions on the basis of tier-3 license areas would not be enough to stimulate the deployment in remote areas. Should the Department decide to implement tier-3 deployment license conditions, Ecotel would then recommend that the requirement for population covered be higher (25% to 33% more than what is proposed in Annex B of the Consultation document).

F. ISED invites comments on whether or not the proposed Tier 4 deployment option should apply to I Block licences issued through the renewal process.

30. Assuming there is a developed ecosystem for I-block, we believe the same rules should apply. It is however our understanding that such an ecosystem is not ready yet. Until such time there is an ecosystem, ISED could decide to relax the conditions.

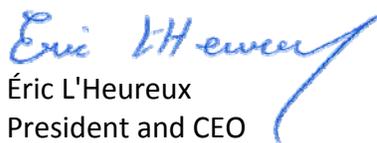
G. ISED invites other proposals for deployment requirements for the AWS-1, G Block and I Block licences issued through the renewal process.

31. As per paragraph 28 above, Ecotel believes ISED should start contemplating additional license conditions to facilitate or force subordination agreements between MNOs in locations where licensed spectrum is not put to use and even though the deployment condition within a license area would already be reached. This would certainly contribute to offer coverage in the most remote parts of our country within a shorter time frame than the proposed 8-year term to reach coverage level.

H. ISED invites comments on the proposed conditions of licence for the AWS-1, G Block, and I Block licences issued through the renewal process as set out in annex A.

32. Ecotel agrees with the remaining proposed conditions of license contained in Annex A.

Yours truly,


Éric L'Heureux
President and CEO