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Spectrum Management and Telecommunications

# Decisions on New Requirements for Wireless Device Testing Laboratories

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## 1. Intent

1. Through the release of this document, Innovation, Science and Economic Development Canada (ISED) announces changes to the requirements for wireless device testing laboratories, resulting from the consultation process SMSE-011-17, [\*Consultation on New Requirements for Wireless Device Testing Laboratories\*](#) (the Consultation).

## 2. Mandate

2. The Minister of Innovation, Science and Economic Development, through the [\*Department of Industry Act\*](#), the [\*Radiocommunication Act\*](#) and the [\*Radiocommunication Regulations\*](#), with due regard to the objectives of the [\*Telecommunications Act\*](#), is responsible for spectrum management in Canada. As such, the Minister is responsible for developing goals and national policies for spectrum use and ensuring effective management of the radio frequency spectrum resource.

## 3. Legislation

3. The Minister of Innovation, Science and Economic Development is provided the general powers for spectrum management in Canada pursuant to section 5 of the *Radiocommunication Act* and sections 4 and 5 of the *Department of Industry Act*. Under the *Radiocommunication Act*, the Minister has the power to establish standards, rules, policies and procedures with regards to radiocommunications, including technical aspects related to broadcasting. The Governor in Council may make regulations with respect to spectrum management pursuant to section 6 of the *Radiocommunication Act*, which have been prescribed under the *Radiocommunication Regulations*.

## 4. Policy objectives

4. A thriving wireless telecommunications industry drives the adoption and use of digital technologies and enhances the productivity of the Canadian economy and its international competitiveness. We are proposing measures that will enhance our already robust certification process for the benefit of Canadian consumers, businesses and public institutions.

5. ISED is guided by the policy objectives of the *Telecommunications Act*, and the [\*Spectrum Policy Framework for Canada\*](#) (SPFC), which states that the objective of the spectrum program is to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource. These objectives and enabling guidelines, as listed in the SPFC, guide ISED in delivering its spectrum management mandate. Through

the [Innovation and Skills Plan](#) and its focus on people, technologies and companies, the Government of Canada is committed to promoting innovation-led growth across all sectors of the Canadian economy. Today's economy is digital. The ubiquity of digital technologies and services across sectors is a defining feature of this digital economy. A world-class communications infrastructure, including equipment, can create a platform for sustainable growth, allowing Canadian companies to take advantage of the latest technologies to better compete globally. Within this context, ISED's objective is to:

- enhance quality, competency and efficiency of wireless testing laboratories to prepare for the next generation of technologies (e.g. 5G, Internet of Things, etc.);
- promote innovation with fair and open markets; and
- support deployment and timely availability of robust wireless equipment.

## 5. Background

6. Compliance with domestic technical standards is necessary in order to prevent radiocommunication interference, harm to the Canadian public telecommunications networks, and to ensure the safety of users. All wireless devices entering Canada must meet the applicable ISED technical standards and labelling requirements.

7. Manufacturers, importers, distributors and vendors have a legal obligation to ensure that wireless devices deployed in the Canadian marketplace have been certified or comply with Canadian technical standards, and that the equipment sold in the Canadian marketplace continues to meet those standards during the entire product life-cycle.

8. The stages in the end-to-end regulatory process for the certification of wireless products typically include:

- manufacturers designing their product to meet ISED's technical standards requirements;
- testing of the product by a testing laboratory;
- submitting test results to a recognized Certification Body (CB), reviewing CB submission by ISED's Certification Engineering Bureau (CEB); and
- publishing the certified products on ISED's Radio Equipment Listing (REL).

Furthermore, market surveillance is carried out to verify that products in the marketplace continue to comply with relevant standards.

9. As part of the conformity assessment regime, the accreditation process demonstrates that testing laboratories are technically competent and able to produce precise and accurate test

results and calibration data. The accreditation of testing laboratories is a rigorous process involving an extensive review of documentation and on-site visits by representatives of an accreditation body. This well-established process is repeated at regular intervals, normally every two years, and is based on a standard developed by the International Standard Organization (ISO/IEC 17025: *General requirements for the competence of testing and calibration laboratories*), and endorsed by the Standards Council of Canada. In Canada, wireless testing laboratories are required to demonstrate the general requirements described in the ISO standard, and be registered with ISED.

10. Wireless products are becoming more prevalent on the market. The increasing complexity of the equipment and the intricacies of the regulatory requirements demand more technical expertise from stakeholders involved in the conformity assessment process. Accredited testing laboratories generally submit higher quality test reports, therefore providing greater confidence in the competencies of these testing laboratories to perform compliance assessments to domestic technical rules.

11. Other countries have recently implemented accreditation requirements for testing laboratories. For instance, the Federal Communications Commission (FCC) has released new rules<sup>1</sup> requiring that all wireless and radio frequency (RF) exposure testing laboratories be subject to a recognition requirement based on accreditation, effective June 12, 2017.

12. To be in line with other countries, ISED launched a public consultation on August 31, 2017, proposing to further strengthen the conformity assessment process by mandating the accreditation of testing laboratories performing compliance measurements to ISED's technical standards for wireless devices. Following the comment and reply comment periods, the Consultation concluded on December 14, 2017. Comments and/or reply comments were received from 16 parties:

- A2LA
- Anonymous
- Applus+ Laboratories (Applus+)
- Bell Mobility
- Cisco Systems Inc.
- Entidad Nacional de Acreditación (ENAC) (Spain)
- LabTest Certification Inc. (LabTest)
- Lenovo
- Ministry of Economy and Industry (MEI) (Israel)
- Office of the Communications Authority (OCA) (Hong Kong)

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<sup>1</sup> [FCC Report and Order \(FCC 14-208\)](#) and [Memorandum Opinion and Order and Order on Reconsideration \(FCC 16-74\)](#).

- PCTEST Engineering Laboratory Inc. (PCTEST)
- Radio Advisory Board of Canada (RABC)
- RN Electronics Ltd
- Standards Council of Canada (SCC)
- UL LLC
- ZTE Corporation

13. In its analysis of the comments, and when making decisions on the new requirements for wireless device testing laboratories, ISED has considered the policy objectives mentioned above, as well as the enabling guidelines of the [\*Spectrum Policy Framework for Canada\*](#).

## **6. Discussion and decision**

### **6.1 Recognition of accreditation bodies in non-mutual recognition agreement (MRA) countries**

14. The Consultation sought views on the proposed Procedure for the Recognition of Accreditation Bodies for non-MRA Countries. The proposed procedure describes the criteria and procedure for the recognition of an accreditation body by ISED to perform accreditation of testing laboratories to ISO/IEC 17025 in non-MRA countries.

15. Comments and/or reply comments were received from A2LA, Bell Mobility, Cisco Systems Inc., LabTest, PCTEST and SCC. The proposal was broadly supported with the exception of LabTest, which claimed that allowing recognition of accreditation bodies from non-MRA countries “only hurts the Canadian economy by creating trade barriers for Canadian manufacturers. Without a bilateral MRA, our own Canadian exports are not able to market their products with the same flexibility as others.”

16. While A2LA supported the proposal, they recommended a recognition cycle of four (4) years for accreditation bodies instead of the proposed two (2) years to align with the accreditation co-operation process of the International Laboratory Accreditation Cooperation (ILAC). In their reply comments, SCC agrees that a recognition period of both two (2) or four (4) years could be adequate. Lastly, Bell Mobility, PCTEST and Cisco Systems Inc. provided minor suggested revisions to the procedure. This recommendation is reasonable, given that both Canada and the United States are among many countries that have recognized accreditation members of ILAC, which must be peer evaluated every four (4) years.

17. In light of the views expressed, ISED will implement its procedure for recognition of accreditation bodies for non-MRA countries (annex A of [SMSE-011-17](#)), allow a recognition

cycle of four (4) years to align with accreditation co-operation, and include revisions based on some of the suggested improvements.

**ISED will publish a new Procedure for the Recognition of Accreditation Bodies for Non-MRA Countries in parallel with the release of this decision paper and allow a recognition cycle of four (4) years for accreditation bodies.**

## 6.2 Recognition procedures for foreign testing laboratories

18. ISED proposed and sought views on a procedure for the recognition of foreign testing laboratories, which describes the criteria and procedure for recognition by ISED of testing laboratories to test to Canadian requirements for wireless products.

19. Comments and/or reply comments were received from Bell Mobility, ENAC, LabTest, MEI, OCA, PCTEST and RN Electronics Ltd. Once again the proposal was broadly supported with the exception of LabTest, which rejected the proposal indicating that recognition should only be allowed for testing labs in countries where bilateral MRA's with Canada exist to ensure "free trade" and ensure "products entering the Canadian market comply with ISED requirements for Canadian consumer safety." Bell Mobility, PCTEST, ENAC and the MEI provided minor suggested revisions to the procedure.

20. In light of the views expressed, ISED will implement its procedure (annex B of [SMSE-011-17](#)) for the recognition of foreign testing laboratories, update the procedure for recognition of Canadian testing laboratories with the same requirements and include revisions based on some of the minor suggested improvements.

**ISED will update the (REC-LAB) [Procedure for the Recognition of Foreign Testing Laboratories](#) and the (DES-LAB) [Procedure for Designation and Recognition of Canadian Testing Laboratories](#) with the same requirements in parallel with the release of this decision paper.**

## 6.3 Technical assessment checklist

21. The Consultation proposed the implementation of a technical assessment checklist (annex C of [SMSE-011-17](#)) to ensure that specific items are evaluated during the assessment of test laboratories by a recognized accreditation body. This checklist would need to be submitted to ISED as part of the recognition process.

22. Comments and/or reply comments were received from Applus+, Cisco Systems Inc., ENAC and PCTEST. PCTEST suggested improvements to the specific absorption rate (SAR) test, as well as the radio frequency (RF) exposure and nerve stimulation test segments of the checklist. ENAC suggested that the recognition of subcontracted laboratories be included.

23. In Applus+'s reply comment, they did not agree with the comments submitted by other parties in regards to the checklist as they felt it would be redundant and inessential under the existing requirements of ISO/IEC 17025.

24. ISED is still of the opinion that a checklist will ensure items covering specific ISED technical requirements will be evaluated accordingly during the assessment of test laboratories by a recognized accreditation body. Therefore, ISED will implement its proposed technical assessment checklist and include revisions based on some of the suggested improvements.

**ISED will include the technical assessment checklist requirement within the DES-LAB, *Procedure for Designation and Recognition of Canadian Testing Laboratories* and the REC-LAB, *Procedure for the Recognition of Foreign Testing Laboratories* in parallel with the release of this decision paper.**

#### **6.4 Changes to other documents related to the accreditation of testing laboratories**

25. In the Consultation, ISED mentioned that other related documents would need to be updated with the implementation of the accreditation of testing laboratories. ISED compiled a table (annex D of [SMSE-011-17](#)), listing the documents that would be impacted.

26. In light that no comments were received regarding the other relevant documents, ISED will proceed with the amendments proposed in the Consultation.

**ISED will amend the documents listed in annex D of [SMSE-011-17](#).**

#### **6.5 Scope of accreditation requirements for testing laboratories**

27. The Consultation proposed a minimum scope of accreditation based on specific Radio Standards Specifications (RSS) and Broadcasting Equipment Technical Standards (BETS) to permit testing laboratories to be specialized in certain areas of testing. ISED further proposed to split the accreditation of RSS-102, *Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)* into three (3) categories (specific absorption rate (SAR), RF exposure evaluation and nerve stimulation (NS)). ISED also sought comments on whether additional standards should be split into separate categories.

28. Comments and/or reply comments on this proposal were received from Cisco Systems Inc. and anonymously. Cisco expressed its support for allowing testing laboratories to specialize in specific parts of the regulations and standards.
29. The anonymous commenter proposed that the scope of accreditation for RSS-247, *Digital Transmission Systems (DTSSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices* be split into two (2) parts: including and excluding dynamic frequency selection (DFS) requirements. Furthermore, the same commenter proposed that ISED should allow testing laboratories to perform a partial scope of accreditation for other technical standards on a case-by-case basis.
30. ISED will implement its proposal to split the scope of accreditation of RSS-102 into three (3) categories. In light of the comments receive, ISED will also split the scope of accreditation of RSS-247 into two (2) categories based on the testing laboratories area of expertise; including and excluding DFS requirements. ISED is also open to the idea of providing testing laboratories the option of submitting a request for partial scope of accreditation for a technical standard in the form of a special authorization. Special authorization for a partial scope will be reviewed on a case-by-case basis, and would be granted on an interim basis until procedures are updated to include the split RSS.

**ISED will implement its proposal to split the scope of accreditation of RSS-102 and RSS-247 and allow testing laboratories to submit a special authorization for partial scope on a case-by-case basis.**

## 6.6 Transition period

31. ISED proposed a transition period of six (6) months following the publication of a decision and relevant procedures related to the Consultation to allow testing laboratories sufficient time to acquire their accreditation.
32. Comments and/or reply comments were received from A2LA, Applus+, Bell Mobility, Cisco Systems Inc., ENAC, Lenovo, RABC, RN Electronics Ltd, UL LCC and ZTE Corporation.
33. All except Bell Mobility were strongly opposed to the transition period of six (6) months, stating that it would not allow enough time for testing laboratories to seek accreditation. A recommended minimum of 12 months was suggested by most parties. The RABC suggested that there should be a minimum of one (1) year but preferred a transition period of two (2) years. Moreover, the RABC suggested that in cases where a testing laboratory is unable to meet the ISO/IEC 17025 requirements within the transition period of one (1) or two (2) years, ISED should provide a grace period of three (3) months to complete projects already underway.

34. In light of these comments, ISED will extend the transition period from six (6) months to one (1) year. ISED will, however, not allow an additional grace period.

**ISED will provide a transition period of one (1) year following the publication of this decision and relevant procedures to allow testing laboratories to acquire their accreditation.**

#### **6.7 Accreditation renewal period for testing laboratories**

35. ISED sought views on testing laboratories renewing their accreditation every two (2) years. Comments and/or reply comments were received from A2LA, Bell Mobility, Cisco Systems Inc., PCTEST, RN Electronics Ltd and SCC.

36. While A2LA, Bell Mobility, Cisco Systems Inc. and RN Electronics Ltd supported the renewal proposal of two (2) years, PCTEST recommended that testing laboratories be renewed every year and extend it to two (2) after some degree of confidence has been achieved.

37. In light of these comments, ISED will implement the renewal period of two (2) years for testing laboratories.

**ISED will incorporate the renewal period of two (2) years in DES-LAB, *Procedure for Designation and Recognition of Canadian Testing Laboratories* and the REC-LAB, *Procedure for the Recognition of Foreign Testing Laboratories*.**

### **7. Obtaining copies**

38. All spectrum-related documents referred to in this paper are available on the [Spectrum Management and Telecommunications](#) website.

39. For further information an email can be sent to: [ic.consultationradiostandards-consultationnormesradio.ic@canada.ca](mailto:ic.consultationradiostandards-consultationnormesradio.ic@canada.ca).