



# Spectrum Management and Telecommunications

## Consultation on Modifications to the Process for Issuing Developmental Licences

## Introduction

Innovation, Science and Economic Development Canada (ISED) is initiating a consultation as a means to revise the process for issuing developmental licences across all frequency bands. These revisions are proposed in order to better address the changing needs of innovators and to enhance Canada's position as a global leader in the development and experimentation of the next wave of wireless technology.

As new wireless technologies such as 5G promise to increase innovation among businesses and offer consumers more advanced applications, Canada will seek to capitalize on these technologies to give businesses, research institutions and cities a competitive edge. As outlined in the [Innovation Agenda](#), ISED has recognized the importance of innovation in digital technologies and is seeking to maximize the benefits of current and emerging digital technologies.

Spectrum is a critical resource for innovators. To keep Canada at the forefront of digital development, it is essential for innovators to have the ability to conduct tests and technology trials of cutting-edge services, technology and systems.

In developing a revised process for issuing developmental licences, ISED will be guided by the objectives stated in section 7 of the [Telecommunications Act](#), and the policy objective stated in the [Spectrum Policy Framework for Canada](#) to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum.

Further, given the pace of innovation, ISED is proposing that any changes to the process for issuing developmental licences should be those that can be implemented efficiently and quickly to maximize the benefit.

## What are the issues?

ISED has received a number of questions and comments regarding its current approach to licensing that highlight areas that could be improved. The following sections describe the current process related to the issuance of developmental licences along with proposals to modernize. See Annex C for a summary of proposals.

### A. The issuance of developmental licences as radio licences

Currently, applicants may request a radio licence for a "developmental service", which is defined in the [Radiocommunication Regulations](#) as:

"a radiocommunication service that provides for research and development, experimentation or demonstration of radio apparatus, or the assessment of the marketability of radio apparatus, new technology or telecommunication services;"

New technologies, such as small-cell technologies, advanced wireless transmission techniques, and radio resource management techniques such as software defined networks, are opening opportunities for wireless innovation. These opportunities are different than those that were contemplated when the process for issuing development licences was originally put in place, in that they are more diverse and require less conventional types of testing.

While the developmental service provides an important opportunity for innovators to test and trial in Canada, ISED has received a number of questions and comments regarding its current approach to licensing that highlight two areas that could be improved:

- a. Radio licences limit the ability to test and trial applications that have broad geographical implications, such as connected cities, because of the large number of radio licences required and the fees associated with these licences; and
- b. The licence term of developmental licences is not in line with many tests and trials. Innovators wishing to conduct tests and trials exceeding the one year mark are unnecessarily burdened with the need to seek extensions or apply for new developmental licences.

Accordingly, to address the current limitations on testing and trialing capacity and geographically wide applications and technologies, ISED is proposing to expand its process to issue developmental licences to allow applicants to apply for developmental spectrum licences. Advantages of spectrum licencing include the ability to issue licences over more flexible geographical (or service) areas and much larger channel spacing bandwidths.

Under this proposal, applicants who meet the criteria for a developmental licence would be eligible to apply for a radio or spectrum licence, depending on the parameters of the specific application. ISED would determine what type of developmental licence is appropriate based on the applicant's specific circumstances.

ISED notes that there is currently no associated licence fee for developmental spectrum licences. However, a separate consultation will be launched to determine the spectrum licence fees that would apply should the proposal to issue developmental spectrum licences be adopted.

Developmental radio licences would continue to be issued with terms of 1 year. However, ISED is proposing developmental spectrum licences be granted for terms of up to 5 years. Developmental licence requests are to be accompanied by a letter of intent (described in section B) that is to include rationale for the desired length of the licence (term). Payment of annual fees would be required, as applicable, on March 31 of each year.

To address the issues within section A, **ISED is seeking comments on its proposal to:**

- a. issue developmental spectrum licences, in addition to the existing developmental radio licences; and**
- b. issue developmental spectrum licences for up to 5 years**

## **B. Information sharing and stakeholder support**

Presently, those seeking a developmental licence must submit an application through ISED's [Spectrum Management System](#) or submit the relevant application form (e.g. [Application for Licence to Install and Operate a Radio Station in Canada](#) or [Mobile Radio Station Licence Application](#)) to one of ISED's district offices. These methods require applicants to provide only limited information, including contact details, the nature of the service and pertinent technical information. No further follow-up information is provided to ISED or to the research and development community on the testing of services, equipment or technology completed through use of developmental licences.

ISED considers that information sharing of test results obtained through the use of the developmental licences could benefit both ISED and the general public. From ISED's perspective, a better understanding of innovators' plans and results would bolster its understanding of the industry's direction, allowing it to be more agile in policy development and spectrum management planning in areas such as standards and band plans. The research and development community could benefit from accessing the most cutting-edge information related to the newest technology that innovators are testing and trialing today.

Accordingly, ISED is proposing to add mandatory information submission requirements as a condition of all developmental licences. Applicants for developmental licences would be required to submit a letter of intent (See Annex B for more information) that describes the subject matter or purpose of their experiment, test, research and/or demonstration, what the test is to include, the rationale behind the desired licence term (up to five years) and the intended use of the spectrum. Applicants would also need to include: a description of the type of traffic that will be carried, the proposed frequency band to be used along with the reason for its selection, technical data (such as site locations), and equipment and antenna characteristics. This letter of intent would be used to supplement the general application form and add a level of uniformity to the application process nationwide.

Further, ISED is proposing that licensees submit test results, in confidence, to ISED at the end of the developmental licence term. ISED would use this information internally for policy development and spectrum planning.

ISED is proposing that licensees of development licences be provided with a forum where they could share the results of their tests and trials with the general public in order to bolster the information available to the research and development community overall. Under this proposal, licensees could, on a voluntary basis, share their letter of intent and their test results via an ISED-hosted website.

ISED is committed to streamline the process and ensure relevant information and guidelines regarding developmental licences are readily available to innovators.

In order to address the issues outlined in section B, **ISED is seeking comments on its proposal to:**

- c. introduce mandatory information submission requirements with ISED, via a Letter of Intent at the application stage and submission of test results at the end of the term, or annually if the licence is issued for greater than one year for the developmental licences; and**
- d. host a website where holders of developmental licences can voluntarily submit their Letter of Intent and test results, for the purpose of enabling greater information sharing within the research and development community.**
- e. produce a procedures guide, or a 'playbook' aimed at better providing information to innovators on the developmental licence process**

## Annex A — Proposed Conditions of Licence

Based on the proposals outlined in this Consultation, it is proposed that the following conditions of licence apply to developmental licences.

### 1. Licence Term

The term of this licence is a maximum of 5 years.

Developmental licence requests are to be accompanied by a letter of intent that is to include the rationale concerning the length of licence term desired. Fees related to any developmental licence, regardless of licence term, will be required on an annual basis.

### 2. Eligibility

The licensee must comply on an ongoing basis with the applicable eligibility criteria in subsection 9(1) of the [Radiocommunication Regulations](#). The licensee must notify the Minister of Innovation, Science and Economic Development Canada of any change that would have a material effect on its eligibility. Such notification must be made in advance for any proposed transactions within its knowledge.

### 3. Treatment of Existing Spectrum Users

The operation of this device/system must not cause interference to other licensed radio apparatus and will not normally be protected from interference, including interference that may cause undesired operation of the device/system. The Department may however, at its discretion, investigate complaints of interference.

### 4. Radio Station Installations

The licensee must comply with Client Procedures Circular CPC-2-0-03, *Radiocommunication and Broadcasting Antenna Systems*, as amended from time to time, which includes ongoing compliance with Health Canada's radiofrequency exposure guidelines also known as Safety Code 6.

### 5. Provision of Technical Information

When Innovation, Science and Economic Development Canada requests technical information on a particular station or network, the licensee must provide the information in accordance with the definitions, criteria, frequency and timelines specified in the request.

### 6. Compliance with Legislation, Regulation and Other Obligations

The licensee is subject to, and must comply with, the *Radiocommunication Act* and the *Radiocommunication Regulations*, as amended from time to time. The licence is issued on condition that all representations made in relation to obtaining this licence are all true and complete in every respect.

### 7. Technical Considerations, and International and Domestic Coordination

The licensee should comply on an ongoing basis with the technical aspects of the appropriate *Radio Standards Specifications (RSS)* and *Standard Radio System Plans (SRSP)* (if applicable), as amended

from time to time. Where applicable, the licensee must use its best efforts to enter into mutually acceptable agreements with other parties for facilitating the reasonable and timely development of their respective systems, and to coordinate with other licensed users in Canada and internationally.

The licensee must comply with the obligations arising from current and future frequency coordination agreements established between Canada and other countries and shall be required to provide information or take actions to implement these obligations as indicated in the applicable SRSP. Although frequency assignments are not subject to site licensing, the licensee may be required through the Letter of Intent or the appropriate SRSP, if applicable to furnish all necessary technical data for each relevant site.

#### 8. Lawful Interception

The licensee operating as telecommunication common carrier using the spectrum for voice telephony systems must, from the inception of service, provide for and maintain lawful interception capabilities as authorized by law. The requirements for lawful interception capabilities are provided in the *Solicitor General's Enforcement Standards for Lawful Interception of Telecommunications* (Rev. Nov. 95). These standards may be amended from time to time.

The licensee may request the Minister of Innovation, Science and Economic Development Canada to forbear from enforcing certain assistance capability requirements for a limited period of time. The Minister, following consultation with Public Safety Canada, may exercise the power to forbear from enforcing a requirement or requirements where, in the opinion of the Minister, the requirement is not reasonably achievable. Requests for forbearance must include specific details and dates indicating when compliance to the requirement can be expected.

#### 9. Amendments

The Minister of Innovation, Science and Economic Development Canada retains the discretion to amend these terms and conditions of licence at any time.

## **Annex B – Required Information for a Letter of Intent concerning the issuance of a developmental licence in Canada**

Applicants requesting developmental licences are to submit a letter of intent describing:

- all information related to what is to be tested;
- the rationale behind the desired length of licence (up to five years);
  - if longer than a single year, annual reporting of progress to be submitted to Dept.
- the intended results of the testing;
- the intended use of the spectrum;
- the type of traffic that will be carried;
- the proposed frequency band along with the reason for its selection;
- technical data (such as site locations); and
- equipment and/or antenna characteristics.

### Annex C - Summary of Proposals

	Current Process	Changes Suggested
<b>Licence</b>	Radio licence required for each apparatus, tied to a specific site.	<p>Permit a new type of licence, to be assessed at time of application, issued as a spectrum licence.</p> <p>Developmental radio licences will still be issued under current process where suitable.</p> <p>Legacy developmental radio licences will not be transitioned to developmental spectrum licences.</p>
<b>Requirements</b>	Apply for a developmental licence online or with with your respective district office	<p>Application online or to district office will include a Letter of Intent that will request information related to the testing/trialing of service/equipment as well as the frequency(ies), location(s) of device(s), desired outcome of test/trial, and justification for desired term.</p> <p>The application will allow the Department to determine whether a radio licence or spectrum licence is appropriate</p> <p>Upon completion of test/trial, licensee is to submit test results (in confidence) to ISED.</p>
<b>Term</b>	Up to one year	Up to five years
<b>Fee</b>	\$41.00 per year or \$3.40 per month	No fee at this time for <b>spectrum licences</b> , subject to fee review
<b>Procedures Guide</b>	None, however information is scattered in various	Will assist innovators in obtaining information

	documents such as: RSP-101 or RSP-113	related to the modernized process
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