Industry Canada Industrie Canada

Update of Industry Canada's RF exposure requirements related to radiocommunication apparatus

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Canada

Draft RSS-102 Issue 5

- Regulatory standard will be published when Health Canada's Safety Code 6 (SC6) is official published.

Some of the main changes:

- **Section 1.1:** Definition of *limb-worn devices* has been added, and definition of *RF exposure evaluation* and *controlled use* has been revised
- **Section 2.5.1:** Exemption limits for routine evaluation -SAR evaluation has been revised.
- **Section 2.5.2:** Exemption limits for routine evaluation –RF exposure evaluation has been revised
- **Section 3:** Clarification on test reduction and fast SAR methods; clarification related to the priority list of documents.
- **Section 3.1:** Clarification for devices with push-to-talk capability; clarification on test distance for certain types of devices; clarification for devices with very low transmission duty factor; clarification on the test channel to first be tested in a SAR evaluation.
- **Section 3.1.1:** SAR measurement method for body-worn devices has been revised.
- **Section 3.1.2:** SAR Measurement of Devices Containing Multiple Transmitters has been revised.
- **Section 3.1.3:** Clarification related to SAR measurement for specific technology and other types of devices.
- **Section 4:** Draft SC6 limits have been incorporated.
- **Annex A:** Clarification related to the standard(s) and/or procedure(s) used for the evaluation and addition of IC Certification Number and name of SAR/RF exposure testing laboratory.
- **Annex B:** Revised to add model number and IC ID number.
- **Annex C:** Revised to add model number and IC Certification Number; clarification related to the submission.
- **Annex E:** Clarification related to operating tolerance and local SAR measurement; additional reporting requirements for test reduction and fast SAR methods.

Draft SC6 (2014)- Highlights relevant to Radio Apparatus

- **No proposed change to Specific Absorption Rate (SAR) limits**

  No impact on devices held close to the body (e.g. cellphone, tablets, laptops with Wi-Fi module)

- **Proposed changes to electric and magnetic field strength limits from 3 kHz to 6 GHz - more stringent**

  Impact antenna installations and devices not meant to be used close to the user/bystander (more than 20 cm).

  See Royal Society of Canada report at:
  https://rsc-src.ca/sites/default/files/pdf/SC6_Report_Formatted.pdf

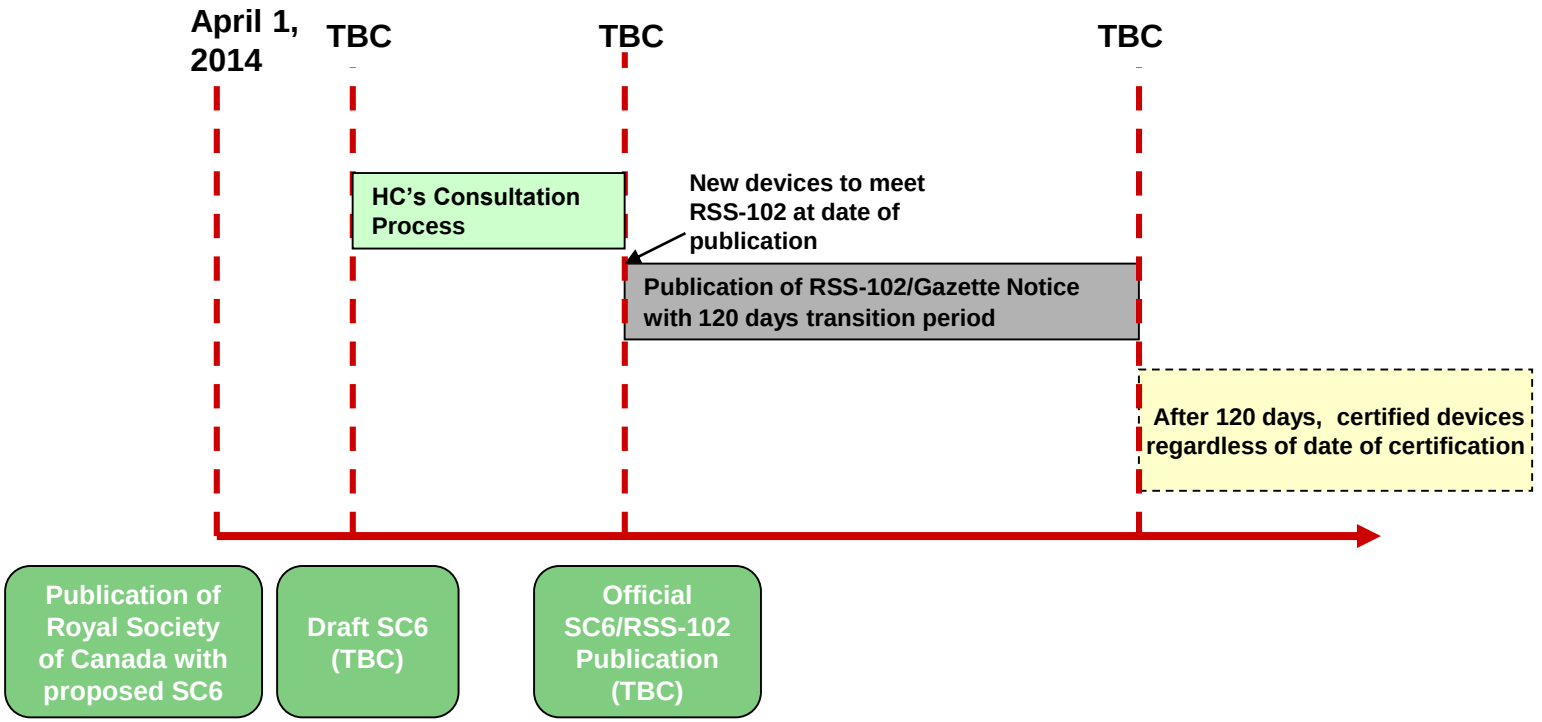
  Health Canada plans to have a public consultation on proposed SC6 guidelines.

  Inquiries to be sent to: certification.bureau@ic.gc.ca

Draft SC6 (2014)- Highlights relevant to Radio Apparatus

- IC recommends that manufacturers take draft limits into consideration during design and testing phases of devices, including compliance distance in user manual.
- IC will incorporate official Safety Code 6 limits in RSS-102 Issue 5.
- IC will immediately use RSS-102 Issue 5 for the purposes of certifying new equipment.
- RSS-102 Issue 5 will take full effect 120 days from the date of publication.
- After the transition period, all devices manufactured, imported or sold in Canada must be in compliance with the revised standard no matter when they were originally certified.

Timeline


April 1, 2014
TBC
TBC
TBC
HC's Consultation Process
New devices to meet RSS-102 at date of publication
Publication of RSS-102/Gazette Notice with 120 days transition period
After 120 days, certified devices regardless of date of certification
Publication of Royal Society of Canada with proposed SC6
Draft SC6 (TBC)
Official SC6/RSS-102 Publication (TBC)

Testing of IEEE 802.11 n and ac

- **Industry Canada accepts KDB 248227 –**

SAR Measurement Procedures for 802.11 a/b/g Transmitters

(see List of FCC KDB procedures for SAR measurements accepted by Industry Canada - ***http://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/h_tt00080.html*****)**

- **Aforementioned KDB not applicable for 802.11 n and ac transmitters.**

- **Manufacturers/test labs should consult with IC if test reductions are to be applied for IEEE 802.11 n/ac.**

Testing of IEEE 802.11 n

- KDB248227 D01 specific to IEEE802.11b, g and a.
- Additional testing must be considered for IEEE802.11n until further notice.
- For IEEE802.11n, SAR testing can be conducted on channel with the highest output power when taking into consideration tune-up tolerance for same test configuration that was identified during SAR evaluations for IEEE802.11b/g and IEEE802.11a (as applicable) provided bandwidth and test position are the same.
- For IEEE802.11n with multiple channel BW configurations, highest channel BW configuration with highest output power limit shall be tested.
- Testing of lower BW configurations is not required when the maximum average output of the default test channels in each lower BW configuration is less than 1/4dB higher than the default test channel in the highest BW configuration.
- If SAR measured for IEE802.11n is within 3dB of the SAR limit, testing of all applicable default test channels must be performed.
- SAR testing for MIMO mode of operation shall be considered separately. Please refer to clause 6.3.4.2 of IEEE1528-2013 for additional guidance on MIMO test requirements.

Fast SAR systems based on array type sensors

- **IEEE 1528-2013 Section 6.7 (Normative)**
  - -Fast SAR based on traditional SAR measurement systems
  - -Procedure based on Fast SAR/Full SAR measurements

- **IEEE 1528-2013 Annex H (Informative)**
  - -Fast SAR based on array type sensors
  - -Procedure based on Fast SAR/Full SAR measurements
  - -Standardized requirements extremely limited

  Systems based on array type sensors currently not accepted by IC. IC seeking more info on these systems. System manufacturers can contact IC to obtain more details on information to be submitted for IC's review.

- **New Work Item Proposal within IEC TC106 related to array type sensors– Accepted**
  - -Under MT1 committee (draft IEC 62209-3)

Enquiries Regarding Regulatory Standards

For any enquiries:

- Email address for enquiries: res.nmr@ic.gc.ca

Thank you !

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