

**Sensus AMI Electric and Gas Endpoints
Radio Frequency Test Results**

**Compliance to:
Health Canada Safety Code 6**

Summary of Findings

**Conducted by:
Planetnetworks Consulting Corporation
North Vancouver, BC
April – May, 2013**

**for:
SaskPower & SaskEnergy**

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Introduction

Planetnetworks was contracted by SaskPower and SaskEnergy to conduct radio frequency (RF) emission testing for:

- Single electric meter
- Bank of 10 Endpoints (6 electric meters and 4 gas modules)

Tests were conducted in April and May, 2013, with test results released on April 24, 2013 (bank of meters) and May 31, 2013 (single electric meter).

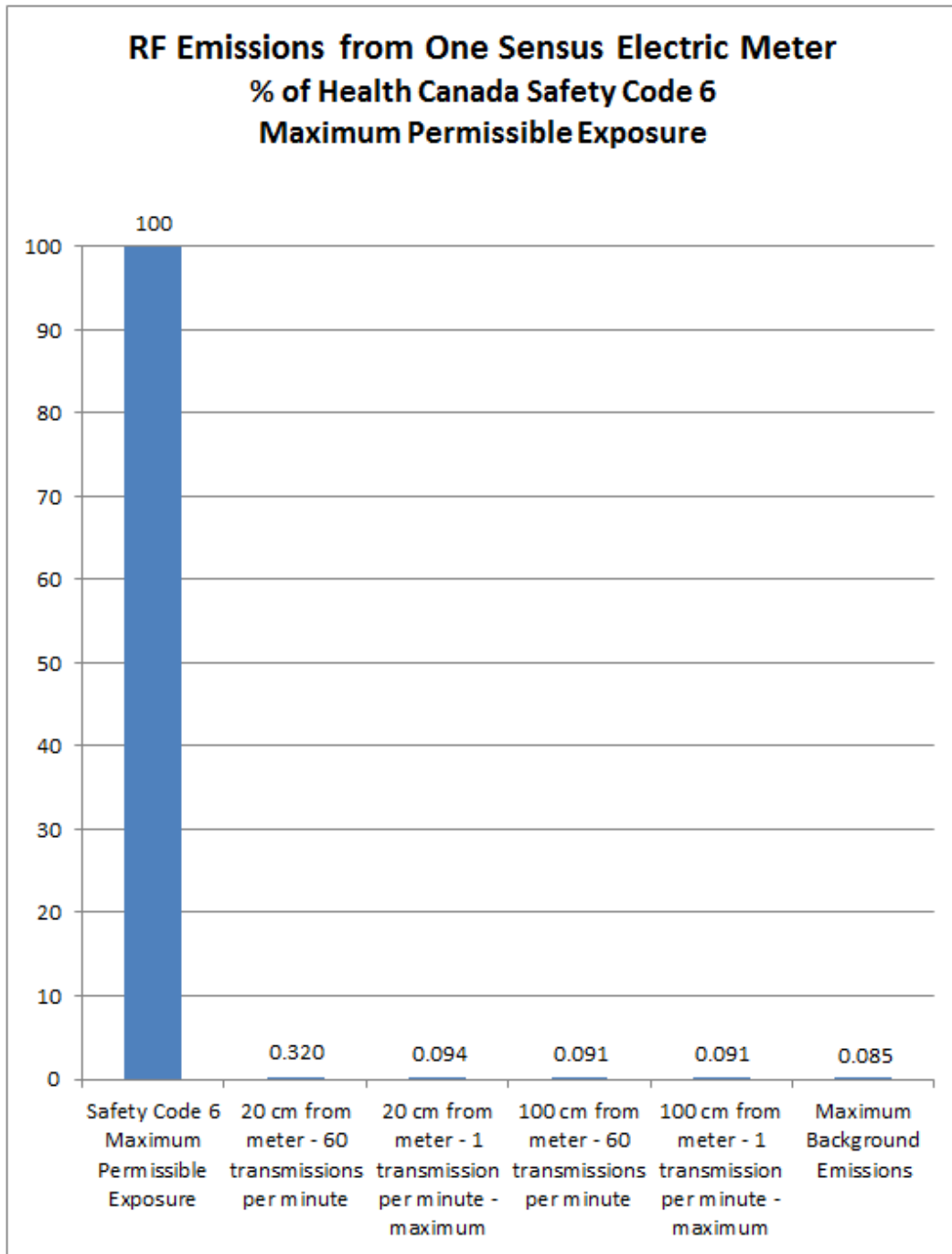
The objective of the tests was to certify the compliance of these devices against Canadian federal regulations as specified by Health Canada's Safety Code 6.

Summary of Findings

Single Electric Meter

- All test configurations resulted in measurements which are significantly below the Health Canada Safety Code 6 limit for public areas (uncontrolled environments).
- At a distance of 20 cm from the meter, the RF emissions are:
 - 0.32% of the Health Canada Safety Code 6 limit for public areas (uncontrolled environments), at a worst case transmission rate of 60 transmissions per minute. This equates to approximately 310 times less than the Health Canada Safety Code 6 limit. This measured value includes the background RF signals originating from other internal or external sources.
 - a maximum of 0.094% of the Health Canada Safety Code 6 limit for public areas (uncontrolled environments), at a transmission rate of 1 transmission per minute. This equates to approximately 1060 times less than the Health Canada Safety Code 6 limit. Note that this measurement is indistinguishable from the background RF signal levels from other sources.
- At a distance of 100 cm from the meter, the RF emissions are:
 - 0.091% of the Health Canada Safety Code 6 limit for public areas (uncontrolled environments), at a worst case transmission rate of 60 transmissions per minute. This equates to approximately 1100 times less than the Health Canada Safety Code 6 limit. This measured value includes the background RF signals originating from other internal or external sources. Note that these measurements are indistinguishable from the background RF signal levels from other sources.
 - a maximum of 0.091% of the Health Canada Safety Code 6 limit for public areas (uncontrolled environments), at a transmission rate of 1 transmission per minute. This equates to approximately 1100 times less than the Health Canada Safety Code 6 limit. Note that this measurement is indistinguishable from the background RF signal levels from other sources.
- At a distance of 300 cm from the meter, measurements were not recorded since at this distance the measured values for all test cases were indistinguishable from background levels.
- With the Sensus meter disabled, background RF signal levels of between 0.02% and 0.085% of Health Canada Safety Code 6 limit for public areas (uncontrolled environments) were measured.
- Spectrum analyzer tests showed that the Sensus meter signal levels were approximately 10 times lower than FM broadcast signal levels, and approximately 5 times lower than those found near a standard residential Wi-Fi access point.

Test results for the single electric meter are shown below.



Bank of 10 Endpoints (6 Electric Meters and 4 Gas Modules)

- All test configurations resulted in measurements which are significantly below the Health Canada Safety Code 6 limit for public areas (uncontrolled environments).
- Under normal operation, and at a distance of 20 cm from the meter in the centre of a bank of ten endpoints, the average RF emissions are:
 - 0.586% of Health Canada Safety Code 6 limit for public areas (uncontrolled environments). This equates to approximately 170 times less than the Health Canada Safety Code 6 limit. This measured value includes the background RF signals originating from other internal or external sources.
- With the Sensus meter disabled, background RF signal levels of 0.188% of Health Canada Safety Code 6 limit for public areas (uncontrolled environments) were measured.

Test results for the bank of 10 endpoints are shown below.

