The Radon Business Case

For health and safety managers seeking budget approval · Revised August 2026 · RadonTest.ca

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> **Purpose.** This document is written to be forwarded. It sets out the obligation, the evidence, the cost drivers and the options for radon measurement in a Canadian workplace, so that a health and safety manager can put a costed recommendation in front of a budget holder without having to assemble the argument from scratch. Sources are at the end.

1. The obligation

Federally regulated employers. SOR/2026-10 amends the *Canada Occupational Health and Safety Regulations* to lower the workplace radon exposure limit from 800 to **200 Bq/m^3**, as an annual average, in force **30 January 2027**. The obligation rests on the employer: the regulation requires the employer to ensure no employee is exposed above that average over a year. An annual average cannot be demonstrated without measurement.

Provincially regulated employers. No province or territory has a radon-specific workplace exposure limit. Every jurisdiction imposes a general duty on employers to take reasonable precautions against recognised hazards. Radon is a Group 1 carcinogen with a published national guideline of 200 Bq/m^3 that applies to all indoor spaces, including workplaces. Inaction after a hazard has been identified is what a general duty is designed to address.

Record retention. Under s. 10.6 of the federal regulations, the qualified person's report from a hazard investigation is retained by the employer for **thirty years** from the date of signature. This obligation already exists and did not arrive with the 2026 amendments.

2. The evidence

The most common internal objection is that radon is a mining problem. Peer-reviewed Canadian research says otherwise.

Brobbey et al. (2022), *Scientific Reports*, estimate that **603,000 Canadian workers** are exposed to radon above 100 Bq/m^3 — about 3.3% of the workforce. Note that 100 Bq/m^3 is the World Health Organization reference level; roughly a third of those workers are above Canada's action level of 200 Bq/m^3.

Exposure level	Share of exposed workers
100–200 Bq/m^3	68%
200–400 Bq/m^3	23%
400–800 Bq/m^3	5.8%
Above 800 Bq/m^3	2.8%

The industries with the largest numbers of exposed workers are educational services; professional, scientific and technical services; health care and social assistance; and public administration. **The occupations** are administrative assistants, general office support workers, receptionists, and elementary and kindergarten teachers.

Mining, quarrying and oil and gas extraction has comparatively few exposed workers but the largest proportion at the extreme end: 43.6% of its exposed workers are above 800 Bq/m^3, against 1.5% in educational services. **Resource workers are the most exposed by level; office workers are the most exposed by number.**

3. What is being proposed

Measurement follows Health Canada's *Guide for Radon Measurements in Public Buildings*:

- Long-term measurement, **minimum three months**, during the heating season.
- One detector in **each occupied room in contact with the ground** — rooms at the lowest level where a person spends four hours or more per day.
- One detector per **200 m^2** in larger open areas.
- **Quality-control detectors in addition** — duplicates at a proportion of locations, plus blanks.
- Devices listed under the Canadian National Radon Proficiency Program, analysed by an accredited laboratory.

The cost driver is the count of occupied ground-contact rooms — not floor area and not headcount. A ground floor with twelve such rooms requires roughly thirteen detectors plus quality control, not one. Establishing that count is the first step in costing the programme.

Other drivers: the number of buildings and how similar they are to one another; whether internal staff place the detectors under a written protocol or a technician attends each site; whether a certified professional is engaged and whether they attend or work remotely from plans and photographs; and whether the deliverable is laboratory certificates alone or an assembled compliance record.

4. Options

Option	Description	Consideration
A. Full programme	All buildings measured this heating season	Highest cost this cycle; complete position by the in-force date
B. Phased, risk-ranked	Highest-risk buildings this season; remainder scheduled and documented	Lower cost this cycle; documented plan; recognised approach for large portfolios
C. Defer	No measurement this cycle	No cost this year; programme delayed approximately twelve months (see §5)

For portfolios larger than one heating season allows, Option B is generally the realistic recommendation. Prioritise on documented criteria, schedule the remainder, and be able to demonstrate progress. An employer with a written, funded plan is in a materially different position from one with no programme.

5. The cost of deferral

Timing. A long-term measurement requires a minimum of 91 days. Counting back from 30 January 2027 places detector deployment in early November 2026. Placement after the end of January pushes the measurement period outside the heating season, weakening the result. **The usable window is approximately 1 October to the end of January.** This is arithmetic rather than a regulatory deadline — but it means a decision deferred by one quarter is in practice deferred by twelve months.

Enforcement. Part II of the *Canada Labour Code* is enforced through a graduated series of measures, with the response depending on the seriousness of the contravention and on the cooperation of the workplace. Available measures include education and counselling, a written assurance of voluntary compliance, a direction to terminate a contravention, administrative monetary penalties with publication of the employer's name, and prosecution. A worker may complain directly to the Labour Program without first raising the matter with the employer.

The record. Because the qualified person's report is retained for thirty years, a decision to defer is documented for as long as a decision to act. That is a consideration for the organisation rather than a threat: documentation of this length outlives the tenure of those making the decision.

6. If a result is above the guideline

Health Canada recommends reducing levels above 200 Bq/m^3 within two years, and above 600 Bq/m^3 within one year. Mitigation is typically completed in a single day by a certified professional and generally reduces levels by

more than 80%. Health Canada recommends that post-mitigation verification not be carried out by the company that installed the system — guidance published in its residential materials; the public buildings guide sets out no post-mitigation protocol.

Most buildings measure below the guideline. The budget case should acknowledge the possibility of remediation without assuming it.

7. Recommended wording

Adapt the bracketed sections; delete what does not apply.

> ***Recommendation:*** *approve radon measurement at [number] buildings during the 2026–27 heating season at an estimated [cost], with the remaining [number] buildings scheduled for [period].*
>
> ***Obligation.*** *[Federally regulated: SOR/2026-10 lowers the workplace radon exposure limit from 800 to 200 Bq/m^3, in force 30 January 2027; the obligation rests on the employer and is expressed as an annual average, which cannot be demonstrated without measurement.] [Provincially regulated: no numeric radon limit applies, but the general duty to take reasonable precautions against recognised hazards does, and Health Canada's guideline applies to all indoor spaces including workplaces.]*
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> ***Scope.*** *Health Canada public buildings protocol: long-term detectors, minimum three months during the heating season, one detector per occupied ground-contact room plus quality control. Estimated [number] detectors across [number] buildings.*
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> ***Timing.*** *The measurement window runs from approximately 1 October to the end of January. A decision after that date defers the programme by a full year.*
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> ***Risk of deferral.*** *The qualified person's report is retained for thirty years, and enforcement under Part II of the Code is graduated and takes account of the cooperation of the workplace. An employer with a documented, phased plan is in a materially stronger position than one with no programme.*
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> ***Options.*** *(a) Full programme — [cost]. (b) Risk-ranked phased programme — [cost], remainder [period]. (c) Defer — no cost this year, programme delayed twelve months.* ***Recommended: (b).***

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Sources. Brobbey A, Rydz E, Fenton S, Demers PA, Ge CB, Peters CE, "Characterizing occupational radon exposure greater than 100 Bq/m^3 in a highly exposed country," *Scientific Reports* 2022;12:21323. Canada Gazette, Part II, Vol. 160, No. 3 (SOR/2026-10). Canada Occupational Health and Safety Regulations (SOR/86-304), ss. 10.4, 10.5, 10.6, 10.26. Canada Labour Code, Part II. Employment and Social Development Canada, occupational health and safety compliance. Health Canada, Guide for Radon Measurements in Public Buildings; Canadian radon guideline; Radon — Reduction Guide for Canadians. C-NRPP. IARC Monograph Vol. 100D.