C-NRPP Technical Bulletin

RADON and the impact of ENERGY EFFICIENCY – AIR TIGHTNESS

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www,c-nrpp.ca

TECHNICAL AUDIENCE: Energy Advisor

This document is developed by C-NRPP for Energy Advisor professionals.

What is Radon?

Radon is a naturally occurring, radioactive gas formed from the breakdown of uranium in soil, rock, and water. Radon is invisible, odourless, and tasteless, making it undetectable without proper testing equipment. All regions of Canada have some level of radon, and it is found in all homes at varying levels.

Why is Radon Harmful?

Health Canada recommends that all homes and buildings should be tested for radon, as radon is a known carcinogen, and action should be taken to reduce radon levels in homes where the radon levels are above the Canadian guideline level of 200 Bq/m^3. Exposure to elevated levels of radon is the leading cause of lung cancer in non-smokers and is responsible for over 3000 deaths each year.

The link between Energy Retrofits and Radon

Since radon is found in indoor air, its levels can be affected by any renovation work that renders a house more airtight. If the amount of fresh air leaking into a home is reduced, the radon levels inside are likely to increase. Alternatively, a well designed retrofit will ensure good airflow, and take steps to ensure radon levels are at safe levels.

Link to RESEARCH: BC Lung's Energy Efficiency and Radon: Making the Connection Focus on health in the balance of energy retrofits and indoor air quality, Dr. Anne-Marie Nicol

Informing Clients About Radon

As an Energy Advisor, you can literally save lives, simply be informing clients about radon while performing your energy assessment. Clients will learn it is important to test for radon after a retrofit and can plan the retrofit process to make any needed radon mitigation easier. Your guidance can lead to radon testing and mitigation at a time when homeowners are making important decisions about changes to their home and reducing radon levels significantly reduces the risk of lung cancer. Taking this proactive approach in advising clients about radon testing and mitigation not only demonstrates your commitment to their well-being, but also reinforces their trust in your services, and ensures you are working as a comprehensive and conscientious professional. Link to RESEARCH: BC Lung's Energy Efficiency and Radon: Recognizing Legal Liabilities

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Information for Clients

To help you provide clear information to your clients about radon, we've developed a one-page informative document that you can pass along, either in printed or electronic format. This document includes important links to references and resources. When it comes to radon, you don't need to have all the answers, but you're an invaluable conduit to spread the information to homeowners at a critical time.
Link to HOMEOWNER RESOURCE: Radon and Energy Retrofits – a Guide for Homeowners
Link to HOMEOWNER RESOURCE: Health Canada's Radon and Energy Retrofits,

Radon Basics: Testing

Radon levels vary from day to day and week to week, so it's important to conduct a long-term test of at least 90 days to get a good estimate of the average annual radon level in a home. Short-term radon testing options also exist, lasting anywhere from a few days to a couple of weeks. However, short term tests can be inaccurate, and fail to inform homeowners of their actual risk from radon.

To test for radon, homeowners may purchase a single-use kit (available online from multiple retailers in Canada – complete listing linked here), or a continuous electronic radon monitor (available online from multiple retailers - performance reviews linked here). Homeowners may also consult a certified radon measurement professional from C-NRPP (list linked here).

Radon Basics: Mitigation

No matter what the results of a radon test, the good news is that there are effective radon mitigation systems available to reduce the radon in any home! Homeowners can consult a list of certified radon mitigation professionals to find someone in their region.

Additional References:
Energy Efficiency and Radon: Gaps in the System we analyze the current energy efficiency system in Canada and find serious gaps in protection from radon.
Energy Efficiency and Radon: Solutions Moving Forward we suggest concrete changes, including new guidance from Natural Resources Canada, ensuring energy advisors are trained in radon, and that radon mitigation be considered a vital part of the energy upgrade process by contractors, grant programs and lenders.
Energy Efficiency and Radon: Guide for Renovation we set out step by step how renovators can meet the standard of care for protecting clients from radon.