

**House Industry Business and Labor, date March 31, 2025, Chairman Jonathan Warrey**

A Bill for an Act to create and enact a new section of chapter 47- 10 of the North Dakota Century Code, relating to the required disclosure of radon hazards by a seller.

**FROM: Gary G Schwartz, PhD, MPH, PhD, University of North Dakota School of Medicine & Health Sciences**

Chairman Warrey and Committee Members, I am writing to provide testimony in support of the pending bill that addresses the need to increase home buyers' awareness of harms that may be caused by elevated radon levels.

My name is Gary Schwartz. I am a Professor and Chair of the Department of Population Health at the University of North Dakota School of Medicine & Health Sciences. I hold a PhD in Neuroscience, a Master's in Public Health, and a second PhD, in Epidemiology. I have been active in radon research in North Dakota for the past 10 years. My research has been funded by the Prevent Cancer Foundation, the National Center for Healthy Homes, the Department of Housing and Urban Development, and the National Institutes of Health. Our publications on radon can be accessed, free of charge, by "googling" the words "radon" and "ROAR" (for Radon Outreach and Research.).

For a brief background, radon gas is a form of ionizing (i.e., cancer-causing) radiation that results from the natural decay of radioactive elements, such as uranium, that are present in rocks and soil. For most individuals, exposure to radon at home is their largest source of exposure to ionizing radiation (followed by radiation for medical purposes, such as CAT scans). Radon ranks second to cigarette smoking as a cause of lung cancer and accounts for more than 21,000 deaths per year from lung cancer. This number EXCEEDS the number of deaths from better known hazards such as drunk driving and approximates the number of homicides from handguns.

**It is important to note that, in addition to lung cancer, recent evidence indicates that radon is also a cause of stroke and is a likely cause of asthma in children.** This is important because cardiovascular disease, including stroke, is the largest cause of death in the US (and North Dakota). Asthma is a life-long disease that usually begins in childhood. Thus, radon contributes to the two largest causes of death in North Dakota and is a contributor to chronic lung disease in children.

**These findings are especially important in our state because North Dakota has one of the highest levels of residential radon in the U.S.** For example, the average radon level in homes in Grand Forks, ND, home to the state's medical school, is 11.7 picocuries per liter. This is more

than 9 times the average radon level in homes in the U.S. (1.3 pCi/L). It is also nearly 3 times the level at which the Environmental Protection Agency recommends remediation of homes (4 pCi/L). **I stress that radon is a problem in every county in North Dakota.** The average radon level in the state overall is approximately 8 pCi/L, twice the level recommended by the EPA. A significant percentage of homes in North Dakota have radon values of 20 pCi/L or greater. There are homes with levels in the hundreds of picocuries/L. To put this into perspective, to convert pCi/L radon into the carcinogenic equivalent of cigarettes, multiply radon in pCi/L by 2. Thus, a home with 20 pCi/L is the equivalent of 40 cigarettes (2 packs) per day. In this regard, I note that the carcinogenicity of cigarette smoke is greatly amplified in the presence of radon; smokers exposed to high radon levels increase their risk of lung cancer ten times.

The only way to determine whether any individual home has a high radon level is to test it. As noted, radon is a proven human carcinogen recognized by the World Health Organization, the International Association for Research on Cancer, the EPA and other national and international organizations. Consequently, least 40 U.S. states have regulations requiring the testing and disclosure of radon levels at the time of home sales. It is ironic that North Dakota, a state with one of the highest radon levels, has no requirements in statute to help mitigate harms that may be caused by radon. This is a significant disservice to prospective home buyers and to their families.

I note this bill in no way precludes the sale of a pending home that is found to have high radon. It merely requires the seller to disclose knowledge of radon, if s/he has it, and to disclose that radon in sufficient quantities can pose a health risk. This simple disclosure is important because radon gas is invisible, odorless and colorless and many individuals have never heard of it. The subject is generally not taught in public schools and our research with family physicians in North Dakota indicates that most physicians never mention radon to patients. Sadly, many individuals learn about radon only when they or a loved one is diagnosed with lung cancer. Thus, at a minimum, this legislation provides a much-needed reminder to home buyers to be aware of radon's risk to their health. Ideally, by stimulating testing and remediation, it could save lives from cancer and stroke.

Thank you.

I'd be happy to answer any questions.