



## **Public funding and radon poisoning, what's the link?**

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It has only been a short while since the news of drastic budget trimming on various EPA projects by President Donald Trump's government came out; however, it is already obvious that it will have a long-term effect on the environment.

The proposed 25-30% cut in EPA's budgets can severely affect several climate programs that were nurtured under President Obama's rule, and many other initiatives and projects that support clean air and water. These initiatives were introduced for the well-being of the public to a large extent in the future. This move can also shut the doors for the Indoor Air Radon Program and State Indoor Radon Grants.

The main goal of the Indoor Air Radon Program is minimizing and preventing radon-related lung cancer nationally. The EPA provides grant funds to States and tribes. These funds help finance their radon risk reduction programs. The recipients of the funds must provide a minimum of 40% in matching funds. The SIRG or States Indoor Radon Grant funds are however not available to individuals or homeowners.

The SIRG program was started in 1988 and has been consistent in supporting the State efforts to reduce Radon exposure-related health risks. The SIRG program from time to time has been revising the SIRG guidance by removing the obsolete administrative and technical guidance and updating with latest modifications that address a renewed emphasis on program priorities, documenting results, and results reporting.

Those who receive funds from SIRG are expected to follow the agency's strategic goals and all their projects and activities must be aligned accordingly. The strategic goals include,

- Local government to adopt building codes that require radon-reducing features and initiate those building new homes to add these radon-reducing features where appropriate.
- Have real estate dealers test the property for radon exposure before striking a deal. Also, have homeowners test their homes for radon exposure and have it fixed.
- Have existing school buildings check for radon exposure and get it fixed appropriately. Building new schools with radon-reducing features.
- Conducting projects and activities that bring awareness to the public about the above three strategies which include promoting action by consumers, real estate professionals, state and local building code officials, schools officials, non-profit public health organizations, professional organizations partnerships.

Cutting down the EPA budget can directly affect the SIRG program as it is essential to continue the State radon programs. With the budget cut down, SIRG program cannot run an effective program.

In the face of multiple environmental hazards and issues radon often gets overlooked, partially because radon is what one can call a *silent killer*. It is a gas which is odorless, tasteless, and colorless. When radium or uranium present in the soil, rock, or water breaks down or decays, it releases radon. Radon itself does not cause any harmful effects as it travels to the surface of the ground and dilutes in the air outdoors. The problem is when the gas accumulates indoors in a building it might not have room for an escape of dilution and further decays –radon can enter a house through cracks in foundations, floors, well water, etc. The decayed radon creates radon progeny, which are radioactive particles that attach to dust particles indoors. When a person inhales this radioactive gas, it can damage the cells in the lung tissue and leads to lung cancer.

Usually there will be two copies of DNA repair enzymes in many people that can repair the damage; however, a few less fortunate people may have just one copy of these DNA repair enzymes which might not be sufficient enough to repair the damages and can lead to lung cancer. This is the reason why even though an entire family is living in a radon-exposed environment, only one or two might be affected by it.

Radon is measured in picocuries per liter of air, and the recommended level is 4 pCi/L. In comparison, the outdoor level of radon is just 0.4 pCi/L. If a house or a building has radon above the recommended levels then proper actions need to be taken. Modern technology is able to bring down the radon level indoors to 2 pCi/L or lower.

Educating the public about radon and their ill effects and ways of preventing it is a must as there is not much awareness about this in the public—despite many northern states in the USA having high concentrations. Part of this education effort involves indoor testing. There are short term tests that last for 90 days as well as long-term tests that last for more than 90 days to confirm the levels. There are also test kits available. If it is confirmed that your home is exposed to radon, mitigation steps can be taken by professional contractors who have expertise in this field. The contractor will gauge your house and recommend the exact mitigation system that your house will need. There are different methods like soil suction which involves sub-slab suction, sump holds suction, drain tile suction, and block wall suction. Other methods are heat recovery ventilators, home pressurization, well water aeration, sealing radon entry locations, etc.

Of course, reductions in federal funding for the Indoor Air Radon Program and States Indoor Radon Grant hamstrings many of the radon risk reduction and education programs, raising the likelihood that low-income households will not be able to afford testing and mitigation. To learn more about radon, go through this [infographic from PropertEco](#) which explains about radon gas and its ill effects. Whether your government supports you or not, you can learn more about the harmful risks of radon and the steps you can take to make your house safer for you and your family.

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