



The National Radon Action Plan

A STRATEGY
for SAVING LIVES



A fresh focus on addressing the radon problem in our country must begin today. You can make that happen.

More than 21,000 lives lost each year to this preventable disease is no longer acceptable.

We can't do it alone. We are literally dying. We need your help to save lives.

Elizabeth Hoffmann

*Co-founder and President of Cancer Survivors Against Radon (CanSAR)
From her testimony before the U.S. Congress on March 21, 2012*

Ms. Hoffmann passed away on November 6, 2013, after a multiyear battle against lung cancer.



The National Radon Action Plan

**A STRATEGY
for SAVING LIVES**

Developed Through the Collaborative Efforts of

American Lung Association

American Association of Radon Scientists and Technologists

American Society of Home Inspectors

Cancer Survivors Against Radon

Children's Environmental Health Network

Citizens for Radioactive Radon Reduction

Conference of Radiation Control Program Directors

Environmental Law Institute

National Center for Healthy Housing

U.S. Environmental Protection Agency

U.S. Department of Health and Human Services

U.S. Department of Housing and Urban Development

Our Vision

The National Radon Action Plan presents a long-range strategy for eliminating avoidable radon-induced lung cancer in the United States.

The Plan's near-term goals are to reduce radon risk in 5 million homes and to save 3,200 lives by 2020. While the 2020 goals offer bold and important milestones, they are not the endpoint.

Our ultimate goal is to eliminate avoidable radon-induced lung cancer in the United States by incorporating radon testing, radon mitigation and radon-resistant construction into the systems that govern purchasing, financing, constructing and renovating homes and other buildings. Using simple and proven technologies, we can eliminate avoidable radon-induced lung cancers. We need to apply those technologies as standard practice and we will, over time, reduce radon risk across the U.S. building stock. When we find, fix and prevent high indoor radon levels as a standard practice so that no American is exposed to avoidable radon at home, school or work, we will have achieved the vision of this Plan.



Our Foundation for Success

Starting with Federal Action

In 2010, the situation that more Americans may be at risk from radon than ever before, despite years of government, non-government and industry effort to address radon, led nine federal agencies to look for new solutions.¹ They came together to develop the [Federal Radon Action Plan](#)² and to launch more than 30 new projects that promote radon action through three approaches:

- Testing for and mitigating high radon using professional radon services.
- Providing financial incentives and direct support where needed for radon risk reduction.
- Demonstrating the importance, feasibility and value of radon risk reduction.

“Radon causes 21,000 lung cancer deaths every year, even though we know how to find, fix and prevent it. Many radon-induced lung cancer deaths are preventable.

Testing for and mitigating high radon levels uses tested, time-proven, straightforward techniques.

Our vision is to make radon risk reduction standard practice to eliminate avoidable radon-induced lung cancer in the United States.”

The Federal Radon Action Plan established a strong foundation for future success. Key federal agencies initiated policies to begin to find, fix and prevent high radon levels in government-influenced buildings. Those actions are saving lives and will continue to do so into the future. As of 2014, federal actions have already reached an estimated 1.6 million homes, schools and childcare facilities with guidance and incentives to reduce radon risk and have tested for and mitigated high radon risk when necessary in nearly 200,000 units.³

The Federal Radon Action Plan also signaled to the non-governmental sector a renewed seriousness and commitment to reducing radon risk and finding new tools to support a comprehensive approach. In response, in 2013, twelve leaders from national organizations representing government, nonprofit and industry joined together to expand the effort to eliminate avoidable radon-induced lung cancer.⁴

Moving to National Action

The American Lung Association led a national radon workgroup to develop this Plan. Our workgroup's purpose is to build upon, leverage and accelerate the impact of the federal plan and to advance coordinated national action. We know that no single approach will solve the radon problem. Our job is to identify proven effective policies, techniques and strategies for reducing radon risk and to gather the people, organizations and resources required from government, non-government and industry organizations to put those strategies into action. We recognize the critical importance of supporting strong and effective state and tribal radon programs that can engage with and support other partners to implement this Plan.

Our group met throughout 2014 to discuss how to move quickly toward a future where all homes are tested for radon, all high-radon homes are mitigated, and all new homes are built to prevent high radon levels. We saw value in the Federal Plan's framework for radon action, which focused on demonstrating radon's significance, providing incentives and support, and building demand for professional radon services. We believe, however, that the essential driver of transformational change for radon is missing.

"Building in" is our term to describe strategies that can solve the U.S. radon problem. Approaches that embed radon testing, mitigation and radon-resistant construction as



norms of individual behavior, industry practice and public policy *build in* radon risk reduction so that it occurs as a matter of course.

We refined the framework for planning action that the federal government had started with to include the following (as shown in the figure on page 5):

- **Build in radon risk reduction:** Approaches that embed radon risk reduction as standard practice across the entire housing sector.
- **Provide incentives and support for radon risk reduction:** Approaches that motivate individuals to pay for testing, mitigation and radon-resistant construction with financial encouragement and provide direct financial support for radon testing and risk reduction for people who cannot pay.
- **Test and mitigate using professional radon services:** Approaches that promote the use of certified radon services and help to build demand to sustain a high-quality industry.
- **Increase visibility:** Approaches that garner broad public attention for the radon issue and demonstrate the importance of radon risk reduction.

“The federal workgroup recognized that its work alone would not dramatically reduce radon deaths. The federal plan was always intended to be a starting point and a catalyst for a broader national effort.”



We believe that an effective plan will pursue all four streams of work while prioritizing approaches and policies that *build in* radon risk reduction. Early federal action generated baseline progress by incentivizing radon action, testing for and mitigating high radon levels, and increasing visibility of the radon issue. In the next phase, we will focus on *building in* radon risk reduction to drive mitigation in 5 million high-radon units, save 3,200 lives by 2020, and set the United States on a path to eliminating avoidable lung cancer from radon.

Using our four-stream framework for action planning and the best available evidence, our workgroup evaluated the effectiveness of various strategies for reducing radon risk. We examined strategies employed in the federal plan and historical radon efforts according to four criteria:

- **Impact:** A strategy's direct effect on high indoor radon levels and the size of the population it will affect.
- **Level of effort:** The amount of effort required to pursue a strategy to the point of achieving impact.
- **Feasibility:** The likelihood that a strategy can succeed, considering structural challenges, financial implications and other factors.
- **Measurability:** Our ability to measure a strategy's impact over time in terms of radon risk reduced.

Using this model, we ranked priority strategies requiring action. **Table 1**—National Radon Action Plan: Priority Strategies for Saving Lives—contains the strategies we plan to pursue and the outcomes each stream of work is intended to achieve. It summarizes our group's work thus

far to define a strategy for the future and lays the groundwork for implementing the National Radon Action Plan. We also have started to identify leaders to spearhead individual approaches and have developed our capacity to collaborate across organizations to implement this plan.

In the next year, our workgroup will undertake the following:

- Consider new strategies and propose policies that are not currently being pursued and evaluate their likely effectiveness for inclusion in the Priority Strategies for Saving Lives table.
- Review the Federal Radon Action Plan scorecard to identify and coordinate with ongoing federal activities and identify potential areas for future joint action.
- Identify priority strategies and the steps we need to take to achieve the envisioned results.
- Identify the individuals, organizations and expertise we need to bring to this work to meet our objectives.
- Determine how to pursue individual strategies with people best suited to the work, while also working across teams to coordinate a unified effort.
- Develop milestone targets and meaningful measures we can use to track progress on individual strategies and the National Radon Action Plan as a whole.
- Create a publicly visible tracking tool to report on our progress and keep this effort on track.

The vision and strategy presented here will guide our efforts.

To learn more about the National Radon Action Plan and to join our national effort to eliminate avoidable lung cancers from radon, please contact NRAP@epa.gov.

NATIONAL STRATEGY FOR PREVENTING RADON-INDUCED LUNG CANCER

A federal, non-profit, and private sector approach for achieving durable changes to the US housing stock

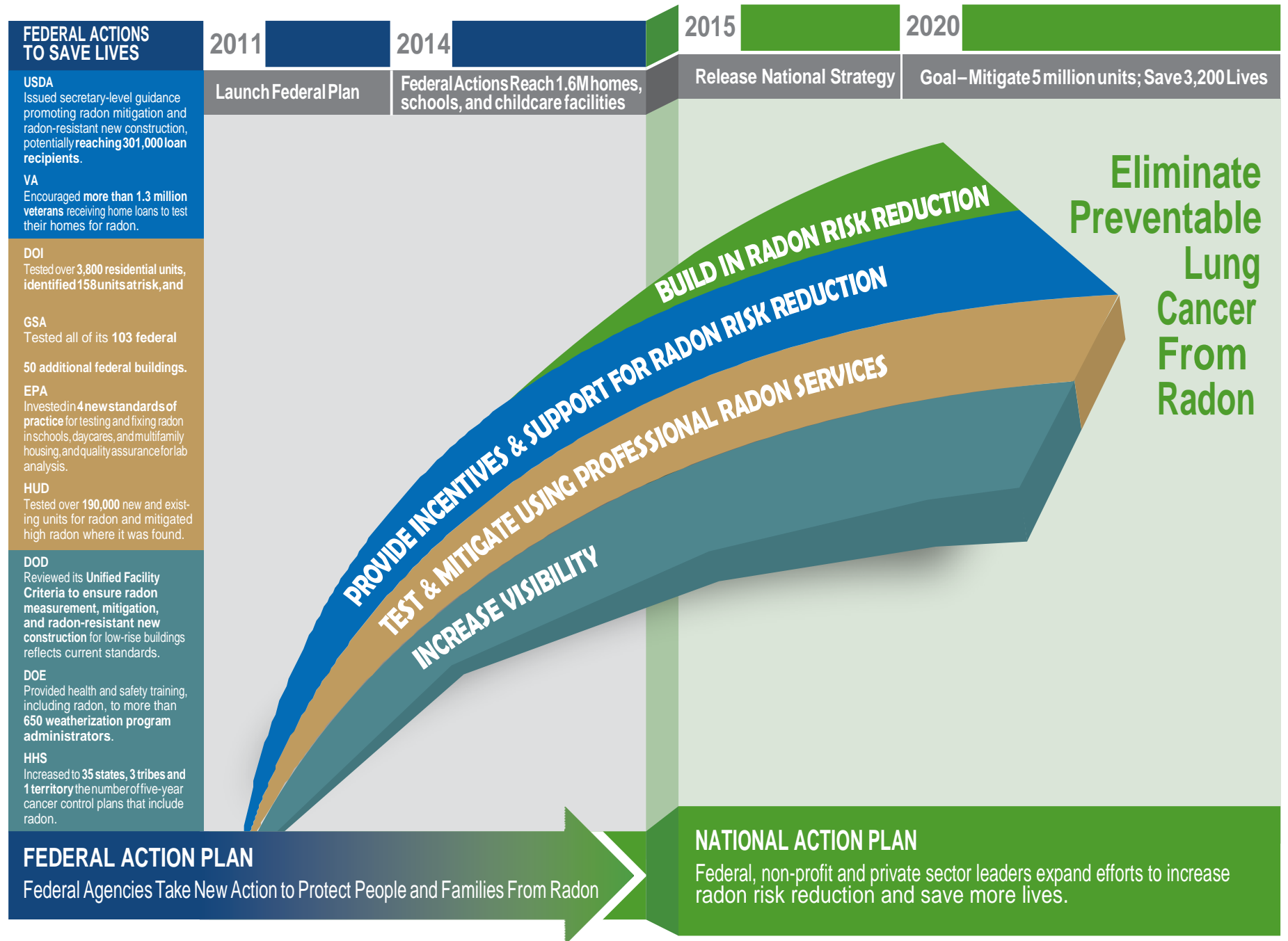


Table 1: National Radon Action Plan: Priority Strategies for Saving Lives

What Needs to Happen	Strategies to Drive Change	Outcomes We Seek
1 Build in Radon Risk Reduction	Work with government, quasi-governmental and private sector housing finance organizations to encourage radon testing and mitigation as a standard practice.	Housing finance and insurance industries take actions that will increase radon testing and mitigation in homes.
	Embed radon risk-reduction requirements in state and local building codes.	State and local building codes require that homes be built to resist radon.
	Develop the research base on the cost-effectiveness of preventive and mitigation actions for radon in energy upgrades.	Energy upgrades include radon risk reduction as standard practice where needed.
2 Provide Incentives and Support for Radon Risk Reduction	Ensure radon is a priority risk addressed in healthy homes programs and grant-making.	Criteria for national programs promoting healthy homes include radon risk reduction.
	Leverage government-backed and other housing loans to cover radon mitigation.	New sources of funding are available to motivate homeowners to test for and mitigate high radon levels.
	Secure direct support from philanthropies, charities and other sources, including governments, to reduce radon risk for low-income Americans in homes, schools and childcare centers.	Radon mitigation is financed in buildings where the occupants are unable to afford testing and mitigation on their own.
	Leverage tax incentives, including health spending accounts, to cover radon mitigation costs in order to reduce cancer-related healthcare costs.	Tax incentives exist that increase voluntary radon testing and mitigation.
3 Build Capacity to Test and Mitigate Using Professional Radon Services	Finalize and disseminate consensus standards for testing, mitigating and ensuring measurement device accuracy.	Quality professional standards to support the certified radon services industry are widely recognized, disseminated and adopted.
	Provide training on high-quality radon testing and mitigation in home health and safety training.	Home health and safety training programs for in-home service practitioners routinely include radon.
	Promote the radon profession to practitioners, such as home inspectors.	More certified radon professionals are available nationwide.
4 Increase Visibility for Radon Issue	Promote radon testing and mitigation through a comprehensive disclosure of health risk to home buyers and loan borrowers.	State and local laws require that sellers disclose knowledge of radon levels and information about radon to prospective buyers. During property sales, borrowers request testing and mitigation where needed to reduce radon risk.
	Encourage state cancer control plans to prioritize radon.	State cancer plans include strategies for reducing radon.
	Focus on radon in coordinated messaging about health risks in homes, schools and childcare centers.	Increased amount, coordination and effectiveness of communication tells Americans that radon is a serious risk that needs to be a priority for action.
	Promote radon awareness to medical, public health and childcare communities through consistent outreach using targeted materials.	Medical, public health and childcare practitioners educate patients and families about radon during routine encounters and increase their actions to reduce radon in home and childcare environments.

Endnotes

¹ Because of recent housing construction booms and insufficient voluntary radon action, more U.S. homes were at risk in 2010 than had been estimated to be at risk in 1986, when EPA last conducted a nationwide radon risk assessment.

² The membership of the Federal Radon Action Plan Workgroup included representatives from the U.S. Department of Agriculture, U.S. Department of Defense, U.S. Department of Energy, U.S. Department of Health and Human Services, U.S. Department of Housing and Urban Development, U.S. Department of the Interior, U.S. Department of Veterans Affairs, U.S. Environmental Protection Agency, and the U.S. General Services Administration. The 33 commitments to radon action that they made in 2010 are described and tracked at <https://www.epa.gov/radon/final-federal-radon-action-plan-scorecard>.

³ The Federal Radon Action Plan's estimated reach is based on actions taken by agencies as part of the Plan's



implementation. Actions include testing and/or mitigation, distributing home loans that include a radon education component, and reaching homes/units through grant programs.

⁴ The member organizations in the national stakeholder group that developed this Plan are listed at the top of this document.

.....