



COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

For Immediate Release
November 1, 2017

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Statement from Chairman Randy Weber (R-Texas) *The Future of Low Dose Radiation Research*

Chairman Weber: Good morning and welcome to today's Energy Subcommittee hearing. Today, we will examine the status of U.S. research in low dose radiation and explore the effects of the previous administration's agency-wide reduction in funding for this area of science.

Last Congress, the Science Committee explored the Department of Energy's (DOE) decision to terminate the Low Dose Radiation Research program, which, until its closure in 2016, was one of the largest and most effective programs in the world.

In the course of staff briefings on this decision, a DOE employee was fired for speaking out in support of the low dose radiation research program. While this employee was eventually reinstated as a result of Committee oversight, the Department has yet to re-start this important area of research.

The DOE's program explored the health impacts of low levels of radiation, allowing our nation's researchers, industry and military to safely handle nuclear material, maintain the nation's nuclear weapons program, and dispose of nuclear waste. Low dose radiation research can also inform the authorities who set nuclear safety standards for the public, enabling federal emergency response agencies to more accurately set evacuation zones from radiological incidents.

This research is also particularly important to practicing physicians, who rely on knowledge about the impact of low doses of radiation to decide when and how to use diagnostics to detect cancer in patients.

This use-inspired, basic research leads to scientific discoveries and long-term benefits for the energy industry and our national defense. Today's hearing is yet another opportunity to evaluate whether we as a nation are doing everything we can to ensure that the regulations, guidelines and protections we put in place are grounded in sound science.

We know a lot about the relationship between adverse health effects and high doses of radiation. At high doses, the dosage and risk are proportionally related.

But the health risks associated with exposure to low doses of radiation are much more difficult to observe, and we are a long way away from understanding and accurately assessing this risk.

In the absence of conclusive evidence, scientists use what's called the Linear-no-threshold (LNT) model to approximate the effects of low dose radiation on the human body. This model takes what we know about high doses and applies it to low doses.

Current federal dose limits and guidelines are based on the LNT model. Because this model is simply an assumption of the impact, not a validated mechanism for assigning risk, there is no definitive science to justify many of our nation's nuclear safety procedures or to set guidelines for medical treatments.

In order to best serve our nation's energy, medical and defense needs, we need foundational research in radiology and biology to directly define the impact of low doses of radiation.

Here on the Science Committee, we hear a lot of enthusiasm for next generation technologies. But we can't forget about the questions we have left unanswered.

The U.S. should not rely on a "best approximation" when it comes to our nuclear regulatory policies. DOE must re-prioritize basic research in low dose radiation so we know we are using the best available science to set these standards.

I want to thank our accomplished panel of witnesses for testifying today, and I look forward to a productive discussion about the future of American low dose radiation research.

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