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

For Immediate Release
November 8, 2017

Media Contacts: Thea McDonald, Brandon VerVelde
(202) 225-6371

Statement from Chairman Randy Weber (R-Texas)

Geoengineering: Innovation, Research, and Technology

Chairman Weber: Good morning and welcome to today's Joint Environment and Energy Subcommittee hearing. Today, we will hear from a panel of experts on the status of America's research in geoengineering, a field truly in the scientific unknown.

Hearings like today's help remind us of the Science Committee's core focus – the basic research that provides the foundation for technology breakthroughs. Within the DOE lab system, Pacific Northwest National Lab (PNNL) is leading the effort to explore the potential impact of geoengineering technology.

PNNL hosts geoengineering researchers who hope to open the dialogue on this groundbreaking technology and consider what methods could have the most positive impact on the climate. Some proposed ideas at PNNL include placement of mirrors in space, injection of naturally occurring substances into the atmosphere to mimic a volcanic eruption or brightening the clouds overhead.

All of these methods could have a cooling effect on our lower atmosphere. It's amazing to think that molten lava from volcanic eruptions can actually produce compounds that cool the air. Brightening clouds is equally interesting, but only early-stage evaluation has occurred on the practicality of this approach.

As we will hear from one of our witnesses, we have already seen "ship tracks" that create this brightening effect, where the sunlight is reflected back into the atmosphere. By injecting aerosols composed of seawater particles into low ocean clouds, researchers could shrink the size of water droplets and in turn brighten the clouds.

PNNL's Climate and Earth Systems Science researchers and partnerships have to rely on computer models to understand the potential impact of these very basic geoengineering methods. But as we've heard before in this Committee, models are only as good as the data they use. I believe that we should consider funding appropriately scaled field-testing to improve the accuracy of geoengineering models.

Through the national labs, the United States already partners with researchers from Canada, China, Denmark, Germany, Japan and Norway. These scientists used the output from 12 climate models in the Geoengineering Model Intercomparison Project, which seeks to understand the possible climate effects of geoengineering.

Geoengineering has the potential to provide us with a whole new understanding and approach to atmospheric research. If we put aside the debates about climate change, we can support innovations in science that can create a better prospect for future generations.

The federal government should prioritize this kind of basic research so we can not only understand the science of geoengineering, but hopefully partner with the private sector to develop technology to mitigate changes in climate. When the government supports basic research, everyone has the opportunity to access the fundamental knowledge that can lead to the development of future technologies.

The future is bright for geoengineering and I want to thank our panel of witnesses for testifying today. I look forward to a productive discussion about the innovation, research and technology of this emerging field of science.

###