COMMITTEE ON SCIENCE SPACE AND TECHNOLOGY REPUBLICANS

H.R. 2613, the Next Generation Pipelines Research and Development Act

SPONSOR: REP. RANDY WEBER (R-TX)
CO-SPONSOR: REP. DEBORAH ROSS (D-NC)

Strengthens public-private partnerships, increases federal research, development, and demonstration related to the evolution of next-generation pipeline systems, and modernizes existing infrastructure.

Extended Summary:

Increased federal research and development, strong industry collaboration, and robust public-private demonstration projects are essential to meeting future energy demands and ensuring the continued safe and efficient use of pipelines. H.R. 2613, the Next Generation Pipelines Research and Development Act, focuses on investment in research and technologies that improve the safety, reliability, and longevity of our nation's pipeline infrastructure.

To achieve this goal, H.R. 2613:

- Establishes a demonstration initiative at the Department of Energy (DOE) to support low- to mid-technology readiness level projects that will advance research by DOE and the Pipeline and Hazardous Materials Safety Administration (PHMSA), helping lab-scale, basic research achieve commercial deployment.

- Requires DOE, the Department of Transportation (DOT), and the National Institute of Standards and Technology (NIST) to enter into a new Memorandum of Understanding (MOU) to launch a joint pipeline research program.

- Directs DOE to establish a National Pipeline Modernization Center, which will serve as a collaborative hub where industry, stakeholders, and federal agencies can work together to develop and commercialize innovative, cost-effective pipeline technologies and practices.

Background:

- The U.S. pipeline network spans nearly 2.8 million miles – enough to wrap around the Earth's equator more than 112 times. Yet, half of the nation's pipeline system is over 60 years old.

- These aging pipelines operate continuously, 24/7, increasing the likelihood of defects and failures without the development of advanced inspection and leak-detection technologies.

- Additionally, emerging fuel sources like hydrogen and carbon dioxide will also require pipeline transportation to be economically feasible. The DOE estimates that up to 96,000 miles of new pipelines will be needed to transport captured carbon dioxide from power plants and direct air capture facilities.

- Both DOE and PHMSA conduct essential, yet distinct, research on pipeline safety and innovation. DOE focuses on materials science, transmission and distribution technologies, real-time sensing and repair, and natural gas conversion processes. At the same time, PHMSA specializes in pipe manufacturing, quality control, permitting, workforce training, and inline inspection techniques.