U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Opening Statement

Chairwoman Eddie Bernice Johnson (D-TX)

Full Committee Hearing:
Losing Ground: U.S. Leadership in Critical Technologies

Wednesday, January 29, 2020

Good morning and welcome to this hearing on United States Competitiveness in Critical Technologies. And welcome to our distinguished panel of witnesses.

United States leadership in science and technology has long given U.S. companies a competitive advantage, which in turn has led to job creation and an increased standard of living for all Americans. It has also bolstered our national defense. However, as recent reports have underscored, the United States has already begun to face the consequences of our inability to make strategic and sustained long-term investments in our science and technology enterprise. For too long we have coasted on the vision and political will that our leaders had in the 1950s, when they enacted the *National Defense Education Act* and other seminal laws that invested in our nation's talent and built the foundations for U.S. leadership in science and technology.

We have risen to the challenge a few times since then, for example in the doubling of the NIH budget and the initiatives in the *America COMPETES Act*, including the creation of ARPA-E. However, in the last 15 years, the nondefense research and development budget has stagnated. We have been lamenting our domestic STEM pipeline challenge for decades, yet we have not made much progress. In the meantime, other countries have implemented strategies and invested significantly in their science and technology capacity. As a result, they are now retaining and attracting talent that once came to the United States to study, conduct research, and build companies here. Those are just a few of the indicators that should serve as a warning to all of us that we are losing ground.

The economic and national security risks of loss of leadership are particularly high in some science and technology fields. If we do not lead, we will be poorly positioned to help set global norms and standards for the responsible development and application of emerging technologies such as artificial intelligence and biotechnology. Even when our best efforts to set norms are not

enough, science and technology leadership will enable us to develop strong defensive capabilities to protect the American people against those who wish us harm.

I do not want to cause any confusion about where I stand. I remain as firmly committed as ever to our investments across all fields of science and engineering as well as the humanities. Those who study ethics and philosophy and other aspects of human society will be needed alongside those who study bytes and microbes. Without this scholarly partnership, the United States will not have the tools to lead responsibly at home or abroad.

The other partnership that remains essential is that between the public and private sectors. The private sector has been increasing its investments in research and development even as the public sector has fallen back. However, the objectives and the constraints are very different for each sector. Joined together in effective partnership, on the other hand, the two sectors can leverage each other's strengths and resources to advance shared goals.

Our nation has accomplished great things when we have put our minds to it. We sent a man to the moon, invented GPS and the internet, and developed the entire field of synthetic biology. We have what it takes to lead. The question is, will we **do** what it takes?

As we embark on another busy year in this Committee, I look forward to today's testimony and discussion that will help us frame both the challenges and opportunities ahead for American leadership in science and technology.