

**Committee on Science, Space, and Technology**

**Opening Statement**

**Chairwoman Eddie Bernice Johnson**

***Maintaining U.S. Leadership in Science and Technology***

**March 6, 2019**

Good afternoon and welcome to our distinguished panel of expert witnesses. We called you here today because of your decades of collective experience and wisdom about the U.S. science and technology enterprise, and I look forward to learning from you.

I have always said, there is no more important Committee in Congress than the Science Committee when it comes to determining our nation's future. In this Committee we have an opportunity to look beyond the politics of today to develop the best policies for tomorrow.

This afternoon the Committee will discuss key opportunities and challenges as we develop legislation and lead discussions within Congress on what we need to do to secure our future prosperity. We will hear about the current state and history of our S&T enterprise, the increasing international competition and what that means for our economic and national security, how we can best educate and train a skilled workforce for the 21<sup>st</sup> century, and how the government, universities, and private sector can best partner to maintain U.S. leadership.

According to data reported by the National Science Foundation, the U.S. now ranks 11<sup>th</sup> in the world in research intensity. We are behind several countries in R&D as a share of GDP. China has surpassed us in total research publication output and East Asian countries as a group have surpassed us in patents. In total number of R&D dollars invested, the U.S. was still leading in 2016, which is the latest data NSF has reported, but China likely surpassed us last year. It has also been a given that the U.S. leads in investments in fundamental research at our universities and national labs, but we are close to dropping out of the top 10 even in basic research investments. The numbers are sobering but they don't tell the full story, so I look forward to hearing from our experts about what this all means.

When we look at the state of STEM education and the STEM workforce in the U.S., we also have cause for concern. Our students have not shown improvements in math or science assessments in the last decade, and they continue to perform well behind the average for the top performing countries internationally. There are significant achievement gaps across economic and racial and ethnic lines. The

underrepresentation of minority groups persists through STEM degree attainment and participation in the STEM workforce. While women are doing much better than they used to, they continue to be significantly underrepresented in fields key to U.S. competitiveness, including computing and engineering. There is high demand for STEM skills that don't require a 4-year degree, but there is still a stigma associated with these jobs even though they pay well.

By 2050, today's minorities will be the majority. Simple math tells us that if we do not increase the number of women and minorities earning STEM degrees and participating in the STEM workforce at all levels, we will experience dire workforce shortfalls in the not too distant future. Some companies in the technology sector tell me the shortfall is already here.

I'm an optimist. These numbers are cause for concern, but we should also view them as a rallying cry for action. Our children and grandchildren are counting on us. We have many ideas on our agenda already, but I'm sure today's hearing will give us more. I am confident that we will hear good ideas from the scientific experts and from my colleagues on both sides of the aisle, and I look forward to today's discussion.

With that, I yield back.