Minority Views and Estimates of the Democratic Caucus of the Committee on Science, Space, and Technology on the FY 2017 Budget Request for Submission to the Budget Committee

It is impossible to provide thoughtful consideration of the President's fiscal year 2017 (FY17) budget request in these Views and Estimates because of the arbitrary deadline that has been imposed, requiring them to be submitted before the President's budget request is delivered to Congress. Therefore, we will not attempt to engage in a detailed discussion of funding levels for specific programs. Instead, we will focus on the importance of committing to robust and sustained investments in R&D, innovation, and education as part of any Budget Resolution.

As we have said before, as the Budget Committee works to craft its Budget Resolution, we urge its Members to at least maintain in constant dollars and hopefully increase the levels of federal investment in our nation's scientific, innovation, and education enterprise, whether in basic research, energy technology innovation, aeronautics and space exploration, advanced manufacturing, climate science, or any of the other areas of our committee's jurisdiction. Given the necessity of healthy R&D, STEM education, and innovation capabilities to our future economy and quality of life, shortchanging these accounts to save a few dollars in the near term would be both shortsighted and reckless.

Based on choices made in the Republican Budget Conference Plan for FY16, we have concerns that these critical investments will not be made a priority in the Budget Resolution to be considered this year. That Republican Budget Conference Plan slashed non-defense discretionary funding from 2017 through 2025 by $496 billion below the sequester-level austerity caps. Even more concerning was that that budget plan allocated $575 billion in cuts over ten years to a placeholder section called "Allowances," which made it impossible to tell which vital funding priorities would be hit. As a share of the economy, funding for non-defense programs, including our strategic national investments in R&D, STEM education, and innovation capabilities, in 2025 would fall 35 percent below the lowest level seen in the last 50 years.

However, the Bipartisan Budget Act and the Omnibus Appropriations passed late last year give us hope that a Budget Resolution can be put forward that

both sides can support. The Budget Act increased overall federal discretionary spending levels for FY16 by 5.2 percent above the FY15 level. And, in the Omnibus, most of the major science agencies and offices receive increases greater than the 5.2 percent overall discretionary spending increase.

We should continue to build on that momentum. It would be folly to take a step backwards in funding these vital agencies and offices. It would also send the message to our scientists, engineers, and students that we are not serious about providing funding stability to America's R&D, innovation, and education enterprise. In that regard, funding stability and consistency are every bit as important as the overall R&D funding levels achieved. Making scientific and technological progress is a process, and it is a process that reacts poorly to fits and starts in funding. Moreover, the talent pipeline that fuels our innovation enterprise can't be turned off and on like a spigot. Once that talent pool moves to other fields for lack of funding, it takes years of sustained efforts to build it back. We must continue to send the signal to the next generation of great innovators that their hard work in school will not be wasted by erratic research funding. That requires steady and consistent funding for our research agencies. A Budget Resolution that provides adequate R&D and education funding for FY 2017 but which then imposes steep reductions in the outyears will not provide a basis for long-term leadership in innovation for our nation.

With respect to the Science, Space, and Technology Committee Majority Views and Estimates, unfortunately, there are just a few points on which we can agree. As a result, we will not attempt to address the Majority's V&E point by point or even agency by agency. However, we will note that only three of the many legislative proposals cited by the Majority as a basis for their policy and budget recommendations have been enacted, and several passed the Committee or the House along partisan lines. Our opposition to these proposals is well documented, and in most cases reinforced by opposition from the overwhelming majority of our Committee's stakeholder community. Rather than being drawn back into those debates here, we will focus as asked on our budget priorities for FY 2017 and beyond.

Below are some of our key priorities for the coming fiscal years that we hope will be supported in the Budget Resolution presented to the House of Representatives.

An Innovation Agenda

We believe that we should be investing in an innovation agenda. The role of innovation in restoring America's economic strength and addressing national priorities cannot be overstated.

We must continue the highly successful pact that the federal government made with our nation's great research universities following our victory in World War II and the onset of the space race that led to the creation of NSF and NASA. This pact is what has made NSF, NASA, NIST, and the Department of Energy among the world's greatest and most admired research agencies.

We should also continue to invest in our newer innovation programs such as ARPA-E, as well as in important innovation programs at the Department of Commerce such as the Regional Innovation Program. ARPA-E has exceeded every expectation for creating innovative new energy technologies and spurring private sector follow-on investment. The Regional Innovation Program helps regions across the country emulate the job creation of innovation hubs such as Silicon Valley and North Carolina's Research Triangle.

Climate Change

The scientists have made it abundantly clear to lawmakers and industry leaders alike that climate change is here. The Earth is warming, sea ice is disappearing, the glaciers are receding, the oceans are acidifying, and sea levels are rising. This may be the defining scientific and policy challenge facing humanity, and we have a responsibility to the nation and the world to lead.

We are becoming too familiar with the consequences of waiting until the eleventh hour to develop solutions to the problems we face. We cannot make that mistake with something as serious as climate change. That is why we support funding for the President's Climate Action Plan, including the Clean Power Plan, and the Paris Climate Accord. Without transforming our energy sources and

reducing our reliance on fossil fuels, we will not be able to address this looming challenge. In addition, we must invest in the scientific research at NASA, NOAA, and our other agencies that will increase our understanding of the problem and provide for solutions.

Mission Innovation

At the U.N. Climate Conference in Paris, President Obama, along with the leaders of 20 other countries, announced Mission Innovation. According to the White House, Mission Innovation is "an initiative to dramatically accelerate public and private global clean energy innovation to address global climate change, provide affordable clean energy to consumers, including in the developing world, and create additional commercial opportunities in clean energy." This initiative will be undertaken in parallel with a private sector initiative, led by Bill Gates—the Breakthrough Energy Coalition—comprised of over 28 private capital investors who have pledged to invest in clean energy, focusing on early-stage innovations.

Without transforming our energy sources or reducing our reliance on fossil fuels, we will not be able to address the imminent challenge of climate change. Big problems require big solutions. Federal investments along with a commitment from the private sector to help get new ideas and technologies to the market will help us find those solutions.

Emerging Areas

We must prioritize emerging areas of science and technology now to ensure that the United States remains preeminent in new and exciting fields. As just one example, the field of engineering biology, the emerging field of research at the intersection of biology, the physical sciences, engineering, and information technology, is relatively new, but we on the Committee are already hearing that if we do not make the necessary investments, we will lose our leadership position. We are already seeing other countries make significant progress. The EU and others are investing, working on coordinated strategies across their research enterprises, and developing action plans to execute those strategies. Engineering biology has the potential to grow our economy, create jobs, and improve our quality of life. There are other equally exciting areas of research that are emerging, and it is vitally important that the Budget Resolution provide resources for the

investments needed to make scientific advances and to promote U.S. leadership in these areas.