COMMITTEE ON
SCIENCE, SPACE, AND TECHNOLOGY
REPUBLICANS Frank Lucas, Ranking Member

Opening Statement of Ranking Member Frank Lucas

Energy Subcommittee Hearing – "Accelerating Discovery: the Future of Scientific Computing at the Department of Energy"

May 19, 2021

Thank you, Chairman Bowman for hosting this hearing, and thank you to all our witnesses for being with us this afternoon.

Earlier this month, the Energy Subcommittee held a hearing on the Department of Energy's Office of Science which emphasized the essential role of DOE in our federal research enterprise and highlighted our shared support of its programs.

Today, we have an opportunity to examine the activities of another Office of Science program in Advanced Scientific Computing Research, or ASCR. Advanced computing research and infrastructure is the backbone of scientific discovery, not just at the Department of Energy but at U.S. research institutions nationwide. Through the ASCR ("Oscar") program, DOE supports the development of tools and technologies in high performance computing, applied mathematics, advanced networks, data analytics, and next-generation computing initiatives. It also hosts some of the most advanced computing resources in the world at its national laboratories.

There is great potential for federal agencies and U.S. industry partners to leverage ASCR's unique computing resources. With adequate support, DOE's program will revolutionize our relationship with advanced technology and our capacity for scientific progress. This work is vital to our clean energy economy, our national security, and our leadership in science and technology.

Yet we know that our international competitors like China are outpacing us in basic research investment and are closing the gap in key computing focus areas like artificial intelligence and quantum sciences. Expanding our capacities in these fields requires a strategic effort with strong federal investment and active public-private partnerships.

That's why, this Congress, I've introduced legislation to address these challenges. My bill, the Securing American Leadership in Science and Technology Act (SALSTA), roughly doubles funding for ASCR over ten years. Another bill I introduced, the Quantum User Expansion for Science and Technology Act (QUEST) Act, establishes a program at the Department of Energy to expand public-private partnerships for quantum

resource use and encourage greater participation in the development of quantum information sciences.

Mr. Chairman, at this time I'd like to ask unanimous consent to submit for the record, a letter from the Quantum Industry Coalition, on the need to maximize the value of the U.S. quantum industry, and the role that DOE and its national laboratories can play in this high-priority work.

I'm also proud to join my colleague and Ranking Member of the Investigations and Oversight Subcommittee, Jay Obernolte, on a bill to strengthen other high-priority computing research carried out by the Department.

This week, Representative Obernolte introduced the Next Generation Computing Research and Development Act, which authorizes various DOE advanced scientific computing programs. These will support beyond-exascale and energy efficient computing, computing workforce development, and applied mathematics and software development activities. This bill, along with the QUEST Act and SALSTA, is an important step forward in improving our nation's global standing in science and technology.

We know that maintaining U.S. leadership will require a shared commitment to prioritize DOE and its Office of Science. And nowhere is this clearer than in the advanced computing space.The U.S. relies on computing capabilities that only the Department of Energy can provide. We know that the nation who takes the lead in advanced computing will set the stage for the next generation of technologies and technology standards. We cannot afford to fall behind in this race.

Last week, I was encouraged by the progress made by my friends in the Senate to recognize the important role the Department of Energy plays in advancing U.S. innovation. But DOE and the National Labs shouldn't be an afterthought when we consider the U.S. research enterprise. They're integral to our scientific progress. That's why Chairwoman Johnson and I have been working on bipartisan Office of Science legislation that will make a strong commitment to the Department of Energy and its work—including successful programs like ASCR.

This legislation to support research at the Department of Energy will go hand-in-glove with the NSF For the Future Act, which supports basic research, STEM education, and technology transfer at the National Science Foundation. Together, these research bills will solidify the long-term stability of our international leadership in science.

I once again want to thank our witnesses for being here today. I look forward to a productive discussion. Thank you Chairman Bowman and I yield back the balance of my time.