

Statement of Congressman Randy Hultgren (R-Illinois)
Hearing on America's Next Generation Supercomputer: The Exascale Challenge

Congressman Hultgren: Thank you, Madam Chair, for holding this hearing today.

Exascale computing represents an exciting new world of science for our nation. The applications for the next generation of super computers are vast.

A thousand fold increase in processing power will give us the intense computing tools necessary to ensure our national security by better testing our nuclear stockpile; revolutionize our understanding and treatment of complicated health care problems like neurological diseases or the genetics underpinning cancer with the ability to model new treatments; and ensure our nation's competitiveness in the big data economy of the 21st century by spilling over knowledge and expertise into industry and academia.

And while I can postulate further on some of the applied uses of faster machines; I also know that simply by making these investments in the basic science needed to overcome challenges in immensely massive parallelism, power management, new architectures and programming models, we will enrich our nation intellectually and ensure our labor force remains competitive.

Madam Chair, my bill would amend the existing statute by specifying the need to target the specific challenges in power requirements and parallelism required to make the leap to exascale. It would also instruct the Secretary of Energy to conduct a coordinated research program to develop exascale computing systems, and require an integrated strategy and program management plan to ensure the health of existing research activities is not harmed.

The bottom line is, we do not know all of the ways we will use the next generation of supercomputers, but given the vast and unpredictable ways that computing technology has already enhanced every part of our lives, and given the investments being made in other countries to deploy large scale systems, it is more important than ever that we make this investment today.

I look forward to hearing what the witnesses think of this legislative proposal, areas we can improve it, challenges we face, and with that I thank you and I yield back.