

Testimony of Dr. John S. Langford,
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Chairman Knight, Chairman Comstock, members of the committee, thank you for the opportunity to share my thoughts on the SBIR program today. I would like to make two general points today: the first is on my direct, personal experience with the SBIR Program, and the second is on the contributions of the SBIR Program to broader issues of America's international competitiveness and innovation.

In the spring of 1989 I had completed my doctorate in aeronautics and public policy at MIT. I had spent some time as an engineer at the Lockheed Skunk Works, and I had just completed a human-powered aircraft program called Daedalus that set world distance and duration records when a Greek Olympic cyclist pedaled the aircraft my team had built on a flight from Crete to Santorini. I was interested in starting a company to commercialize this technology, but I had no practical understanding of how to do so. I took two short courses: one in Entrepreneurship from the University of Maryland, and one on the SBIR Program, taught by Harry Johnson of NASA.

I founded Aurora Flight Sciences Corporation in late May of 1989, and that fall we won our first two contracts: an SBIR from NASA on fuel cells for electric aircraft propulsion, and another SBIR from NSF, on the atmospheric science applications of such an aircraft.

Since that time, Aurora has grown and prospered. To date we have earned revenues of approximately \$1.2B billion. We are no longer eligible for the SBIR/STTR program, but over the more than two decades that we were, we won slightly over 200 SBIR and STTR contracts worth approximately \$59 million. This was about 5% of our total revenue during this period, a relatively small amount, but I want to stress that it was a critical 5% as it provided the seed for innovation for essentially all of our modern programs. The core fan technology for our revolutionary hybrid-electric XV-24A Lightningstrike vertical takeoff aircraft, for example, came out of a DARPA SBIR. Our Orion ultra-long endurance UAS, which holds the current world record for UAV endurance, evolved out of those original NASA and NSF SBIRs. I could go on and on.

In our early days, the SBIR program provided the first customer funding that allowed us to start our business. While we also took in private venture capital, the SBIR program allowed us to keep control of the business, which has been a key to our longevity. It introduced us to the complexities of government contracting, allowing us to grow into a significant competitor to the larger, better established players – and competition is truly the surest way to reduce costs and improve procurement efficiency. Once we were established, the SBIR program allowed us to train new engineers in the art of program management, and it provided opportunities for anyone in our company to experiment with new ideas. “You get to eat what you kill” we told our engineers – if you write an SBIR proposal and you

win, you get to run it. This provided an incredible diversity of new ideas which spurred innovation.

Friends and colleagues from around the world are constantly amazed to learn about the SBIR program. They ask incredulously: "The U.S. government will give you money to start a business?". I have met no comparable program in any of my travels – and as a result, the U.S. continues to be a beacon and a magnet to the most talented people from around the world.

We are constantly bombarded with stories of public programs that fail, or have been misdirected, or that somehow disappoint. The SBIR program is an example of a government program that works, and it works spectacularly. I and the employees of Aurora Flight Sciences in Virginia, West Virginia, Mississippi and Massachusetts offer an example of what the SBIR program can contribute to America's economic growth, and help us compete effectively in the international arena. When I am given the opportunity to share one thought with any elected official, I always try to make the point: SBIR is a government program that is a massive success. It deserves your continued support.

Thank you for the opportunity to testify today. I look forward to any questions you may have.