Opening Statement

Chairwoman Kendra S. Horn (D-OK)

Subcommittee on Space and Aeronautics

Committee on Science, Space, and Technology

"***NASA's Aeronautics Mission: Enabling the Transformation of Aviation***"

2:00 p.m., June 26, 2019

Good afternoon, and welcome. I'm especially pleased to welcome our distinguished group of witnesses. Thank you for being here.

We're on the cusp of transformational changes in aviation. Not only is the commercial aviation market robust with global passenger air transport projected to double by about 2040, emerging new markets and innovative technologies are literally changing what we see on the horizon.

These innovations are not just about the novelty of pizza and package deliveries to your door by drones or the "flying cars" of the Jetsons cartoon, they're about economic impact, competitiveness, and American jobs.

One estimate projects that the integration of unmanned aircraft systems into the airspace could lead to 100,000 jobs and $82 billion in economic activity. Market projections for urban air mobility are in the billions of dollars.

Our U.S. economy stands to gain significantly from these emerging aviation markets. Yet, when combined with the current impact of civil aviation, which in 2014, provided over 10 million jobs, represented $1.6 trillion of total U.S. economic activity, and accounted for 5.1 percent of

U.S. GDP, the importance of commercial aviation to our nation's economic growth is magnified.

In my own state of Oklahoma, aviation and aerospace represent the second largest employment sector. According to a study by the Oklahoma Aeronautics Commission, aviation, aerospace, and associated activities provide for over 200,000 jobs and about $44 billion in economic impact.

While there is much to celebrate in the success of U.S. commercial air transportation, our competitiveness on the global market is increasingly harder to maintain. The International Aviation Transportation Association predicts that by the mid-2020s, "China will displace the United States as the world's largest aviation market."

That's why Federal research investments to transform this industry matter, and why we're here today to examine NASA's Aeronautics mission and enabling role. Because maintaining our success and realizing the opportunities before us means overcoming challenges.

Airplane noise complaints to the FAA have seen sharp increases. Growth in air transportation is stretching the capacity of our national airspace system, and new entrants, including drones and urban air vehicles, add complexity to the airspace that must be safely managed if they are to be successful.

Perhaps most pressing of all is the impact of air transportation on the environment. Not only does commercial aviation account for about 2% of human-induced global carbon emissions, the jet fuel that produces those emissions represents a significant portion of commercial airline costs. With expected compound annual growth rates of about 3.5 percent in air passengers, the problem will only get worse. Sustainability is not only critical to the environment; it's becoming a competitive advantage.

At this year's Paris Air Show, which ended just days ago, Chief Technical Officers of 7 of the world's leading aviation manufactures came together in an unprecedented union to commit to a sustainable future for commercial air transportation. I'm submitting a copy of their statement to the record.

And that's where NASA's aeronautics research plays a vital role—carrying out fundamental research to improve efficiencies, enabling the safe integration of new entrants into the air space, testing new aircraft systems and designs, and developing enabling technologies and techniques to mitigate the environmental impacts of aviation.

The question before us today is: are we in Congress and the Federal government doing enough?

Are we making the necessary investments to help realize the full potential of emerging markets that have significant implications for U.S. competitiveness and economic growth?

Do we have the workforce and facilities to support NASA's aeronautics R&D and the growing industries?

And will our R&D efforts help keep us on track to meet goals for commercial aviation to achieve carbon neutral growth in 2020 and reduce CO_2 emissions by 50 percent of what they were in 2005 by 2050?

In closing, I'd like say this: the proposal for aeronautical research and technology in NASA's fiscal year 1994 budget request was 2 and a half times more in 2019-year dollars than the Administration's proposed investment for NASA's Aeronautics research programs in the fiscal year 2020 budget request. Recognizing the magnitude of the economic impact of U.S. commercial aviation today, and the challenges and opportunities ahead, is it sufficient?

Thank you.