

Statement of
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Nominee for the Position of
Director of the Office of Science
United States Department of Energy
Before the
Committee on Energy and Natural Resources
United States Senate
August 3, 2021

Chairman Manchin, Ranking Member Barrasso, and members of the Committee on Energy and Natural Resources. Thank you for the opportunity to appear before you today.

It is my great honor to appear before this Committee as President Biden's nominee for Director of the Office of Science at the Department of Energy. I thank the President and Secretary Granholm for trusting me to help lead the next chapter in the great scientific success story of the Office of Science.

Allow me to acknowledge my family and friends whose love and support I am fortunate to have – especially my husband, Professor Teamrat Afewerki Ghezzehei, our children Essey and Elilta, and my parents, Ghidei Woldelassie Ketema and the late Asefaw Berhe Hagos.

I was born in the horn of Africa, in Eritrea. I grew up in a wonderful family with two great parents and role models who, not only were first-generation middle school graduates, but who received college degrees while working to support their families and raising six kids. The fact that I am appearing in front of you here today is a testament to the incredible power of education to transform a person's life. My parents instilled in me the value of education and respect for knowledge and ignited my love of science and the natural environment. I am now fortunate to be a professor at the University of California-Merced, an institution with a genuine commitment and demonstrated success in serving communities that have historically been underserved.

I am an earth scientist and educator. I am passionate about soil – the thin veil of loose material covering the land surface that has an outsized role in regulating life as we know it. Soil is the most complex biomaterial that we know of. It regulates the earth's climate, is home to the most abundant and diverse forms of life on the earth system and is foundational to human and national security. Because of the complexity of soil, scientific investigations that seek to unravel the physical, chemical, and biological processes that take place in the soil system and the energy systems that support said processes require advanced experimental, observational, and

computational tools and interdisciplinary perspectives. That is why earth scientists, including me, have had career-long ties to the Department of Energy, the national labs, and the advanced facilities the Office of Science manages.

As a soil and global change scientist who has studied and worked in public institutions of higher learning, I have always taken my responsibility to serve the public very seriously. I believe publicly funded science and technology are critical for inspiring the next generation of scholars. Scholars have a responsibility to equitably serve the diverse communities of taxpayers that make our scientific careers and love of scientific research possible; and work to cultivate society's trust in science.

I approach my nomination to serve as Director of the Office of Science with the experience of an earth system scientist that works across and synthesizes knowledge from, multiple scientific areas and teams. The integrative systems perspective that I would bring, if confirmed, is uniquely suited for this role, especially for the current time when we need to urgently address multiple issues that are critical for not just pushing the frontiers of science, but also to address the ongoing climate emergency, need for workforce development, and to promote better understanding and trust in the scientific processes.

It is evident that no one person can be an expert in the entirety of the wide-ranging portfolio of scientific endeavors the Office of Science supports. My experience with scientific investigations across multiple disciplines, covering spatial scales ranging from molecular to the globe, and processes that occur from seconds to geologic timescales is an asset as we seek to address fundamental processes that hold the key for the environmental, energy, and national security challenges of our time.

It has never been more critical that we employ a systems approach to support scientific endeavors that push the frontiers of knowledge. The nation's response to the COVID-19 pandemic has clearly demonstrated what is possible when we continue to fund basic science and then allow scientists from across multiple fields to work in the most advanced scientific facilities – including facilities the Office of Science manages – to enable timely discoveries.

If I am confirmed, my vision for the Office of Science is to ensure that I support and enable the office's mission to deliver scientific discoveries to transform our understanding of nature and advance the energy, economic, and national security of the United States. I am committed to fostering a supportive scientific enterprise for staff and researchers from across all fields to ensure that U.S. science and technology remains pre-eminent, well-supported, at the cutting edge, and continues to inspire and inform decisions in society. If I am confirmed, I commit to you that I will provide strong leadership for the Office of Science's mission. Thank you again for the opportunity to appear before you today.

I am happy to answer any questions that you may have.