Statement of Ellen D. Williams
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U.S. Department of Energy

Before the
Committee on Energy and Natural Resources
United States Senate

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Chairman Wyden, Ranking member Murkowski, members of the Committee, I appreciate the opportunity to appear before you today as President Obama's nominee for Director of the Advanced Research Projects Agency – Energy (ARPA-E) at the United States Department of Energy (DOE). It is an honor to be here.

I would like to thank President Obama for nominating me for this position. If confirmed, I would do my utmost to justify the confidence he has placed in me. I also would like to express my gratitude to Secretary Moniz for his support. If confirmed, it will be a privilege to join his team.

I also would like to thank my family, my parents Lois and Richard Williams, my husband, Neil Gehrels and his parents Tom and Aleida Gehrels, my brothers and sisters, my children Thomas and Emily, and my friends and colleagues. Their guidance, love and support are the foundation for all my efforts.

Mr. Chairman, as you know, ARPA-E is a young agency that is applying to energy technology the approaches to innovation and value development that have been demonstrated with long term success by Defense Advanced Research Projects Agency (DARPA) for military technology. If confirmed, I will bring to the role my lifetime of experience in scientific research and in supporting the application of cutting-edge technology to meet pressing social needs.

I grew up in Michigan, in the Detroit suburbs, and experienced first-hand the benefits to local communities of a thriving manufacturing base. I went to college at Michigan State University, where I studied chemistry. The excellent program there made it possible for me to go on to advanced studies at California Institute of Technology in Pasadena, California. There I was introduced to a broad perspective of interdisciplinary research, and as a result my subsequent career in science has spanned the disciplines of chemistry, chemical engineering, physics and materials science.

After my doctoral and post-doctoral work, I became a professor at the University of Maryland in College Park. As a professor, teaching and running a research laboratory and later a research center, I saw over a decade's time amazing transformations in which difficult and esoteric experiments led to new technologies that shifted the baseline of the possible.

This has left me with optimism about the potential of science and innovation. If confirmed I would bring this vision –optimism, and my enthusiasm to the work of ARPA-E.

In parallel with my academic career, I had the opportunity to be involved in government service as a member of a technology group that provides advice upon request to the U.S. government. In this role I participated in technical assessments for DARPA and the Department of Defense, and for other government agencies including the National Nuclear Security Administration and DOE. The DOE studies included stockpile stewardship, site remediation, and science activities. If confirmed, I would bring this external perspective to further developing the complementary relationship between ARPA-E and other DOE programs.

In the midst of this satisfying and productive academic and service career, four years ago I had the opportunity to become directly involved in energy technology as BP's Chief Scientist. In this role I have been involved in both internally-facing and externally-facing activities. One of my greatest sources of pride in the inward-facing role has been giving our technology teams the space and resource to apply their talent and creativity to generate new technical value through innovation. In my externally-facing role, I've been responsible for assessing technology that may have strategic implications for the world energy industries. In doing so I've applied a stringent criterion of testing the technical basis for all assertions – this is essential to provide decision makers with the information they need to make sound choices for the future. If confirmed, I will bring the same rigor in supporting the members of this Committee with the information you need about ARPA-E and innovation in energy technology.

Mr. Chairman, we as a nation face great challenges and great opportunities in proving the secure, clean and affordable energy essential to our quality of life both now and for generations to come. ARPA-E is playing an important role in establishing new, transformational opportunities for the future. If confirmed, I would look forward to working with the members of this Committee to help ARPA-E deliver the greatest value and impact.

Thank you very much for this opportunity to come before this Committee. I look forward to answering any questions you may have.