ARPA-E: Energy Innovation for the 21st Century

In 2007, Congress created the Advanced Research Project – Energy with the America COMPETES Act. First funded under the Recovery Act of 2009, the Agency exists to support high-risk high-reward transformational technologies across the entire energy landscape. Over the last three years, the Agency has awarded over $750M to some 250 performance teams to advance technologies from laser drilling to power electronics, from natural gas storage to transgenic plants. In this talk we briefly review the history of the Agency and consider the means by which it operates by reviewing the Agency’s activities in the transportation sector, including liquid fuels, vehicle electrification, and natural gas storage.

http://arpa-e.energy.gov/

ABOUT THE SPEAKER

Dr. Eric Toone is the Principal Deputy Director of the Advanced Research Projects Agency – Energy (ARPA-E) where he is responsible for oversight of all of ARPA-E’s programs and operations. In addition to his role at ARPA-E, Toone currently serves as the Anne T. and Robert M. Bass Professor of Chemistry and Professor of Biochemistry at Duke University.

Toone is a scientific founder of two venture-backed companies: Aerie Pharmaceuticals, a research-based ophthalmology company, and Vindica Pharmaceuticals, a nitric oxide delivery company.

He has served as a permanent member of the Bioorganic and Natural Products Study Section at the National Institutes of Health and is currently a member of the National Sciences and Engineering Research Council’s Organic & Inorganic Review Panel (Canada).

Toone has authored over 100 scientific papers and over 30 patents. He is an associate editor of the journal Biopolymers and is the editor-in-chief of the monograph series Advances in Enzymology.

Toone studied chemistry as an undergraduate at the University of Guelph and graduated in 1983. That same year, he enrolled at the University of Toronto where he began graduate studies with Professor J. Bryan Jones. Toone graduated from the University of Toronto in 1988. Toone continued his studies at Harvard University with Professor George Whitesides.

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