

## ARPA-E AWARDED PROJECTS IN ENERGY STORAGE (1<sup>st</sup> Round)

<b>Arizona State University</b> (Fluidic Energy, Inc.)	\$5,133,150	Tempe, AZ	A new class of metal-air batteries using ionic liquids, with many times the energy density of today's lithium-ion batteries. Could enable long range, low cost plug-in hybrid and all-electric vehicles.
<b>EaglePicher Technologies LLC</b> (Pacific Northwest National Laboratory)	\$7,200,000	Joplin, MO	High energy, low cost planar liquid sodium beta batteries for grid scale electrical power storage. Could enable continuous power from renewable resources, like wind and solar, and could support a highly stable and reliable grid.
<b>Envia Systems</b> (Argonne National Laboratory)	\$4,000,000	Hayward, CA	High energy density Lithium-ion batteries with 3x better energy density than current batteries. Based on novel nano silicon-carbon composite anodes and manganese composite cathodes discovered at Argonne National Laboratory. Could lower the cost and speed the adoption of plug-in hybrids and electric vehicles.
<b>FastCAP Systems Corporation</b> (MIT)	\$5,349,932	Cambridge, MA	A nanotube enhanced ultracapacitor with energy density approaching that of standard batteries, but with many times greater power density and thousands of times the cycle life. Could greatly reduce the cost of hybrid and electric vehicles and of grid-scale storage.
<b>Inorganic Specialists, Inc.</b> (Ultramet, Inc., EaglePicher, Southeast Nonwovens, EMTEC)	\$1,999,447	Miamisburg, OH	A silicon-coated carbon nanofiber paper for the anode of next generation Lithium-ion batteries. These low cost, manufacturable batteries could accelerate the deployment of plug-in hybrids and electric vehicles, shifting U.S. transportation energy from imported oil to the grid.
<b>Massachusetts Institute of Technology</b>	\$6,949,624	Cambridge, MA	An all liquid metal grid-scale battery for low cost, large scale storage of electrical energy. This new class of batteries could enable continuous power supply from renewable energy sources, such as wind and solar and a more stable, reliable grid.