

# Analyzing the US Utility Energy Storage Market

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## Abstracts

Energy storage technologies are very important in today's world where constant energy demands need to be met by utilities and energy companies alike. There are many different types of energy storage technologies available today. Some of the commonly used ones include batteries, CAES (compressed air energy storage systems), flywheels, and hydroelectric storage, among others.

There are also some energy storage technologies that are under development at the moment and are being touted as being the next revolution in the industry. These include Superconducting Magnetic Energy Storage systems, hydrogen technologies, ultracapacitors, and Vehicle-to-Grid. With companies developing newer technologies to simplify the process of energy storage, the race is on to develop the most efficient system for storing energy.

Utilities are perhaps one of the major users of energy storage systems. With the US DOE announcing a stimulus funding for smart grid programs, energy storage technologies have become a primary component in the future planning of the smart grid. There are many companies who are trying to develop energy storage technologies for addressing utility storage applications. Aruvian's R'search analyzes the market for utility energy storage technologies in its research report Analyzing the US Utility Energy Storage Market.

With the global industry for utility electric energy storage systems expected to cross \$3.8 billion by 2013, the US is emerging as a leading market for the development of such technologies.

**Aruvian's R'search analyzes the following utility energy storage technologies in this report:**

Batteries – includes an analysis of lead-acid batteries, lithium-ion batteries, metal-air batteries, sodium-sulfur batteries, vanadium-redox flow batteries, and zinc-bromide flow batteries.

Compressed Air Energy Storage Systems

Hydrogen and the role it plays in utility energy storage

Pumped hydroelectric storage

Superconducting Magnetic Energy Storage Systems

Ultracapacitors

Vehicle-to-Grid

For each technology analyzed in the report, we analyze the technology, the role the particular technology plays in utility energy storage, and the installations around the US of that particular technology for storing energy. Apart from this, the leading industry players for each technology are also analyzed.

We also analyze the various benefits utilities can derive by using the technologies discussed. Benefits are further segmented into the following areas:

Financial Benefits

Benefits for Power Generation Infrastructure

Benefits for the T&D System

Benefits for Utility Customers

Issues such as installation costs and other challenges facing developers and investors in utility energy storage technologies are also analyzed in the report.

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