

Winner of the 2015 \$500,000 Lemelson-MIT Prize – Dr. Jay Whitacre

Dr. Jay Whitacre, a Professor at Carnegie Mellon University, is a global leader in the field of large-scale energy storage devices and systems. He is a prolific inventor who holds 30 patents or pending patent applications. His technologies have the power to transition the world toward a sustainable energy future.

Energy storage is necessary to decrease mankind's global carbon footprint. Whitacre and Aquion Energy's Aqueous Hybrid Ion (AHI™) batteries are creating a new age for solar and storage systems:



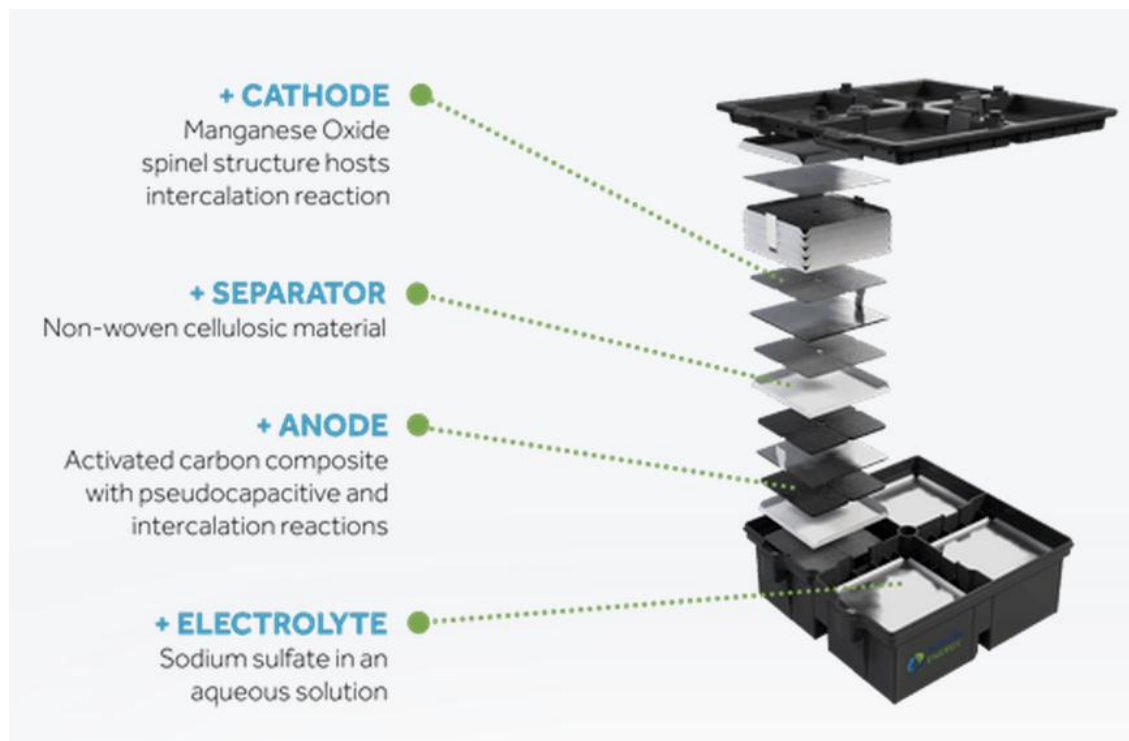
Quietly and reliably eliminating **CO₂** from the environment by increasing renewable use and reducing fossil fuel consumption.



Deploying **multiple Megawatt-hours** of energy storage around the world; many of those off-grid.

Clean Batteries for Renewable Energy

Whitacre's AHI™ battery is a clean saltwater battery with a unique environmentally-friendly electrochemical design. AHI™ batteries contain no heavy metals or toxic chemicals and are non-flammable and non-explosive, making them the safest batteries in the world.



AHI™ Battery Use:

Residential Solar

- Stores and consumes all the solar energy generated
- Ensures critical power during grid outages
- Controls energy costs by using energy stored during the highest-cost daytime grid hours
- Removes peak demand charges by dispatching energy to keep below the peak power threshold

Energy Management

- Shifts energy use from the grid to batteries at times of high demand
- Ensures critical power during grid outages
- Stores energy generated on-site to maximize use of renewables and offset using energy from the grid during peak times

Off-Grid and Microgrids

- Increases use of renewables and reduces reliance on fossil fuels
- Stores energy for later use to enable islanding and independence from the grid
- Ensures access to critical power, manages intermittency and ensures stability

Global Impact

Aquion currently has installations globally, including Australia, Germany and across the United States. A large fraction of the developing world has no centralized electricity grid, by installing these systems, the quality of life for hundreds of millions of people could potentially be improved in areas such as Africa, rural Australia, India, South America and South Pacific countries.

