

Gridtential Secures \$6 Million from Battery Industry Strategics, East Penn Manufacturing, Crown Battery Manufacturing, Leoch International and Power-Sonic Inc.

Accelerates Silicon Joule™ commercialization for advanced high power battery designs

SANTA CLARA, Calif. – January 12, 2017 – Gridtential Inc., an innovator in low-cost, high-performance energy storage technologies, today announced it has completed a \$6 million fundraise with strategic investors from some of the world’s largest battery suppliers and distributors. New investors include East Penn Manufacturing, the world's largest single-site, lead-acid battery facility; Crown Battery Manufacturing, a leader in deep-cycle applications; Leoch International, the largest lead acid battery exporter in China, and Power-Sonic Inc., a global specialty battery distributor.

Gridtential’s Silicon Joule™ technology is a novel breakthrough that replaces the lead grid inside a traditional lead battery with a plated silicon wafer similar to a solar cell. This approach translates to performance levels that match or exceed lithium-ion battery performance in many high power, medium energy and deep cycling applications, with significant cost, safety and recycling advantages. Gridtential is licensing the technology and building out its drop-in specialty Silicon wafer supply, enabling manufacturing partners to easily adapt their existing highly productive factories to provide high performing 12V to 48V batteries to their customers, without gigascale capital investments. The added funds will support further cost reductions and scaling of manufacturing processes to deliver 12 to 48V batteries, which can be one-third lighter than existing advanced lead batteries with performance up to 5x in power density.

With combined 2016 revenues exceeding \$4 billion, this innovative group of battery industry manufacturers has been working jointly with Gridtential for four years to validate the potential of Silicon-Joule batteries. In that time, Gridtential has eclipsed its performance targets, providing demonstrations of the Silicon Joule technology with 6 partners in over 250 batteries. The results of those pilots showed an overall 2-5x cycle life improvement and demonstrated a scalable assembly method.

“East Penn continues to explore advanced battery technologies, and the company strongly believes that lead-based solutions will play a significant role in powering future needs,” said Kevin Smith, East Penn’s VP of Technology. “The remarkable strides that Gridtential has made in demonstrating advancements from a traditional lead-battery design, helps prove that East Penn’s lead battery beliefs are well founded. The company is excited to explore Silicon Joule technology, along with our other technology partners, in order to further support our customers and the industry’s growth in vehicle electrification and grid storage optimization.”

“Lead-acid batteries are the most cost-effective, safest form of energy storage -- and they’re more recyclable than an aluminum can,” said Hal Hawk, President and CEO of Crown Battery Manufacturing. “Now, they’re even better. Because Gridtential’s new technology combines the

safety, recyclability, and ROI of lead-acid batteries with up to 5X greater power density, lighter weight, and more than double the lifespan.”

“We are very excited about the potential for the Gridtential technology, and the advantages it can provide our customers. It will take lead acid battery performance and life up to the next level,” said Shawn Peng, Leoch International’s VP of Technology.

Gridtential is focused on applications ranging from 48V automotive hybrid and grid storage to back-up power for cloud computing, material handling equipment and many others. The 48V battery market for hybrid vehicles alone represents a \$30 billion opportunity worldwide. While 12V electrical systems are straining to supply the power demanded by amenities and mechanical operations in contemporary car and truck models, 48V systems provide more than enough energy to support a variety of hybrid automotive features, such as stop-start energy regeneration and engine shut-off at higher speeds. Gridtential's proprietary Silicon Joule battery technology will not only significantly reduce the cost barrier to create these systems, it will ensure that these high-performance hybrid vehicles achieve the best fuel economy possible.

“An investment like this from such a highly respected group of global battery producers is significant in two respects. First, it underscores our investors’ confidence that our licensable silicon-based bi-polar technology can change the game for advanced lead battery makers, giving them a competitive edge in the highest growth markets,” said Ray Kubis, Gridtential Chairman. “Second, it is an efficient contrast to the large capital sums going into lithium. Rather than spending our time and efforts on continuous fund raising, we’ve chosen a capital-light path with an existing global network of suppliers that will swiftly exceed gigascale production of advanced lead-based batteries to meet rapidly growing application demand.”

“This new influx of funding will allow Gridtential to expand support for its manufacturing partners and bolster R&D as we continue to identify new, industry-changing applications for our Silicon Joule technology,” said Christiaan Beekhuis, Gridtential CEO. “With help from our new strategic partners, we’ll now focus on refining our advanced, high-power designs, scaling up the silicon supply chain without driving up costs, and automating the assembly process to rival speeds familiar to high-volume producers of advanced lead-based batteries.”

About Gridtential Energy

Gridtential Energy has developed a new battery architecture that enhances the traditional benefits of lead batteries (low cost, safety, recyclability, wide temperature range and long cycle life) with many lithium-like performance characteristics including fast charging/discharging and deep depth of discharge. These breakthrough capabilities, the result of Gridtential’s novel *Silicon Joule™* technology, eliminate the main failure modes of lead batteries, providing the battery the power density that lithium batteries are known for, while retaining the low cost, recyclability and safety of lead. With a global manufacturing base that is 70x the size of Tesla’s gigafactory efforts. Gridtential and its licensing partners will begin beta production of the

Silicon Joule enabled batteries later this year, with a rapid scale up and commercial production in late 2017. To learn more, visit <http://www.gridtential.com/>

About East Penn Manufacturing Company

East Penn is a leading manufacturer of high quality lead-acid batteries and accessories for the automotive, commercial, marine, motive power, UPS and telecommunication markets. The company's quality and environmental systems for its entire 520-acre complex have been certified to ISO 9001:2008, ISO/TS 16949:2009 and ISO 14001:2004 requirements. For more information, contact East Penn Manufacturing Co., Lyon Station, PA 19536 or visit the company website at <http://www.eastpenmanufacturing.com>.

About Crown Battery

Since 1926, Crown Battery has been a leading manufacturer of advanced technology, industrial traction, deep cycle, starter and AGM batteries. Every one of Crown's lead-acid batteries is 99% recyclable and comes from the company's ISO 9001:2008-certified plant in Fremont, Ohio. The plant incorporates solar panels, wind turbines, and high-efficiency robotic welding. Crown batteries power businesses, industrial and residential vehicles, off-grid homes and villages, and more than 100 other application types on six continents.

<http://www.crownbattery.com>

About Leoch International

Leoch International Technology Limited ("Leoch"), founded in 1999, is an international high-tech enterprise listed on the Hong Kong Stock Exchange since 2010. Leoch specializes in research and development, manufacturing, sales and marketing of full categories of lead-acid batteries in reserve power, automotive, motorcycle and motive power applications. Leoch has production bases in China, Malaysia, Sri Lanka and India, which include 3 R&D centers and 97 production lines. <http://www.leoch.com>

Media contact

MissionCTRL for Gridtential

gridtential@missionC2.com