October 25, 2022

Initial Testing of Aqua Metals' Li AquaRefining Shows Potential for More Than 95% Reduction in Carbon Footprint Over Other Lithium-ion Battery Recycling Methods

Taiwan installation Phase 1 is producing ultra-pure Pb AquaRefined lead

Li AquaRefining pilot installation on track to recycle high value minerals from black mass in Q4

RENO, Nev., Oct. 25, 2022 (GLOBE NEWSWIRE) --Aqua Metals, Inc. (NASDAQ: AQMS) ("Aqua Metals" or the "Company"), a leading innovator in metals recycling with its AquaRefining™ technology, today shared three significant updates:

- The comparative environmental figures (fig. 1) indicate the superiority of Li AquaRefining at current scale vs. current Lithium-ion Battery recycling technologies regarding CO_2 emissions and sodium sulfate waste streams
- The on-schedule production of lead (Pb) at AQMS partner ACME Metal Enterprise in Taiwan using Pb AquaRefining
- The near-term launch of the company's U.S.-based Li AquaRefining pilot plant currently on schedule to meet the company's goal of producing high purity metals in Q4 2022

This progress is a testament to Aqua Metals' standing as a breakaway recycling innovator in the rapidly growing, high-demand critical battery minerals industry. In fact, AQMS is the first LiB recycling company on track to recover all critical minerals from spent lithium-ion batteries and return them into the battery supply chain within the U.S. This positions AQMS to support EV and battery manufacturers' initiatives to meet the tax credit requirements of the electric vehicle (EV) production of the Inflation Reduction Act of 2022, which requires 40% of all battery materials, by value, to be produced in the U.S. by 2023, increasing to 100% by 2029.

Quantifying Success: AquaRefining's Environmental Superiority

Aqua Metals recently conducted and released an environmental comparison using competitor data derived from EverBatt, a closed-loop battery recycling cost and environmental impacts model from Argonne National Laboratory. The initial results indicate that AquaRefining has a cleaner approach to LiB recycling, producing far less CO_2 waste streams than the two evaluated primary processes currently on the market: pyro-based (smelting) and other hydro recycling methods in development.

“Aqua Metals recycles the minimal amount of chemicals we use in our closed loop process, resulting in relatively little waste stream compared to other commercial processes,” said David Regan, VP of Commercial at Aqua Metals. “Aqua Metals’ unique recycling process puts us on a path to achieving net zero emissions, and positions us as the best recycling partner for companies that need to recycle lithium-ion batteries while lowering their carbon footprint.”

Taiwan Pb AquaRefining Pilot Program

In September 2022, Aqua Metals delivered on its agreement withACME Metal Enterprise to deploy AquaRefining technology at its facility in Keelung, Taiwan. A successful commissioning of AquaRefining equipment and lead production followed in October. “This installation meets Aqua Metals’ visionary goal of creating ultra-pure lead through the only proven green method for recycling it in the APAC region, the largest and fastest growing lead market in the world,” said Ben Taecker, Chief Engineering and Operations Officer of Aqua Metals.

U.S.-based Li AquaRefining Pilot Plant Progress

Aqua Metals’ fully integrated pilot system, located at the company’s Innovation Center in the Tahoe-Reno Industrial Center in Nevada, is on schedule to meet the company’s goal of producing high value minerals in Q4 2022 and will host potential strategic partner visits in Q4 and into Q1 2023. This puts AQMS on pace to reach its goal of becoming the first company in North America to recycle battery minerals from black mass and sell them in the U.S. and positions the company as the first LiB recycler in North America to align with the U.S. government’s goal of retaining strategic battery minerals within the U.S.

“Aqua Metals is at an inflection point. In the coming weeks, we intend to demonstrate something truly innovative: an economically viable and sustainable battery recycling operation,” said Steve Cotton, President and CEO of Aqua Metals.

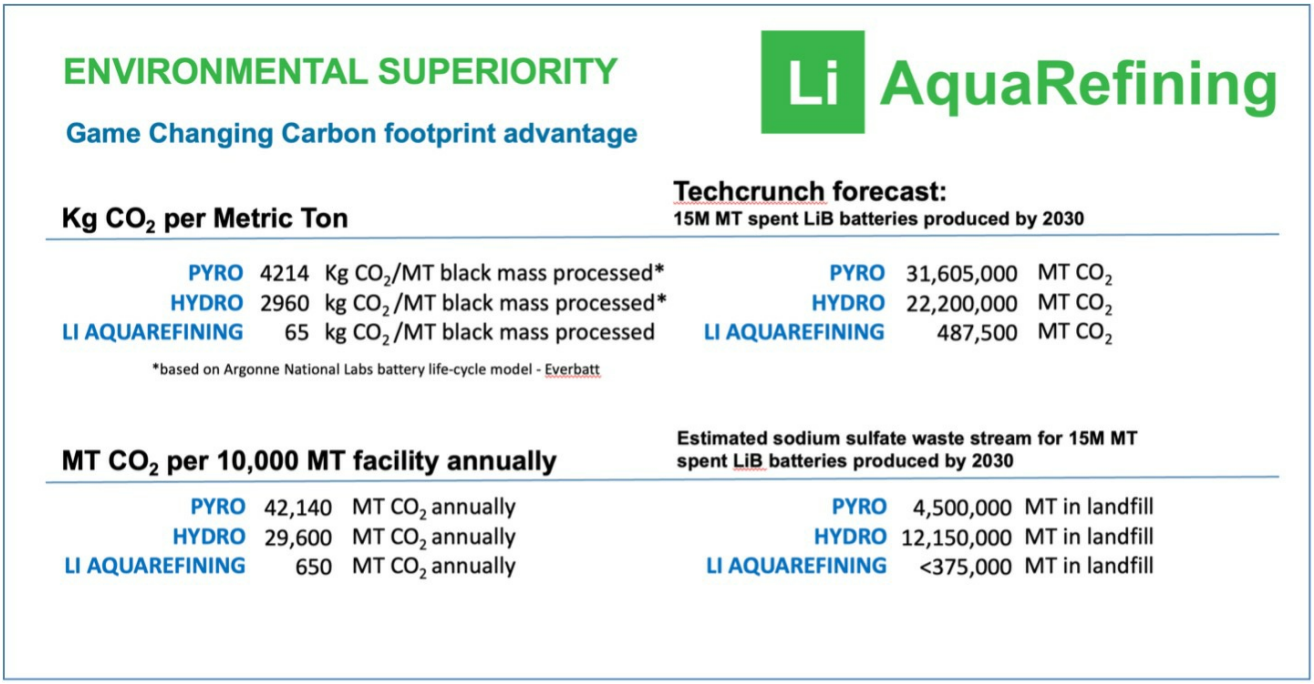
The Right Recycling Technology at the Right Time

It is predicted by the International Energy Agency that there will be approximately 140 million EVs globally by 2030, creating a massive demand for LiBs and the critical minerals used to make them. In addition to higher costs, geopolitical risks, human rights abuses, and environmental issues associated with mining some of the metals used in lithium-ion batteries, mining alone cannot meet the demand of this exponentially growing market.

Recycling the more than 15 million tons of LiBs that are expected to retire between now and 2030 needs to be done sustainably to meet the carbon reduction objectives that the U.S., EU governments and major corporations have set for themselves. Recycling also enables the retention of these strategic minerals within the U.S., helping to defend against the at-risk supply chain for lithium-ion battery manufacturing.

In conclusion, noted David Regan: “With lithium-ion battery technology serving as the foundation of the ongoing clean energy and EV transition, how the minerals used to make batteries are sourced and recycled is vital to meeting global emissions targets. There is already a large and rapidly growing supply of spent LiBs, making it imperative to build a cost-effective, scalable recycling infrastructure that is environmentally sustainable from inception.”

Fig. 1 - Comparative Environmental Figures



Aqua Metals' environmental comparison using competitor data derived from EverBatt, a closed-loop battery recycling cost and environmental impacts model from Argonne National Laboratory. To see more images related to this press release visit https://ir.aquametals.com/press-releases

About Aqua Metals

Aqua Metals, Inc. (NASDAQ: AQMS) is reinventing metals recycling with its patented hydrometallurgical AquaRefining™ technology and is providing sustainable metal recycling for materials strategic to energy storage applications. Unlike smelting, AquaRefining is a room temperature, water-based process that emits less pollution. Aqua Metals is applying its commercialized clean, closed loop recycling technology principles to develop the cleanest and most cost-efficient recycling solution for lithium-ion batteries starting with its Li pilot plant. The Company is scaling production of Li recycling and is exploring JV and licensing opportunities for all AquaRefining technologies. Aqua Metals is based in Reno, Nevada. To learn more, please visit www.aquametals.com.

Aqua Metals Social Media

Aqua Metals has used, and intends to continue using, its investor relations website (https://ir.aquametals.com), in addition to its Twitter, LinkedIn and YouTube accounts at https://twitter.com/AquaMetalsInc (@AquaMetalsInc), https://www.linkedin.com/company/aq metals-limited and https://www.youtube.com/channel/UCvxKNWcB69K0t7e337uQ8nQ respectively, as means of disclosing material non-public information and for complying with its disclosure obligations under Regulation FD.

Safe Harbor

This press release contains forward-looking statements concerning Aqua Metals, Inc. Forward-looking statements include, but are not limited to, our plans, objectives,

expectations and intentions and other statements that contain words such as "expects," "contemplates," "anticipates," "plans," "intends," "believes", "estimates", "potential" and variations of such words or similar expressions that convey the uncertainty of future events or outcomes, or that do not relate to historical matters. The forward-looking statements in this press release include our expectations for our ability to develop our AquaRefining technologies for the recycling of lithium-ion batteries and the expected benefits of our Innovation Center and the recycling of lithium-ion batteries and our deployment of AquaRefining technology and equipment to our Taiwan partner's facility. Those forward-looking statements involve known and unknown risks, uncertainties, and other factors that could cause actual results to differ materially. Among those factors are: (1) the risk we may not be able to recycle lithium-ion batteries using our AquaRefining process or, if we do, derive the expected benefits from such recycling, (2) the risk that we may not derive the expected benefits from our proposed pilot operation to be deployed at our Aqua Metals Innovation Center; (3) the risk that licensees may refuse or be slow to adopt our AquaRefining process as an alternative to smelting in spite of the perceived benefits of AquaRefining; (4) the risk that we may not realize the expected economic benefits from any licenses we may enter into; (5) the risk that we may not be able to access additional capital, through the sale of our TRIC facilities and equipment or otherwise, as and when needed and (6) those other risks disclosed in the section "Risk Factors" included in our Annual Report on Form 10-K filed on February 24, 2022. Aqua Metals cautions readers not to place undue reliance on any forward-looking statements. The Company does not undertake and specifically disclaims any obligation to update or revise such statements to reflect new circumstances or unanticipated events as they occur, except as required by law.

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Source: Aqua Metals

Ultra-high purity lead coming off Aqualyzers installed at ACME Metal Enterprise in Keelung, Taiwan.

Jim Kenney, Director of Engineering, discusses the commissioning of the control panel for the Li AquaRefining pilot with CEO Steve Cotton and CFO Judd Merrill.

Jim Kenney, Director of Engineering, discusses the soon to be installed rectifiers with CEO Steve Cotton and Dave McMurtry Chief Business Development Officer. (CFO Judd Merrill in background).

Jim Kenny, Director of Engineering, discusses nickel plating cells with CEO Steve Cotton, Dave McMurtry Chief Business Development Officer, and CFO Judd Merrill.

Jim Kenney, Director of Engineering, Dave McMurtry Chief Business Development Officer, CEO Steve Cotton, and CFO Judd Merrill stand in front of our first delivery of black mass that will be recycled into high purity metals and minerals at our pilot installation starting in November 2022.

Source: Aqua Metals