Applied Minerals Submits Application for U.S. DOE STTR Phase II Award for Halloysite-Derived Silicon Project

20.04.2022 | ACCESS Newswire

EUREKA, April 20, 2022 - Applied Minerals Inc. (the "Company" or "AMI") (OTC:AMNL), a leading producer of halloysite clay and natural iron oxides for high-value industrial applications, submitted its application for a U.S. Department of Energy STTR Phase II award with respect to the further development of its halloysite-derived silicon project.

The halloysite-derived porous silicon developed and tested under our U.S. DOE STTR Phase I award showed promising results. In particular, a 100% halloysite-derived porous silicon electrode demonstrated specific capacity in excess of 2,200 mAh/g, little loss in capacity up to a rate of 2C, high Coulumbic efficiency, and cycling data showing high reproducibility. We believe a high-purity source of halloysite clay, such as that found at the Dragon Mine, is critical to the synthesis of porous silicon.

Based on a preliminary techno-econometric analysis, we estimate the cost of halloysite-derived silicon will be at or below that of synthetic graphite, a dominant anode material found in lithium-ion battery formulations. Furthermore, we estimate the cost of halloysite-derived silicon will be significantly below that of engineered silicon products currently utilized in battery formulations. Based on these preliminary cost estimates, we believe halloysite-derived silicon could offer an attractive value proposition for battery manufacturers.

The $1,150,000 Phase II award, if granted, would be used to (i) build upon the technical objectives of the Phase I work, (ii) scale-up the process used to manufacture halloysite-derived silicon (iii) test halloysite-derived silicon powder formulations with partners and prospective customers, (iv) transfer the halloysite-derived silicon technology to AMI, (v) perform an extensive techno-econometric analysis as part of the development of a commercialization plan, and (vi) generate and protect intellectual property. Brigham Young University and Argonne National Laboratory will be partners in the Phase II work. The Phase II project has a term of two years.

The Phase II application process is highly competitive with the number of applicants exceeding the funding available. There is no guarantee the Company will receive the Phase II award. Whether or not the Company receives the Phase II award, it plans to explore the possibility of engaging a partner to commercialize the technology based on the Phase I work performed.

About Applied Minerals, Inc.

Applied Minerals Inc., the owner of the Dragon Mine property in Eureka, UT, is a producer of halloysite clay and natural iron oxides. Halloysite is aluminosilicate clay that possesses a naturally formed tubular structure. The Company markets its halloysite clay and iron oxide products into a number of high-value application areas including, but not limited, catalysts and molecular sieves, polymer reinforcement, flame retardant additives, controlled release, construction products and lithium-ion battery minerals. Applied Minerals sells its halloysite products under the DRAGONITE trade name its iron oxide products under the AMIRON trade name.

Safe Harbor Statements

The following are safe harbor statements under the Private Securities Litigation Reform Act of 1995 for Applied Minerals Inc. Some statements contained or implied in this news release may be considered forward-looking statements, which by their nature are uncertain. Consequently, actual results could materially differ. For more detailed information concerning how risks and uncertainties could affect the

Company's revenue pipeline, please refer to Applied Minerals' most recent annual and quarterly reports filed with the SEC. The Company assumes no obligation to update any forward-looking information.

Investor Relations Contact:

Christopher Carney
President and CEO
info@appliedminerals.com

SOURCE: Applied Minerals Inc.

View source version on accesswire.com:
https://www.accesswire.com/698163/Applied-Minerals-Submits-Application-for-US-DOE-STTR-Phase-II-Award-for-Hall