Elcora Advanced Materials Developing Graphene Infused Lithium-Ion Battery for Fast Charge Applications

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Halifax, December 14, 2017 - Elcora Advanced Materials Corp. (TSXV: ERA) (FSE: ELM) (OTCQB: ECORF), (the "Company" or "Elcora"), is pleased to announce the development of graphene infused Lithium-ion batteries for fast charge applications.

Graphene among other applications has exceptionally high electrical and thermal conductivity. Currently li-ion battery technology is restricted by recharging time which Elcora plans on addressing through the application of graphene properties. Given these characteristics graphene could significantly improve the performance of lithium-ion battery technology and result in a major impact in the future of Li-ion applications.

Elcora is uniquely positioned to develop graphene infused Li-ion batteries for several reasons:

- Elcora produces high quality graphene in its advanced graphite processing facility on-demand
- Elcora produces high purity Lithium-ion anode battery powder from the same facility
- Elcora's supplies the feed-stock for both graphene and anode powder fabrication processes
- Elcora has expertise in graphene and Lithium-ion battery technology and is presently working with strategic partners in development of applications.
- Elcora has its own in-house Lithium-Ion R&D Battery Lab

Elcora may improve Lithium-ion battery performance by optimizing thermal and electrical conductivity of the electrodes. Battery electrodes use carbon black as a conductivity promoter. The carbon black used in traditional electrodes may be replaced/supplemented with graphene produced using Elcora's environmentally friendly processing techniques. The highly conductive graphene should influence charge transfer kinetics, allowing for faster charging times compared to conventional electrode formulations.

Unlike carbon black, high-quality graphene has a relatively short shelf life (weeks if not days) and requires understanding of proper dispersion techniques. Elcora can produce its own graphene, that can be used in electrode formulation experiments immediately after fabrication. This synergy ensures that the graphene is of the highest quality before being infused into the battery electrode.

Elcora's goal is to develop proprietary battery technology that can store more capacity and deliver more power at lower cost.

Commented CEO Troy Grant, "We believe Elcora's production of both graphene and anode powder along with our expertise and strategic relationships with third parties is a perfect fit to our end goal of addressing the energy storage market."

About Elcora Advanced Materials

Elcora was founded in 2011 and has been structured to become a vertically integrated graphite & graphene company. Elcora mines, processes, and refines graphite. That graphite is converted to graphene or graphite powder for Li-ion batteries. As part of the vertical integration strategy, Elcora has secured high-grade graphite from its interest in the operation of the Ragedara mine in Sri Lanka, which is already in production. Elcora has the tools and resources for graphite and graphene vertical integration.

For further information please visit the company's website at http://www.elcoracorp.com. Continue to watch for updates on the development work by tuning into https://youtu.be/5shbT68Trno.

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