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iM3NY Lithium-ion Batteries to be some of the Greenest Globally

- **Green credentialed supply chain to lead to some of the greenest batteries in the marketplace as was independently verified by US research and consulting firm Abt Associates**
- **Abt Associates Report highlights at least 87% less dirty energy per kilowatt hour versus comparable batteries**
- **Semi-Automated Production on track for December 2021**

Magnis Energy Technologies Limited (“**Magnis**”, or the “**Company**”) (**ASX: MNS**) announces key data regarding the green credentials for batteries being produced out of the iM3NY battery plant based in Endicott, New York of which Magnis is the major shareholder.

iM3NY Lithium-ion Cells

iM3NY lithium-ion cells are engineered to lead in safety and performance at the forefront of advanced chemistry, robust cell design, and manufacturing process that ensures low cost, flexibility, long-term high repeatability while factoring in green attributes in the manufacturing process. Semi-Automated production is on track for December 2021.

Greenest Batteries in the Marketplace

Abt Associates assessed the environmental impact of C4V’s lithium-ion battery production for NYSERDA in mid-2020, and the following results were published by Abt Associates in a special article with key outcomes highlighted below.

“Our lifecycle analysis found C4V’s batteries which are used to power EVs consume fewer metals and less-toxic materials during manufacture than comparable lithium cell batteries. This leads to lower global warming, acidification, smog, and energy consumption when compared to other Li-ion battery production processes.”

“Manufacturing lithium batteries or any product with dirty energy drastically increases the associated pollution, especially products that require vast amount of energy to manufacture. Think of it as garbage in, garbage out. C4V’s lithium batteries require 89 MJ of “dirty energy” per battery kWh manufactured. We found comparable batteries manufactured with more fossil fuels consumed 719 to 1,219 dirty energy-inclusive MJ per battery kWh manufactured. This significant differential is explained in part by the fact that C4V chose New York to host its manufacturing facilities.”

“New York’s Clean Energy Standard was revised in 2019 to require 100 percent carbon-free electricity by 2040. In 2018, 29 percent of New York’s in-state generation at both large- and small-scale facilities came from renewable sources. The state ranks 14th in renewable electricity production as percent of total generation, so it’s energy is cleaner than that produced by most other states. This means there’s less additional pollution associated with the energy used for production. For the manufacture of Li-ion and other, similar products, choosing to build those products with clean energy goes a long way to reducing their environmental impact.”

“The other old environmental adage about material consumption—Reduce, Reuse, Recycle holds here as well. In the case of Li-ion batteries, they contain many toxic chemicals—such as copper lithium, nickel, cadmium, and other heavy metals—that require a substantial amount of energy and produce a lot of pollution and waste during the refining and manufacturing processes. C4V found ways to build a battery that reduces its use of toxic materials compared to similar lithium cell batteries. Again, this translated into less pollution during the manufacturing process and lower environmental impacts. For example, It appears comparable batteries use nearly double the amount of copper used in the C4V battery and copper refining is often a primary driver of particulate emissions in battery manufacturing.”

“What can other manufacturers learn from this analysis? That choices made when building a product are important. Sometimes manufacturers may choose dirtier processes or materials because they’re cheaper, more convenient, or more efficient in the short-term. However, this tradeoff of old is no longer necessary. Now, manufacturers can choose processes that are cleaner, more efficient, and consider all the externalities of production.”

Magnis Chairman Frank Poullas commented: “We are deeply committed towards integrating strong ESG and sustainability practices. We continue to demonstrate real action in lowering the environmental impact and in creating benefits to all stakeholders. We are proud to play a role in advancing the progress on the UN Sustainable Development Goals (SDGs), by catalysing the pathway to the clean energy transition. We believe that Magnis provides a perfect investment for conscious, ESG and impact conscious investors who are seeking to align their values towards making a positive impact on the world and creating real world outcomes.”



Figure 1: Full-sized Lithium-ion Battery Prismatic Cell produced by iM3NY

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