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EXTRA FAST CHARGE BATTERIES – POTENTIAL GAME CHANGER

- Extra Fast Charge results for unoptimised cells developed by Magnis Partner, Charge CCCV, LLC. ["C4V"], have yielded *a potential game changer for electric vehicle [EV] manufacturers.*
- Over 85% charge achieved in 6 minutes.
- Potential ability to shorten the charging times and thus enabling operational flexibility for EVs, convenience to EV consumers, and potential increase in run time for in-service EVs.
- Low cost and sustainable processes are ethically aligned with the use of such designs as requested by EV manufacturers.

Magnis Energy Technologies Limited ["Magnis", or the "Company"] [ASX: MNS] is very pleased to announce that Extra Fast Charge ["EFC"] test results for electric vehicles ["EV"] batteries developed by Magnis Partner, Charge CCCV, LLC. ["C4V"], have yielded a potential game changer for electric vehicle [EV] manufacturers.

Extra Fast Charge Battery

Having attracted global attention in recent times, EFC shortens the charging times required by traditional EV charging, enabling operational flexibility for EVs, convenience to EV consumers, and potential increase in run time for in-service EVs.

Battery cells optimised for very fast charging are required to maximise charging energy efficiency and battery life. Magnis technology partner, C4V, is at the forefront of this technology development and has been working with end users being commercial EV manufacturers, to develop a future proof design for EFC batteries with a focus on low cost and sustainable practices.

Innovation

The C4V team has developed and built advanced Lithium-ion battery cell technology that can significantly improve the cycling life of commercial Lithium-ion batteries. The longer cycling life benefits from its proprietary high voltage bio-mineralised Lithium-Mixed-Metal-Phosphate [BM-LMP] Cathode and the Anode material using C4V and Magnis technology. This development program is undergoing a rigorous test program on the cell-level and aims to conduct end user system level tests in the coming months.

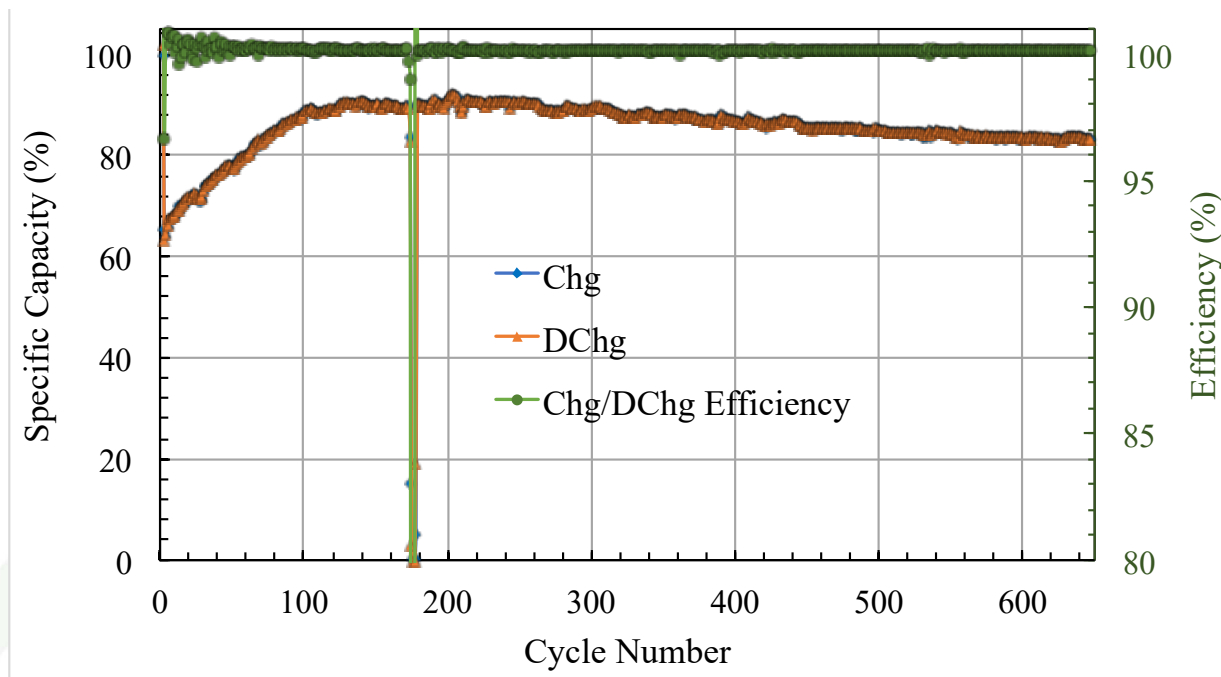


Figure 1: Initial cycling data for EFC from unoptimised commercial size cell

Figure 1 shows initial cycling results from an unoptimised commercial size cell made with C4V technology, and its cycling life retention over 650 cycles, with a 6 minute charge and 1 hour discharge. 100% on Y-axis indicates charge capacity of the same cell at a 3 hour charge time. The C4V team is in the process of developing a 25-50kWh pack for EFC demonstration at the conclusion of the program. The unoptimised cell is within 99% energy density of a regular energy cell, which means no energy density loss for the regular charge discharge processes. Initial 100 cycles run with pulse charging to condition the cell for better life expectancy.

C4V President Dr Shailesh Upreti commented: “Today’s results are very exciting and our potential partners in the automobile industry have been highly encouraged by the data produced so far. We have commenced a demonstration program to showcase the benefits of EFC at the system level, by committing to deliver a minimum 25KWh battery pack to an EV producer with EFC capabilities. We look forward to producing further batteries with continued improvements for this fast-growing sector, with the aim to eventually deploy C4V’s proprietary technology at Giga scale in New York and Australia.”

Magnis Chairman Frank Poullas commented: “Fast charging is usually synonymous with batteries degrading quickly, however today’s results using an unoptimised cell are exciting and will improve further as the cell is optimised. This news is highly encouraging for the global battery industry and for every EV manufacturer. To be able to charge batteries within 6 minutes would be a game changer and it’s comforting to know that Magnis and C4V are at the forefront of this and other battery technologies.”

This announcement has been authorised for release by the Board of Magnis Energy Technologies Limited [ACN 115 111 783].

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