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# Quarterly Activities Report to 31 December 2018

# HIGHLIGHTS

- Battery partner C4V, announces prototype Solid State Battery Production
- New York Battery Plant Update
- Official Change of Company Name to align strategies and development
- Appointment of Managing Director
- Nachu Graphite Project Update subsequent event to quarter end
- Indian interest and discussions on first battery plant in their country subsequent event to quarter end

Magnis Energy Technologies Ltd ("Magnis" or the "Company") [ASX:MNS] is pleased to present its Quarterly Activities Report for the period ended 31 December 2018.

The major activities announced during the past quarter are summarised in this report.

# Battery partner C4V, announces prototype Solid State Battery Production

The Company announced to the ASX on 2 October 2018, that battery partner, Charge CCCV ["C4V"] completed production of a working prototype Solid State Battery which was demonstrated at the 2018 NYBEST Conference in New York.

C4V's new Solid State Battery, replaces more than 80% of the liquid electrolyte with a solid electrolyte. This effectively produces a lower cost battery that is higher capacity, higher density, higher performance, and with significantly reduced charging times than existing battery solutions. Further, C4V's battery does not require cobalt which contributes to the reduction of costs and an increase in scalability of production without metals supply constraints.

The prototype Solid State Battery demonstrated in New York has specific capacities of 380Wh/kg and 700 Wh/L which is expected to increase to 400Wh/kg and 750 Wh/L through optimisation over the coming months prior to production for commercial availability.

As an example, the C4V Solid State Battery will be capable of delivering a 70% increase in range for electric vehicles when compared to other batteries, allowing an electric car with a current 400km range to be able to run 680km on the same single charge.

C4V is working alongside commercial supply chains to further refine and optimise compositions, chemical structure, particle morphologies, and electrode processing techniques to develop solutions for tailored applications including electric vehicles, grid backup solutions, aviation, and portable electronics. Magnis has exclusivity to C4V IP.



Figure 1: C4V Third Generation Solid State Battery

#### New York Battery Plant Update

Progress has been made by Imperium3 New York, Incorporated (iM3NY) with respect to start-up activities for the New York Gigafactory project in which Magnis has increased its indirect and direct shareholding to 47%.

Physical relocation including the disassembly, packaging and shipment of the acquired equipment from the previous battery manufacturing plant in North Carolina to the new iM3NY facility at the Huron Campus in Endicott, New York was recently completed.

Particular care was taken to ensure the plant and equipment traceability including tagging, recording and tracking every asset from the original auction item identifiers into iM3NY's equipment and inventory tracking system and fixed asset tagging of items as they arrived at the Huron Campus.

The equipment and inventory will remain in approximately 100,000sq feet of storage space while plans for the design and installation of production lines and facilities are developed over the next few months. Plans are geared subject to project or investment funding, towards the

initial start of production during the latter stage of calendar 2019 in a more robust 300,000sq feet facility that is located within the adjacent storage facility on the former IBM manufacturing campus at Endicott.

Work on design and process engineering has commenced along with site preparations following the successful move of the battery manufacturing plant. Equipment manufacturers, engineers and the Imperium3 (iM3) New York team have been working closely together to meet the future production time frames and local government and environmental approvals have been underway. The iM3 team are actively assessing potential financing arrangements and investment opportunities to allow production to commence this year.

Key personnel hiring will be undertaken over the next six months and the manufacturing system design will be tailored to accommodate high-volume production throughput.

## Company Name Change

The change of the Company's name occurred during the quarter, after approval by shareholders at the Annual General Meeting held in late October. The change reflects the nature of the business that Magnis is creating now and in the future. While Magnis is focused on bringing the Nachu Graphite Project into development, the Company is now vertically integrated in the production of lithium-ion batteries beyond just the mining operation.

# Appointment of Managing Director

During the quarter, the Company officially appointed the existing non-executive director, Mr Marc Vogts, as the new Managing Director. Marc will oversee the major growth of the Company.

Marc, a project executive has an experienced and illustrious career spanning over four decades with an extensive track record in running multi-billion-dollar projects. He was previously Project Director for the QMM Project in Madagascar for Rio Tinto, Vice President for Project Management for BHP Billiton and Vice President for all Uranium Projects including Olympic Dam for BHP Billiton.

Many of the complex projects that Marc has led include significant research and development scopes and the successful commercialisation of these ventures.

Marc was the founding CEO and is currently the Executive Director of Energy and Resources at the John Grill Centre for Project Leadership at the University of Sydney, a world leading project leadership executive education for value creation and realisation in large-scale projects.

# Nachu Graphite Project Update

#### Compensation Program

The Company provided an updated to the ASX on 30 January 2019 regarding the Nachu Graphite Project in Tanzania as some milestones have recently been completed and others nearing completion.

The Compensation Program resulting from the Land and Asset Valuation that Magnis subsidiary, Uranex Tanzania Ltd ("Uranex") undertook, was completed for all Project Affected Persons (PAP) within the Nachu Graphite Special Mining Licence (SML) in accordance with the

laws and guidelines of Tanzania, guiding valuation of assets for compensation and resettlement programs.

The main valuation process was approved by the Chief Valuer (CV) in December 2016, and a signing of the Supplementary Valuation Report by the CV occurred in July 2018 concluding legal occupancy of the SML land by Uranex in accordance with the Act Supplementary No.11 dated 23rd March 2018: The Valuation and Valuers (General) Regulations, 2018. Within the SML, 785 PAP were identified in total for the Valuation and Resettlement Program.

By 21 January 2017, a total of 720 PAP were paid a sum of TZS 6.7 Billion (~AUD 4.064 million). During November 2018 land payments to the remaining PAP accounted for a sum of TZS 643 Million (~AUD 386 thousand) making a cumulative total of TZS 7.4 Billion (~AUD 4.5 million) for paid compensation for land and assets as per the approved Valuation Report.

In conjunction with clear access to the ground and to allow unrestricted ground clearance where required, the grave sites identified during the valuation have also been compensated for and relocated. The grave relocation program is 100% complete with grave payments totalling a sum of TZS 45.3 Million (~AUD 27 thousand) and all graves were relocated to local demarcated village grave yards. The successful completion of removal of graves in the SML concession, allows commencement of initial ground disturbing project development activities such as vegetation clearance and improving access.

In a media conference held in Lindi, Tanzania, on 15 January 2019, the Lindi Regional Commissioner Hon. Godfrey Zambi stated "The Government of Tanzania recognises the efforts of Uranex during the valuation and land compensation process, the Company and consultants performed in a professional and very correct manner to assure all the Project Affected People were compensated fairly and timely."

# Resettlement Program

As part of the Magnis valuation and compensation program, there is a need to look after the relocation of families that resided within the Special Mining License area. 59 households ranging from relatively well-built local clay fired brick houses that are roofed with corrugated iron sheets to poorly built mud walled, and grass thatched houses were identified to be inside the SML area. These people must be resettled elsewhere or placed into short term rental accommodation whist new housing is built to make way for development of the mine and its infrastructure.

Magnis has decided to build alternative modern houses outside the SML and to do so, has acquired 54 acres of land outside the SML area to build houses for the affected households falling inside the SML. This village land is currently named Nachu Village and since it will host a minimum of 59 households, key social facilities will be required to support the population of the area. The Nachu Village will likely in time, become a small township and for this reason, a separate ESIA study was completed to identify, assess and focus on all positive and negative impacts generated by the establishment of such a small township to properly mitigate the negative impacts and enhance positive benefits of establishing such a village. The ESIA is a key planning and management tool of the township during the construction and operational phase of the Nachu Village project.

Uranex has recently received the Environmental Certificate approving and accepting the ESIA report and the measures within and in turn allowing the next phase of proceeding with the resettlement village including a local District building permit and finalisation of construction tender processes.

Engineering, Procurement, Construction and Finance (EPC+F) Discussions

In recent weeks senior level Magnis representatives have been overseas speaking with a global engineering group regarding EPC+F for the Nachu Graphite Project. Discussions to date have been very encouraging with information remaining commercial in confidence.

# Listing on the DSE

Uranex continues to be in discussions with the Mining Ministry in Tanzania regarding seeking assurances of "a waiver" from the Minister for Minerals regarding the need of Uranex to be listed on the Dar es Salaam Stock Exchange (DSE). The legislation provision of a "waiver" is being examined as Uranex cannot meet all essential criteria to listing, including current year on year profitability and as such, is seeking to be excluded from the legislation requirement to list on the DSE as a holder of a SML. The Company will provide further updates when they officially become available from Government authorities in Tanzania.

### Subsequent event post reporting period - potential Indian lithium-ion battery plant

The Company released information to the ASX on 21 January 2019, regarding an announcement by The Government of India's Ministry of Heavy Industries and Public Enterprises, advising that BHEL was in dialogue with LIBCOIN on the building of India's first lithium-ion battery (LIB) Gigafactory beginning at 1GWh and scaling up to 30GWh.

BHEL is a global energy powerhouse with its equipment accounting for 60% of India's power generation. BHEL is a leading state-owned company with more than 50 years of experience, wherein The Government of India is holding 63.06% of its equity. BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organisation in India, catering to the core infrastructure sectors of the Indian economy. The annual turnover of BHEL for the year 2017-18 was approximately US\$4.1 Billion with over US\$8 Billion in assets. BHEL's highly skilled and committed employees amount to 37,500 in number.

BHEL has technology tie-ups with leading providers that include General Electric, Siemens, Metso Automation Inc and Kawasaki Heavy Industries Ltd.

LIBCOIN is a consortium made up of Magnis, Duggal Family Trust and Charge CCCV ("C4V") and has a vision to build large LIB gigafactories globally with the significant focus being on the Indian market. Magnis has a 20% non-dilutive stake in LIBCOIN.

The consortium plans to maintain a technical competitive advantage through existing and new unique IP, that will continue to deliver superior LIB cells by delivering vertically integrated global procurement capability throughout the LIB Battery Supply Chain.

The consortium has been in discussions with BHEL for approximately nine months and is the natural choice as a partner on the project as they are synonymous with power generation in India. BHEL is a household name in India and carries a history of quality and expertise in the power sector and has significant requirements for LIBs in the short-term with those requirements growing exponentially in the long-term.

Discussions are currently taking place with BHEL with details being 'Commercial in Confidence'. Talks are also progressing with other potential owners and offtake partners mainly from the local automotive sector who are showing considerable interest.

# **Funding**

The cash position for the Company at 31 December 2018 was A\$6.2M. In September 2018, the Company announced to the ASX that it had completed the transaction to acquire a 10% interest in battery technology group C4V. As at 31 December 2018, the Company's investment holding has increased via its indirect and direct shareholding in Imperium3 New York, Incorporated [iM3NY] to 47%.

#### **Tenements**

The following are the Mineral Tenements held by the Company:

SML550/2015 SML Nachu (100%) PL10929/2016 Nachu (100%)

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Marc Vogts

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