ASX: QEM

ASX ANNOUNCEMENT

27 June 2023

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QEM secures second vanadium-rich Queensland waste stream for conversion to battery electrolyte

Highlights

- **Agreement with Incitec Pivot Limited builds on Sun Metals' commitment in March to provide QEM with vanadium-bearing spent catalyst.**

- **Second Circular Economy opportunity for QEM to upcycle Queensland industrial waste to battery grade vanadium pentoxide (V2O5).**

- **QEM has applied to use the Queensland Government's $75M Critical Minerals facility in Townsville to produce battery grade V2O5 from the spent catalyst collected from Incitec Pivot and Sun Metals.**

QEM Limited (ASX: QEM) **("QEM" or "Company")** is pleased to announce it has entered into an agreement with Incitec Pivot Limited (ASX: IPL) **("IPL" or "Incitec Pivot")** to collect all the vanadium-bearing spent catalyst from IPL's Mount Isa Sulphuric Acid Plant and process this waste into high purity vanadium pentoxide (V2O5).

The scope of the off-take agreement between QEM and IPL is for five years with an option to extend.

QEM entered into a similar agreement in March on the supply of vanadium-bearing spent catalyst from Sun Metals Corporation Pty Ltd's (**"SMC" or "Sun Metals"**) Townsville Zinc Refinery (see ASX Announcement dated 7 March 2023).

This collaboration between QEM and IPL represents another Circular Economy opportunity where industrial waste can be repurposed to a higher use. V2O5 is the critical component of the catalyst required to produce sulphuric acid and our aim is to recover and repurpose the V2O5 for use in VRFB batteries critical to achieving Australia's carbon reduction targets.

QEM commissioned Clean TeQ Water Ltd (ASX: CNQ) **("CNQ" or "Clean Teq")** to assess the viability of vanadium recovery from IPL's spent catalyst (see ASX Announcement dated 7 March 2023).

QEM has made application to access the Queensland Resources Common User Facility (**"QR-CUF"**) for which the Queensland Government has allocated $75M in funding. The equipment necessary to produce battery grade V2O5 from the spent catalyst is being considered as part of the QRCUF Project.

Speaking during the World Mining Congress in Brisbane, QEM Managing Director Gavin Loyden stated, "We have been working on developing multiple sources of Queensland industrial waste to be repurposed for conversion to vanadium battery electrolyte."

"This will introduce Queensland-sourced and processed vanadium electrolyte into the market before emerging primary producers like QEM are able to supply our own V2O5 from our primary vanadium resource at Julia Creek.

"What began as a small-scale project between QEM and Sun Metals with predominantly environmental drivers, now has economies of scale with Incitec's inclusion and enhanced vanadium industry development drivers.

"I believe that this type of initiative will contribute to realising Queensland's potential to become a global player in high purity V2O5 production and throughout the supply chain, all the way to vanadium redox flow battery production – an Australian invention," said Mr Loyden.

IPL interim CEO Paul Victor said: "This partnership is a great example of the circular economy in action and a win-win for both QEM and IPL.

"We are really pleased to be reducing waste by repurposing our spent catalyst and providing QEM with the valuable vanadium metal.

"It is part of our ongoing focus on sustainability across our operations and our commitment to exploring innovative waste reduction solutions," said Mr Victor.

QEM's recent visit to IPL acid plant in Mount Isa

ENDS

This announcement was authorised for release on the ASX by the Board of QEM Limited.

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ABOUT QEM

QEM Limited (ASX: QEM) is a publicly listed company which is focussed on the exploration and development of its flagship Julia Creek Project, covering 250km² in the Julia Creek area of North Western Queensland.

The Julia Creek vanadium / oil shale project is a unique world class resource with the potential to utilise and deliver innovative and sustainable energy solutions, through the production of transport fuels and vanadium pentoxide. QEM strives to become a leading producer of liquid fuels and in response to a global vanadium deficit, also aims to become a global supplier of high-quality vanadium pentoxide, to both the nascent energy storage sector and the Australian steel industry.

This globally significant JORC (2012) Mineral Resource of 2,850 Mt @ 0.31% V2O5 is one of the single largest ASX listed vanadium resources and represents a significant opportunity for development. The resource is comprised of 360Mt @ 0.29% V2O5 in the Indicated category and 2,490Mt @ 0.31% V2O5 in the Inferred category, with the added benefit of a contingent (SPE-PRMS 2018) in-situ oil resource of 71MMbbls of Oil equivalent in the 2C category (@90% recovery), and 626MMbbLs in the 3C category (@90% recovery), contained within the same ore body.

The tenements form part of the vast Toolebuc Formation, which is recognised as one of the largest deposits of vanadium and oil shale in the world. The project is located 6km east of the township of Julia Creek, in close proximity to all major infrastructure and services, and intersected by the main infrastructure corridor of the Flinders Highway and Great Northern Railway, connecting Mt Isa to Townsville.

ABOUT Incitec Pivot Limited

Incitec Pivot Limited (IPL) is an ASX 100 Company and a global leader in the resources and agricultural sectors. Our commitment to Zero Harm drives us as we deliver innovative technology solutions, manufacturing excellence and world-class services. Our explosives company Dyno Nobel plays a critical role in releasing the world's natural resources for infrastructure and energy needs. With a 100-year heritage, Incitec Pivot Fertilisers enables sustainable food production to meet rising global demand.

About Clean TeQ Water Limited (ASX: CNQ)

Based in Melbourne, Australia, Clean TeQ Water provides innovative metals recovery and water treatment solutions for governments and companies. Its sectors of focus include municipal wastewater, surface water, industrial wastewater and mining wastewater. Clean TeQ Water has offices in Melbourne, Perth, Beijing and Tianjin, and partners in Africa and Latin America. It provides turnkey metals recovery and water treatment plants across the world.

For more information about Clean TeQ Water please visit www.cleanteqwater.com.

*The information in this announcement that relates to the mineral resource and contingent resource estimates for the Company's Julia Creek Project was first reported by the Company in its IPO prospectus dated 20 August 2018 and supplementary prospectus dated 12 September 2018 (together, the "Prospectus") and the subsequent resource upgrade announcements ("Resource Upgrade") dated 14 October 2019 and 7 April 2022. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus and Resource Upgrade, and in the case of estimates of Mineral Resources and Contingent Resources, that all material assumptions and technical parameters underpinning the estimates in the Prospectus and Resource Upgrade continue to apply and have not materially changed.