

ASX ANNOUNCEMENT



8 April 2021

QEM Advances Green Hydrogen Strategy

- **QEM engages DNV to further progress studies into green hydrogen opportunities at Julia Creek**
- **DNV has commenced a pre-feasibility study into solar and wind farm potential**
- **Green hydrogen strategy to underpin the continued development of the Julia Creek vanadium and oil shale project**

QEM Limited (ASX: QEM) ("**QEM**" or "**Company**") is pleased to announce that it has engaged DNV Australia Pty Limited ("DNV") to undertake a pre-feasibility study ("PFS") into power generation from solar and wind farms, as part of the Company's broader assessment into the production potential of green hydrogen on site at QEM's flagship 100%-owned Julia Creek vanadium and oil shale project in North Queensland.

QEM previously announced it had commissioned studies with E2C Advisory Pty Ltd ("E2C") to investigate the capital and operating cost requirements of the Company producing green hydrogen on site at Julia Creek using a solar-powered electrolyser (see ASX announcement dated 15 March 2021).

DNV's complementary PFS encompasses solar farm resource mapping and modelling, as well as a preliminary solar photovoltaic (solar PV) system design.

Additionally, as part of the PFS, DNV will develop a preliminary wind turbine layout and assess wind farm resource mapping and modelling.

The wind portion of DNV's PFS will help QEM assess how complementary wind and solar are at the site as potential renewable energy sources for the electrolyser to produce hydrogen. Subsequently, this will also be considered in E2C's assessment.

The PFS is scheduled to be finalised by the end of Q2.

Following the successful completion of the PFS, DNV will undertake more definitive wind resource measurements and solar resource monitoring, which are anticipated to be under way in Q3.

DNV is one of the world's largest technical consultancies in the global renewable energy sector.

QEM Managing Director Gavin Loyden said the Company is proactively progressing its green hydrogen strategy.

"Engaging DNV demonstrates that we are swiftly laying the foundations for green hydrogen opportunities at Julia Creek," Mr Loyden said.

"The Julia Creek site receives significant sun exposure and DNV has already noted that the site is substantially flat, which bodes well for installation of wind power generation.

ASX ANNOUNCEMENT



“Importantly, advancing our green hydrogen strategy will enhance the development of our flagship Julia Creek vanadium and oil shale project.”

About Green Hydrogen

Hydrogen, which is the most abundant element on earth, is a non-toxic colourless gas that has to be extracted from other compounds by a chemical process.

The creation of hydrogen is considered green if renewable energy, such as solar panels or wind turbines, are used to generate electricity for electrolysis of water, rather than a chemical process that creates carbon emissions.

About DNV

DNV is the independent expert in risk management and assurance, operating in more than 100 countries. Through its broad experience and deep expertise DNV advances safety and sustainable performance, sets industry benchmarks, and inspires and invents solutions.

Whether assessing a new ship design, optimizing the performance of a wind farm, analyzing sensor data from a gas pipeline or certifying a food company’s supply chain, DNV enables its customers and their stakeholders to make critical decisions with confidence.

Driven by its purpose, to safeguard life, property, and the environment, DNV helps tackle the challenges and global transformations facing its customers and the world today and is a trusted voice for many of the world’s most successful and forward-thinking companies.

In the energy industry

DNV provides assurance to the entire energy value chain through its advisory, monitoring, verification, and certification services. As the world's leading resource of independent energy experts and technical advisors, the assurance provider helps industries and governments to navigate the many complex, interrelated transitions taking place globally and regionally, in the energy industry. DNV is committed to realizing the goals of the Paris Agreement, and supports customers to transition faster to a deeply decarbonized energy system.

ENDS

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

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ASX ANNOUNCEMENT



*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 announcement ("Resource Upgrade") dated 14 October 2019. 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.

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 deliver innovative energy solutions, through the production of energy 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 2,760 Mt @ 0.30% V₂O₅ is one of the single largest ASX listed vanadium resources and represents a significant opportunity for development.

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 and located less than 16km east of the township of Julia Creek. In close proximity to all major infrastructure and services, the project is intersected by the main infrastructure corridor of the Flinders Highway and Great Northern Railway, connecting Mt Isa to Townsville.

QEM Limited

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