

9 June 2022

Zeotech Limited (ASX: ZEO, "Zeotech" or "The Company") is pleased to attach a copy of its presentation for the Credit Suisse Australia Forum.

Ms Sylvia Tulloch, Chairman, is a member of the panel on the topic "Capturing the hard to abate: the role of CCUS in industry" and will be presenting on the 'ESG Investment Theme' day, Thursday 9 June.

- End -

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Credit Suisse Australian Forum

Capturing the hard to abate: the role of CCUS in industry

June 2022

ASX: ZEO www.zeotech.com.au

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Company overview



ESG positive company

An emerging mineral processing technology company, with a portfolio of exciting projects targeting circularity and sustainability, utilising advanced materials 'manufactured zeolites'



Proprietary process

Maximising green & sustainable processes to produce manufactured zeolites = low energy use, reduced production time, high reagent recycling.



Patent-pending technology

The company's core technology – International Preliminary Examination Authority examiner, expressed a view that all 26 claims in the PCT application are novel and inventive.



Circular economy enablement

Developing a value-add lithium process tailings management solution, by producing manufactured zeolites from leached spodumene by-product.



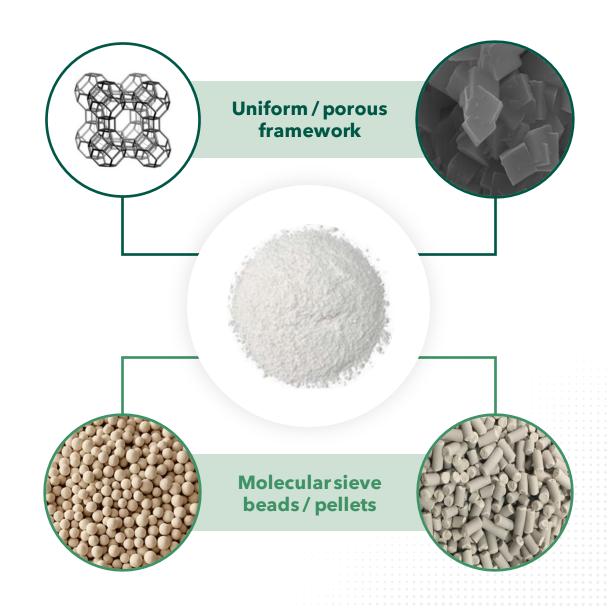
GHG mitigation/abatement

Portfolio of projects targeting the reduction / mitigation of GHG emissions, including CO₂ utilisation, sequestration and methane oxidation.

Manufactured Zeolites

Zeolites are high-value adsorbents / catalysts with broad applicability

- Manufactured zeolites are synthesized aluminosilicate minerals with a sponge-like structure (frameworks)
- Zeolites are made up of tiny pores that make them useful as adsorbents, catalysts and ultrafine filters
- Type A zeolites are commonly known as molecular sieves
- Can be designed to selectively adsorb molecules or ions dependent on their unique construction and can be regenerated repeatedly for re-use
- Manufactured zeolites act like a magnet that can hold cations, including heavy metals, ammonia, low level radioactive elements, toxins, petrochemicals, many different types of gases and a multitude of various solutions, offering diverse applications



Collaboration targets circularity and sustainability





CO₂ utilisation

- Develop a sustainable process for converting captured CO₂ into syngas and hydrocarbon fuels such as methanol.
- CO₂ hydrogenation process utilising green hydrogen and low-cost structured metal-based zeolites as catalysts to produce value add-products.



Lithium refinery cleantech

- Developing a lithium process tailings management solution
- Proprietary IP to convert lithium process by-product into high value molecular sieve zeolites
- Trailblazer Grant project win, with UQ and Covalent Lithium as project partners.





Nutrient management & carbon sequestration

- Developing ZEO agri-products, to improve on-farm economics & offer carbon market opportunity:
 - Improved nutrient mgmt. and soil moisture levels
 - Enhance soil carbon
 - Decrease soil acidification
 - Pesticide Destruction

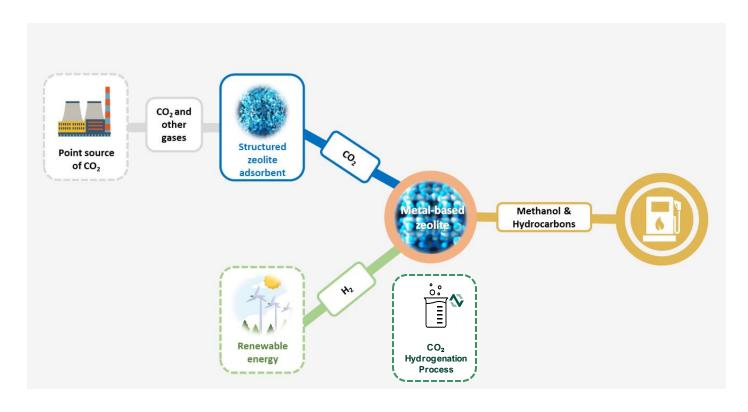


Landfill methane control program

- Evaluate properties of ZEO manufactured zeolites applied to landfill cover soils to facilitate methane oxidation, as well as decreasing dangerous and nuisance gas emissions.
- Fresh landfill sites have no immediate solution to reduce methane emissions, until retired and capped / engineered.

CO₂ Utilisation

Hydrogenation of CO₂ utilising metal-based zeolite catalysts



- Develop a sustainable process for converting captured CO₂ into syngas and hydrocarbon fuels such as methanol.
- The CO₂ hydrogenation process utilising green hydrogen and low-cost structured metal-based manufactured zeolites as catalysts to produce value add-products.
- UQ will undertake the project with ZEO as an industry partner in the ARC Training Centre for the Global Hydrogen Economy.
- CO₂ utilisation process can be an add-on the existing CC technologies or teamed with proven CO₂ separation technology, Pressure Swing Adsorption (PSA).



Lithium refinery cleantech

Proprietary IP to convert lithium process by-product into high value molecular sieve zeolites

- Zeotech has developed proprietary process technology to produce type A molecular sieve zeolites from leached spodumene
- The cleantech solution creates a valuable advanced material from lithium refinery by-product and reduces tailings volume
- Australia is expected to become one of the largest producers of lithium hydroxide, a key input for lithium-ion batteries, from demand driven by vehicle electrification and as global economies target carbon neutrality
- Approximately 6-7 tonnes of concentrate feed is required to produce 1 tonne of lithium hydroxide, resulting in a significant surplus of by-product
- Lithium refinery participants are under increasing pressure from regulators and the community to manage ESG impacts from mine process by-products.
- IP offers a potential 'circular economy' enabler to the lithium refinery industry







Developing Agri-Products to improve fertiliser economics and enhance soil carbon

- Program underway to develop agri-products that aim to improve fertiliser delivery economics, whilst enhancing and protecting soil carbon levels.
- Recent trials revealed exceptionally high phosphate retention by Zeotech products.

The early trial results support a range of potential benefits:

- Compelling slow-release fertiliser delivery platform;
- Nutrient interception from waste streams coupled with potential re-application to agricultural soils as a fertiliser; and
- Additional co-benefits from improved soil moisture retention, decreased soil acidification, eutrophication prevention and increased soil carbon protection.



The blue highlight line indicates where an active manufactured zeolite layer could function to intercept and destroy methane emitted from the underlying refuse.



Landfill methane control program

- Zeolites applied to landfill cover soils could enhance methane oxidation, contributing to climate change mitigation as well as decreasing dangerous and nuisance gas emissions.
- Methane is the second most significant GHG with a 100-year global warming potential 28 times greater than CO_2 , and landfill methane releases just under 1 Gt of atmospheric CO_2 -e p.a.
- An active manufactured zeolite layer could function to intercept and destroy methane emitted from the underlying refuse within landfill sites
- Comprehensive program planning underway, supported by recent scoping study (completed April 22), found high-level reviews and industry application papers confirming zeolites offer both biological and chemical methane oxidation potential.



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