NEWS

Issue 27 | AUGUST 2018

Calix

HIGHLIGHTS

Successful IPO sees Calix raise $8m in capital after strong institutional interest

LEILAC project update: major erection contract awarded

BOOSTER-Mag takes another step toward international licensing

Calix on track to commission advanced battery materials reactor

Further biogas trials kick off in Australia and the UK

Second export to China for AQUA-Cal+

Calix's LEILAC Project – Completed Furnace Elements arrive on site at HeidelbergCement's Lixhe cement plant, Belgium

EDITORIAL

Issue 27 highlights

Phil Hodgson
CEO

In the eight weeks since our last newsletter, Calix has achieved some significant milestones. Perhaps most significantly, we listed on the Australian Stock Exchange (ASX) with well-oversubscribed institutional interest that helped us raise $8 million in capital.

We're now embarking on growth initiatives focused on expert revenue expansion in Europe, the US, and Asia. Our battery and agriculture development programs are in full swing and we'll keep you updated on all of these developments as the new financial year unfolds.

Some other key highlights in the past eight weeks are:

- Our low emissions intensity lime and cement (LEILAC) project in Belgium continues to progress on time and budget. We remain on track to complete construction and commissioning of this project in March/April 2019.
- Our advanced battery materials project, BATMn, has successfully completed front-end engineering design. Next step: detailed design and construction.
- Our BOOSTER-Mag crop protection licensing strategy has seen a second material transfer agreement (MTA) signed with a major multinational crop protection company.
- Our biogas enhancement application began two more trials with one in Australia and the other in the UK.

Exciting times ahead for the Calix team. Thanks for your interest and continued support.

KEY MILESTONES

LEILAC PROJECT UPDATE: MAJOR ERECTION CONTRACT AWARDED

Calix's LEILAC Project – A render of what the completed Calix CO2 separation facility will look like.

Calix's CO_2 abatement project for lime and cement industries continues to go from strength to strength with the award of the major erection contract. Works are scheduled to commence immediately on the CO2 separation facility.

The low emissions intensity lime and cement (LEILAC) project in Belgium is worth E21 million, with E12 million in funding from the EU Horizon 2020 Research and Innovation program. Calix leads a consortium of the world's largest cement and lime companies, as well as leading European universities and research institutes.

Other key milestones achieved recently include:

- Site preparation works are complete, including erection of a dedicated undercover storage and assembly area for LEILAC components.
- Civil works are complete, including foundations.
- The furnace shell has been delivered to the site and refractory lining operations have commenced.
- Factory acceptance of the burners achieved: ready for delivery.
- Phase one (zero to 17 metres) of the structure has been fabricated and is ready to be dispatched to the site.
- The furnace subsystems including pipework, fans, and control systems are 90 per cent complete.
- Raw and finished material transportation and feed systems are complete and ready for delivery.

With all of this progress, the project remains on time and budget for the construction phase to be complete at the end of March 2019. Commissioning and extensive testing will occur throughout 2019 and into 2020.

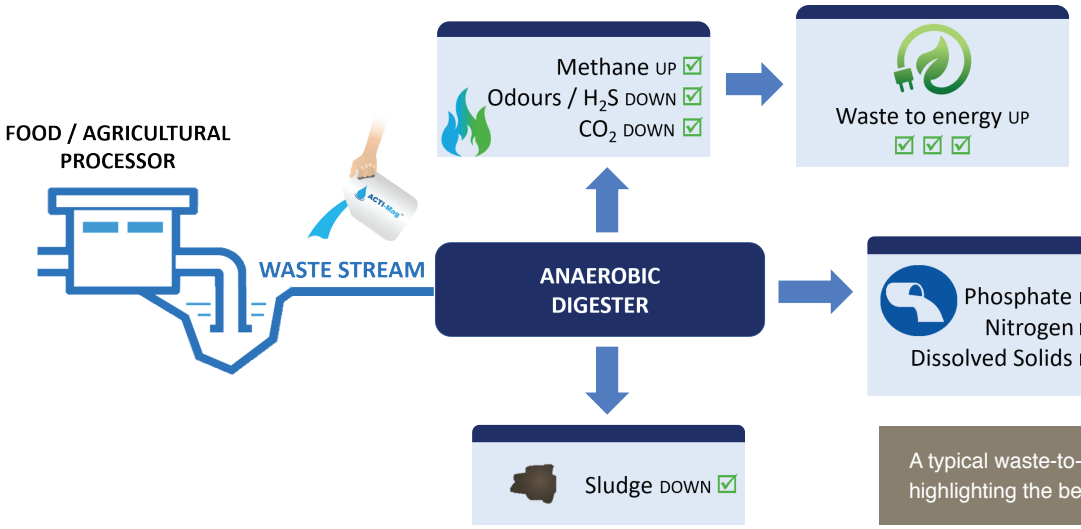
Calix's commercialisation strategy for this application of its technology is to prove its application via this pilot project, and proceed to a license / royalty model to the cement and lime industries.

You will soon be able to follow the construction of the CO2 separation facility with multi-angle time-lapse photos at www.project-leilac.eu.

OPTIMISING WASTEWATER EFFICIENCY

FURTHER ACTI-MAG BIOGAS TRIALS TO BEGIN IN AUGUST

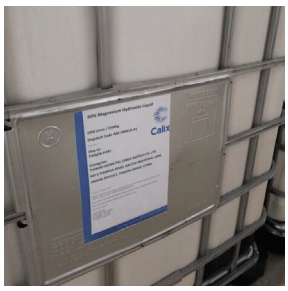
In our last Newsletter, we described how our ACTI-Mag product was recently used in a Thai palm oil processing facility to increase biogas power production and improve the environmental performance of the biotreater system. Following this success, Calix has begun a trial in early August with a major Australian water utility on its biotreater-to-biogas power system. Calix is also preparing a test run on a biotreater-to-biogas power plant in the UK, run by a company with multiple biogas power plants across the country.



A typical waste-to-biogas process, highlighting the benefits of ACTI-Mag addition.

MEETING CORE NEEDS IN AQUACULTURE

AQUA-CAL+ CONTINUES TO GAIN MOMENTUM IN CHINA



A second container of AQUA-Cal+ is on its way to Southern China following our very first shipment to China in June. China is one of the largest farmed shrimp producers in the world.

Calix looks forward to progressing AQUA-Cal+ trials there, following trial programs already underway in Vietnam, Indonesia and Thailand.

A SOLUTION FOR INCREASED CROP YIELDS

BOOSTER-MAG TAKES ANOTHER STEP TOWARD INTERNATIONAL LICENSING

Calix has executed a material transfer agreement (MTA) covering a multi-crop trial of its BOOSTER-Mag crop protection product with a major global crop protection corporation. This is a major step in the commercialisation pathway for BOOSTER-Mag and marks the second MTA executed with a multinational crop protection company.

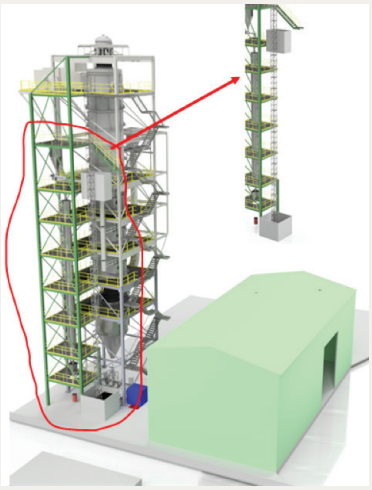
An MTA sets out the agreed trial protocols and IP ownership terms and conditions during the counter-party's detailed due diligence and testing of the product. It requires a considerable investment in time and money from the crop protection companies, and follows their assessments of independent efficacy testing of BOOSTER-Mag over the past three years.

Calix's strategy for BOOSTER-Mag is to pursue a sales and marketing licensing model with crop protection companies while continuing to manufacture the product in-house.

☜ BOOSTER-Mag is gaining further international attention with Rob van Merkestein, BOOSTER-Mag's business development manager, presenting a paper on our three years of tomato trials in Victoria at the ISHS 13th World Processing Tomato Symposium in Greece in mid-June this year.

R&D UPDATE

CALIX ON TRACK TO COMMISSION ADVANCED BATTERY REACTOR



Following the award of an Advanced Manufacturing Growth Fund grant in January 2018, Calix has been working on the design of a novel materials manufacturing facility at its Bacchus Marsh plant, targeting advanced cathode materials for lithium ion batteries, as well as numerous other advanced materials applications.

The project has completed Front-End Engineering Design (FEED) and is undergoing the hazard and operability study (HAZOP) phase before progressing into detailed design and construction. Calix continues to target end of April 2019 to finalise construction, with start-up and commissioning commencing by August 1, 2019.

Rendering of the new BATMn reactor, to be built alongside our current CFC calciner at Bacchus Marsh, Victoria.

Calix's commercialisation strategy for this application of its technology is to develop new "drop-in" materials that improve the performance of lithium ion batteries, and ultimately investigate alternate chemistries for improved battery performance, based upon its unique "kiln" technology's ability to produce highly porous micro-crystals.

STOP PRESS

Calix is proud to be part of the Industry / University collaboration "ARC Training Centre for Future Energy Storage Technologies" which was recently awarded approximately $4.4 million in Australian Government funding, to advance Australia's capabilities in advanced energy materials, batteries and battery control systems.

INTRODUCING

BILL KARIS
GENERAL MANAGER - SALES & MARKETING

Bill Karis credits his initial nine-year stint at Shell Australia with his subsequent successes. He joined the Calix team in May 2018 to run the sales and marketing teams for its in-market products and services in wastewater and sewer treatment.

Bill was born and raised in Sydney before moving to Melbourne to begin his role with Shell after completing his degree in mechanical engineering. At Shell, he was exposed to exceptionally smart, driven people as well as systems, processes, and disciplines that have had a profound effect on this thinking and career since then. He took a lead role in the restructure of Shell Oceania's sales force.

Following his time at Shell, Bill started up and grew a private company, Self-Drive Pty Ltd, which grew into a multimillion-dollar turnover business over 18 years. Bill remains a director of that company.

When he's not at work, Bill enjoys walking in the park with his wife, Jo, and their son and twin daughters, along with their dog Coco, the best-looking dog in the park. Bill also has a keen interest in the Australian outback, where he has travelled extensively.

To learn more about Calix technology, products, applications and services,
Visit www.calix.com.au
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