



## **ASX Announcement**

August 4, 2020

---

### **Calix – CO<sub>2</sub> market opportunity – presentation**

**Sydney, Australia | August 4, 2020** – Calix Limited (ASX: CXL 'Calix' or 'the Company') is pleased to provide a copy of the presentation – CO<sub>2</sub> market opportunity - that it will present at the NWR Small Cap Conference to be held at 11am, Tuesday 4 August 2020.

This announcement has been authorised for release to the ASX by:-  
Phil Hodgson  
Managing Director  
**Calix Limited**  
9-11 Bridge Street  
Pymble  
NSW 2073  
Ph +61 2 8199 7400

---

## About Calix

Calix is a team of dedicated people developing a unique, patented technology to provide industrial solutions that address global sustainability challenges.

The core technology is being used to develop more environmentally friendly solutions for advanced batteries, crop protection, aquaculture, wastewater and carbon reduction.

Calix develops its technology via a global network of research and development collaborations, including governments, research institutes and universities, some of world's largest companies, and a growing customer base and distributor network for its commercialised products and processes.

Because there's only one Earth – Mars is for Quitters.

**Website:** <https://www.calix.global/>  
**Twitter:** @CalixLimited  
**Youtube:** [CalixLimited](#)

### For more information:

Phil Hodgson  
**Managing Director and CEO**  
phodgson@calix.com.au  
+61 2 8199 7400

Darren Charles  
**CFO and Company Secretary**  
dcharles@calix.com.au  
+61 2 8199 7400

Simon Hinsley  
**Investor Relations**  
simon@nwrcommunications.com.au  
+61 401 809 653

# NWR Small Cap Conference Presentation

August 2020

# Important Disclaimer



This presentation has been prepared by Calix Limited (ABN 36 117 372 540) ("Company").

## SUMMARY INFORMATION

This presentation contains summary information about the Company and its subsidiaries ("Calix") and their activities current as at 4<sup>th</sup> August, 2020. The information in this presentation is a general background and does not purport to be complete.

## NOT FINANCIAL PRODUCT ADVICE

This presentation is for information purposes only and is not a prospectus, product disclosure statement or other offer document under Australian law or the law of any other jurisdiction. This presentation is not financial product or investment advice, a recommendation to acquire Calix securities or accounting, legal or tax advice. It has been prepared without taking into account the objectives, financial or tax situation or needs of individuals. Before making an investment decision, prospective investors should consider the appropriateness of the information having regard to their own objectives, financial and tax situation and needs and seek legal and taxation advice appropriate to their jurisdiction. Calix is not licensed to provide financial product advice in respect of Calix securities. Cooling off rights do not apply to the acquisition of Calix securities.

## FINANCIAL DATA

All dollar values are in Australian dollars (\$) or A\$) and financial data is presented as at or for the half-year ended 31 December 2019, unless stated otherwise.

## PAST PERFORMANCE

Past performance information given in this presentation is given for illustrative purposes only and should not be relied upon as (and is not) an indication of the Company's views on its future financial performance or condition. Investors should note that past performance, including past share price performance, of Calix cannot be relied upon as an indicator of (and provides no guidance as to) future Calix performance including future share price performance.

## FUTURE PERFORMANCE

This presentation contains certain "forward-looking statements". The words "expect", "anticipate", "estimate", "intend", "believe", "guidance", "should", "could", "may", "will", "predict", "plan" and other similar expressions are intended to identify forward-looking statements. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements, including projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. Such forward-looking statements are by their nature subject to significant uncertainties and contingencies and are based on a number of estimates and assumptions that are subject to change (and in many cases are outside the control of Calix and its directors) which may cause the actual results or performance of Calix to be materially different from any future results or performance expressed or implied by such forward-looking statements. The forward-looking statements should not be relied on as an indication of future value or for any other purpose.. No representation, warranty or assurance (express or implied) is given or made in relation to any forward-looking statement by any person (including the Company). In particular, no representation, warranty or assurance (express or implied) is given that the occurrence of the events expressed or implied in any forward-looking statements in this presentation will actually occur. Actual results, performance or achievement may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based. The forward-looking statements in this presentation speak only as of the date of this presentation. Subject to any continuing obligations under applicable law, the Company disclaims any obligation or undertaking to provide any updates or revisions to any forward-looking statements in this presentation to reflect any change in expectations in relation to any forward-looking statements or any change in events, conditions or circumstances on which any such statement is based. Nothing in this presentation will under any circumstances create an implication that there has been no change in the affairs of Calix since the date of this presentation.

## INVESTMENT RISK

An investment in Calix securities is subject to investment and other known and unknown risks, some of which are beyond the control of Calix,

including possible delays in repayment and loss of income and principal invested. Calix does not guarantee any particular rate of return or the performance of Calix, nor does it guarantee the repayment of capital from Calix or any particular tax treatment. Persons should have regard to the risks outlined in this presentation and appendices.

## NOT AN OFFER

This presentation is not and should not be considered an offer or an invitation to acquire Calix securities or any other financial products and does not and will not form any part of any contract for the acquisition of Calix securities.

This presentation does not constitute an offer to sell, or the solicitation of an offer to buy, any securities in the United States or to, or for the account or benefit of, any 'U.S. person' (as defined in Regulation S under the U.S. Securities Act ("U.S. Person")). The new shares to be offered and sold in the placement ("Offer") have not been, and none of them will be, registered under the U.S. Securities Act or the securities laws of any state or other jurisdiction of the United States. In addition, Calix has not been, and will not be, registered under the U.S. Investment Company Act of 1940, as amended (the "U.S. Investment Company Act") in reliance on the exception from the definition of "investment company" provided by Section 3(c)(7) thereof. The New Shares to be offered and sold in the Offer may not be offered and sold to, directly or indirectly, any person in the United States or any person that is, or is acting for the account or benefit of, a U.S. Person except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and applicable U.S. state securities laws and pursuant to an exception from the registration requirements of the U.S. Investment Company Act provided by Section 3(c)(7) thereof. This presentation may not be distributed or released in the United States or to any U.S. Person. The distribution of this presentation in other jurisdictions outside Australia may also be restricted by law and any such restrictions should be observed. Any failure to comply with such restrictions may constitute a violation of applicable securities laws. Offers in Australia of the shares are only being made to persons who are "sophisticated investors" or "professional investors" (within the meaning of section 708(8) and section 708(11) of the Australian Corporations Act (Act) respectively) or otherwise pursuant to one or more exemptions under Section 708 of the Act so that it is lawful to offer the shares in Australia without disclosure to investors under Part 6D.2 of the Act.

## NO ADVICE

None of Calix's respective advisers or any of their respective affiliates, related bodies corporate, directors, officers, partners, employees and agents, have authorised, permitted or caused the issue, submission, dispatch or provision of this presentation and none of them makes or purports to make any statement in this presentation and there is no statement in this presentation which is based on any statement by any of them. For the avoidance of doubt, the advisers and their respective affiliates, related bodies corporate, directors, officers, partners, employees and agents have not made or purported to make any statement in this presentation and there is no statement in this presentation which is based on any statement by any of them. To the maximum extent permitted by law, Calix and its advisers and their respective affiliates, related bodies corporate, directors, officers, partners, employees and agents exclude and disclaim all liability, for any expenses, losses, damages or costs incurred by you as a result of your participation in the Offer and the information in this presentation being inaccurate or incomplete in any way for any reason, whether by negligence or otherwise. To the maximum extent permitted by law, Calix and its advisers and their respective affiliates, related bodies corporate, directors, officers, partners, employees and agents make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of information in this presentation and Calix's advisers and its affiliates, related bodies corporate, directors, officers, partners, employees and agents, take no responsibility for any part of this presentation or the Offer. Calix and Calix's advisers and their affiliates, related bodies corporate, directors, officers, partners, employees and agents make no recommendations as to whether you or your related parties should participate in the Offer nor do they make any representations or warranties to you concerning the Offer, and you represent, warrant and agree that you have not relied on any statements made by any of them in relation to the Offer and you further expressly disclaim that you are in a fiduciary relationship with any of them. Statements made in this presentation are made only as the date of this presentation. The information in this presentation remains subject to change without notice. Calix reserves the right to withdraw the Offer or vary the timetable for the Offer without notice.

# Calix Limited Business Overview



**Growing Sales Revenues**  
generated from water treatment products, with growing exports and recent US acquisition  
**Our Feb FY20 Guidance remains \$12.5m to \$14m UP between 280% to 320% yoy**



**Control of Supply Chain**  
from mine, to manufacturing facility, to local mixing plants, to customer / distributor



**Quickly scalable** for minimal (organically funded) capex

**Cash-positive and virtually no debt, with growing revenues, secure supply chain, quickly scalable and funded development pipeline.**



**Robust business model** with existing commercialised markets in “essential services” waste water and food, largely unaffected by COVID-19



**Funded Development** in Australia (\$5m for agriculture, advanced batteries) and Europe (\$47m for CO<sub>2</sub> capture for cement and lime)

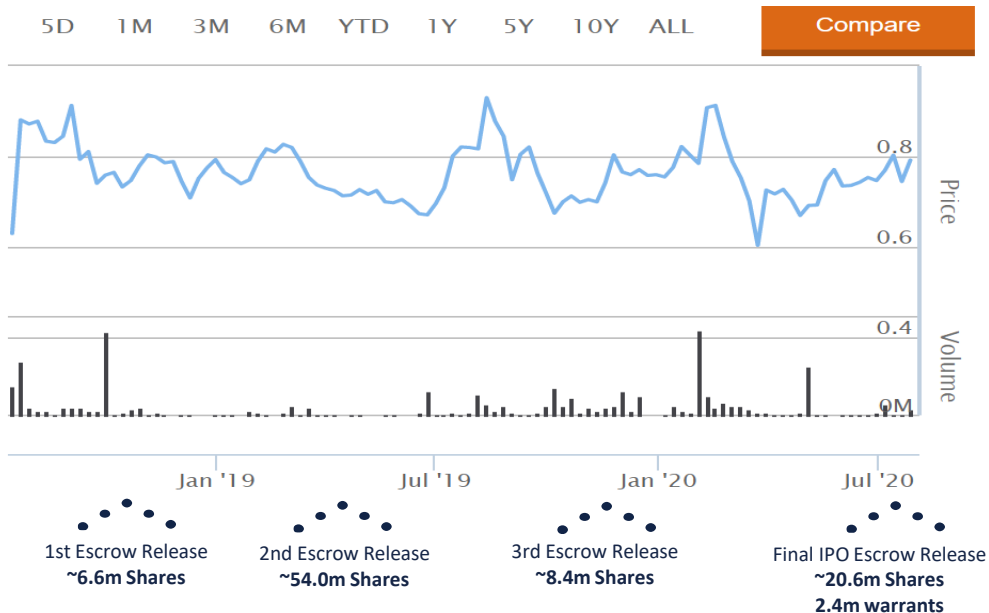


# Listed on the ASX in July, 2018

ASX:CXL



## Share Price Performance Since Listing



## Further Equity Detail

As at 31 July 2020

Free Float	147.4m shares
Warrants to be exercised by July 2022 (\$0.66 Strike Price)	2.4m warrants
Employee Incentive Scheme Rights	7.8m rights

As at 30 June 2020

Shares on issue	~147.4m
Share price for IPO Capital Raise	\$0.53 per share
Share price on IPO	\$0.62 per share
Share price	\$0.765 per share
Market capitalisation	~\$112.8m
Cash (company is debt free)	\$11.1m






## Major shareholders

As at 31 July 2020

Board & Management	17.5%
Perennial Value Management	14.1%
Sculptor Capital Management	11.5%
Nicholas Merriman and associates	8.9%
Australian Super Pty Ltd	6.1%
Paul Crowther	5.7%
Thorney Investments	5.6%
Acorn Capital	5.4%

# Calix's Existing & Target Markets – with Global Appeal



	IN-MARKET		PRE-COMMERCIAL			R&D		
								
	WATER AND WASTE WATER		AQUACULTURE & FRESH WATER REMEDIATION		AGRICULTURE CROP PROTECTION		CO <sub>2</sub> MITIGATION LIME & CEMENT	ADVANCED BATTERIES
Revenue model	Direct sales model Australia / NZ / US		SE Asia Distributors		Supply under margin-share		License technology to industry / royalty basis	
Markets	Active: Australia, NZ and US Target: EU, Global		Active: South East Asia Target: Global		Active: EU Target: Global		Active: EU Target: Global	
Strategic play	Partnering / portfolio potential		License and possible equity play to crop majors		License and possible equity play to cement / lime Eng. Tech companies		License and possible equity play to battery / EV companies	
TAM <sup>1</sup> \$A billion	36.7		1.5		9.8		10.8	
	All based upon Calix's highly active magnesium hydroxide (MHL) technology					Pilot plant in Belgium		Pilot plant at Bacchus Marsh

<sup>1</sup> Frost & Sullivan: Market Opportunity for Calix Flash Calcination, dated 17 April 2018. Refer to Section 4 of the Calix Prospectus for risks associated with the competitive environment, retaining and winning customers and market development.

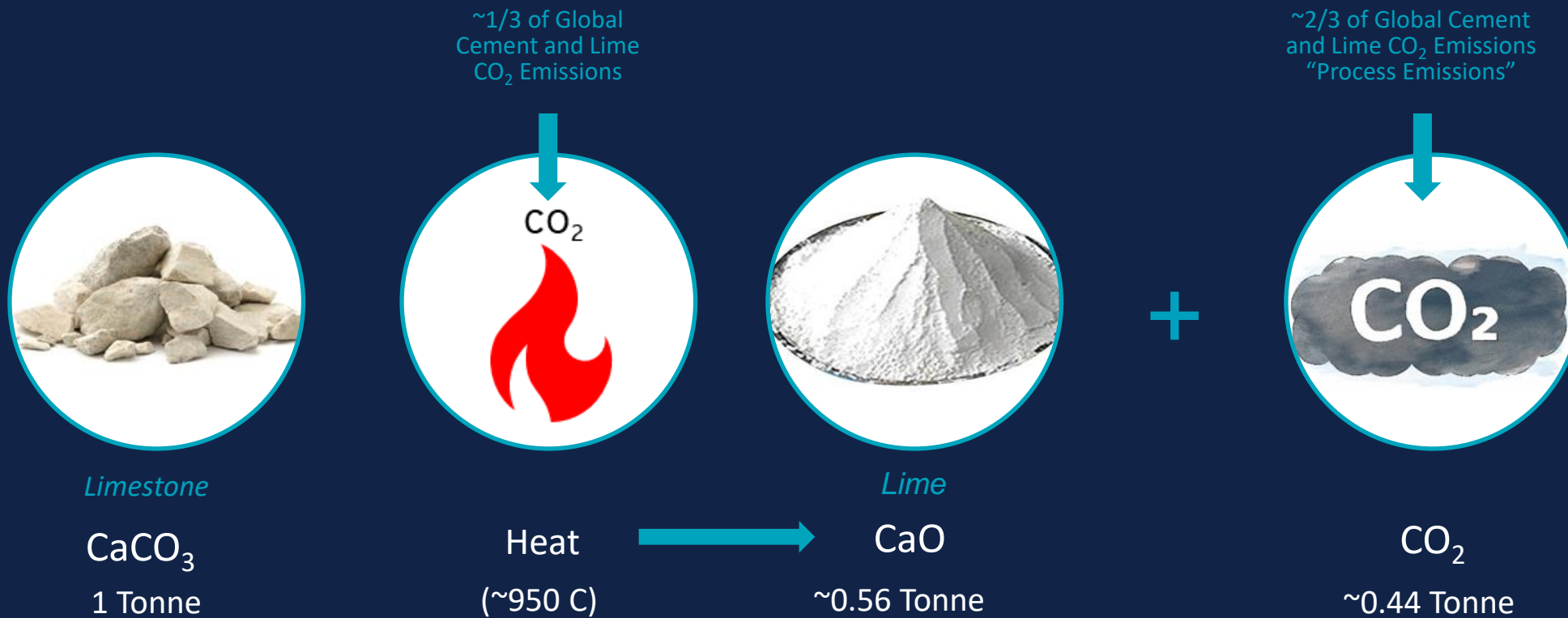


# The CO<sub>2</sub> Problem

LIMESTONE IS THE SECOND MOST UTILISED SUBSTANCE ON EARTH



Cement and lime contribute between 5% and 8% of global anthropogenic CO<sub>2</sub> emissions - about 2.2 BT per annum\*  
Around 2/3 of those emissions are unavoidable – coming from the raw material (limestone)

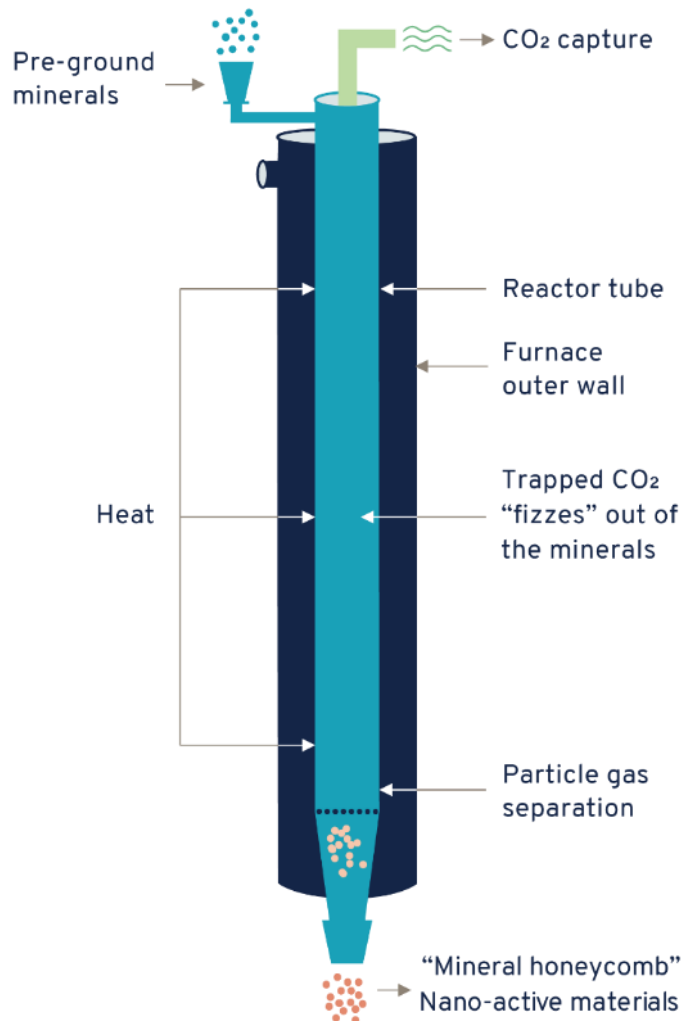


\*Global CO<sub>2</sub> emissions from cement production, 1928–2018 Robbie M. Andrew CICERO Center for International Climate Research, Oslo 0349, Norway, Earth Syst. Sci. Data, 11, 1675–1710, 2019 <https://doi.org/10.5194/essd-11-1675-2019>



# The CO<sub>2</sub> Solution

## CALIX'S CORE TECHNOLOGY



### CO<sub>2</sub> Capture

When processing limestone, cement meal, or magnesite, gas exhaust is pure CO<sub>2</sub>

### "LEILAC" (Low Emissions Intensity Lime and Cement)

### Low Cost + Very High Surface Area (Reactive) Products for:

- Wastewater
- Aquaculture
- Lake remediation
- Crop protection
- Advanced batteries

### A New Type of Kiln



27 patent families covering core technology and applications



>\$60m has been invested to date in developing the technology.

# Cement – the Size of the Opportunity

## CO<sub>2</sub> MITIGATION FOR CEMENT



If...

...LEILAC was proven the “best available technology” by 2025...

---

...and it was possible to fit the LEILAC technology to a 1 million tonne cement plant every 3 to 4 days...

---

...this would still not meet the global CO<sub>2</sub> capture capacity required\* assuming full de-carbonisation of the cement industry by 2050

---

\*Assuming 12 to 23 % growth in the cement market to 2050 (IEA 2019)

# Technology – fully funded to develop to demonstration scale

CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



## “CFC-15000”



**Built**

### 2013 - Australia

25kTpa CO<sub>2</sub> from Magnesite – commercial scale

Temperature: 760 C

Capital: ~ \$18m

Over 7 years operation, low maintenance / OPEX

## “LEILAC-1”



### 2019 - Belgium

25kTpa CO<sub>2</sub> from cement and lime (~5% of 1MTpa Cement plant)

Temperature: 960 C

Capital: ~ \$13m (from EU H2020 Grant)

Already small commercial scale for lime

Technology concept proven

>95% purity CO<sub>2</sub>, Achieved 70% Max Throughput for cement

Pushing to Operational Limits to end 2020

## “LEILAC-2” Demonstration

**Funded**



## “LEILAC-3” Full Scale

Up to 500kTpa

**In Planning**



### Target 2023 - Germany

100kTpa CO<sub>2</sub> from cement (~20% of 1MTpa Cement plant)

Fully Integrated for cement

Capital: \$27m (from EU H2020 Grant) + \$15m Industrial Partners

Test runs through to end 2024

### Target ASAP after L-2 EU or US

Most likely retrofit

Industry- and grant-funded, or possible risked equity



# Calix's Technology is Attracting Global Players

CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



## CALIX'S PARTNERS IN LEILAC-1 AND LEILAC-2...

HEIDELBERGCEMENT



# Competitive Landscape

## CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



\*TRL = NASA “Technology Readiness Level”, a scale from 1 (conceptual) to 9 (commercialised and deployed repeatedly). Figures are Calix estimates for cement application

**LEILAC represents one of the most advanced, and also potentially the lowest theoretical cost solution to CO<sub>2</sub> mitigation**

Option	TRL* (Cement)	Cost € / TCO <sub>2</sub> Avoided <sup>e</sup>	Advantages	Challenges	Development Pathway
Amine	6 <sup>a</sup> - 7	55 – 189 <sup>f</sup>	Most advanced technically Can use some lower grade (waste) heat	Millions of tonnes of spent amine to atmosphere – uncertain impact Energy penalty High CAPEX and OPEX	<b>SECURED</b> Norcem Project (400kTpa CO <sub>2</sub> ) to TRL 8 by 2025
LEILAC	5 - 6 <sup>b</sup>	< 25 <sup>i</sup> (To be confirmed post LEILAC-1)	Lowest theoretical cost Easily electrified – energy agnostic No new chemicals needed	Heat and process integration - retrofit	<b>SECURED</b> LEILAC-2 Project (100kTpaCO <sub>2</sub> ) to TRL 7/8 By 2024
Svante (Temp swing – MOF sorbent)	5 - 6 <sup>j</sup>	? (Capital Cost ½ Amine) OPEX ?	No new chemicals needed	OPEX / Footprint at scale ? MOF Performance over time ?	<b>PLANNED</b> Holcim Colorado Project (725kTpa CO <sub>2</sub> ) to TRL 8 Date ?
Calcium Looping	5 <sup>c</sup>	26.4 <sup>g</sup> – 58.6	No new chemicals needed	Heat and process integration – integrated retrofit	<b>UNCLEAR</b> Taiwan Cement no firm commitment Beyond CLEANKER unclear
Oxyfuel	4 <sup>d</sup>	42 <sup>f</sup> - 66		Air ingress Air sep energy costs Gas flows	<b>PLANNED</b> Mergelstetten Project (725kTpa CO <sub>2</sub> ) to TRL 6/7 Date?

a. Based upon Anhui Conch capture project 50kTpa CO<sub>2</sub> capacity

b. Based upon LEILAC-1 project 20kTpa CO<sub>2</sub> capacity

c. Based upon Taiwan Cement / ITRI 350 Tpa CO<sub>2</sub> capacity, similar “La Pereda” Spain. Also being developed in integrated cycle in CLEANKER project

d. Based upon CEMCAP Project – some elements tested at lab scale and in relevant industrial environment. And Carbon Capture in the Cement Industry: Technologies, Progress, and Retrofitting in [Environmental Science & Technology](#) 50(1) - December 2015

e. Based upon 1 Mtpa Cement Plant – NOAK technology deployed at scale. Includes OPEX + annualised CAPEX (12.5% capital charge, where known)

f. The Swing Adsorption Reactor Cluster for Post-Combustion O<sub>2</sub> Capture from Cement Plants – *Journal of Cleaner Production* 223 (2019) 692 - 703

g. Lower bound as claimed by ITRI for power production – no public domain information for cement. Higher bound as per the CEMCAP project

h. As tested in CEMCAP project – CO<sub>2</sub> Capture in the Cement Industry, Norcem CO<sub>2</sub> Capture Project (Norway) *Energy Procedia* 63 (2014) 6455 – 6463

i. Estimate as presented by Jan Theulen – HeidelbergCement – Futurecem Conference and Exhibition, Brussels, May 2019

j. Based upon 30TPD test unit (10kTpa)

# Market – up to 2030

## CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



Until 2030, we will target Europe and the US to “Beach-head” the technology

Demonstration Projects for new CO<sub>2</sub> mitigation technologies for cement appear to be best pursued in Europe and the US

These will largely be **RETROFIT** opportunities

### Europe

- ✓ Cement Capacity 175 Mtpa
- ✓ EU Emissions Trading Scheme = Price / Cost on CO<sub>2</sub>
- ✓ “Innovation Fund” from 2020 supporting (~2/3) big capital investments from industry, including for CO<sub>2</sub> infrastructure

### China

- ✓ Cement Capacity 2,200 Mtpa (~55% of Global capacity)
- Chinese Emissions Trading Scheme = Price / Cost on CO<sub>2</sub> for power, but not yet for Industrial emissions
- ✗ No clear monetary incentives (most companies are government-owned)

### India

- ✓ Cement Capacity 280 Mtpa
- ✗ No cement emissions policy
- ✗ No clear monetary incentives

### US

- Cement Capacity 89 Mtpa
- ✓ 45Q Tax Credit EU = Price / Value on CO<sub>2</sub>
- ✓ Some existing CO<sub>2</sub> infrastructure
- ✓ DoE support for early stage project assessments

# Market – up to 2030

## CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



### Europe and the US putting significant support behind new CO<sub>2</sub> mitigation projects



#### EUROPE



##### Innovation Fund

Energy, CCU/S, Energy Storage

€ 10b funding from 2020 to 2030

Up to 60% contribution

High Innovation

Flagship Projects

(€100's m+)

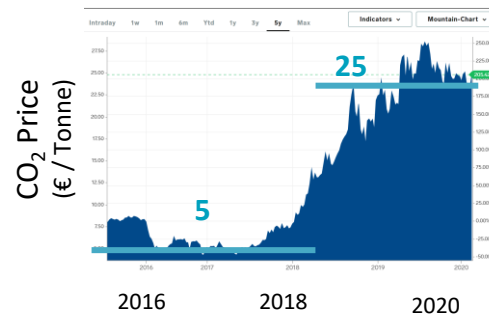
##### ...Capital Support and CO<sub>2</sub> Penalties

##### Emissions Trading Scheme

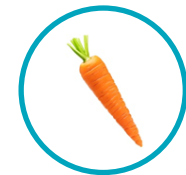
2021 to 2030, 2.2% yoy reduction in free CO<sub>2</sub> permits

Emitters above the “cap” will need to go on-market and buy permits

CO<sub>2</sub> permit price has risen dramatically



#### US



##### EOR CO<sub>2</sub> Value

CO<sub>2</sub> already bought / sold and pipelined for Enhanced Oil Recovery (EOR)

Prices are typically set at a per ton price of about 40% of the price of oil per barrel\*

##### ...CO<sub>2</sub> Value

\* Infrastructure to enable deployment of carbon capture, utilization, and storage in the United States Ryan W. J. Edwardsa,1 and Michael A. Celiaa a Department of Civil and Environmental Engineering, Princeton University, Princeton, NJ 08544

##### 45Q Tax Credit System

Up to end 2024 (lobbying to extend) – new projects in CO<sub>2</sub> abatement > 100 kTpa qualify for tax credit of US\$ 35 / ton CO<sub>2</sub> (if used for EOR, or US\$ 50 / ton otherwise)



# Carbon Capture and Storage (CCS) versus Utilisation (CCU)?

CCS AND CCU



*Putting CO<sub>2</sub> to Use - Creating Value from Emissions – IEA Technology Report September 2019*

**CO<sub>2</sub> utilisation is a complement, not an alternative, to CO<sub>2</sub> storage for large-scale emissions reductions.**

**CO<sub>2</sub> utilisation is not expected to deliver emission reductions on the same scale as carbon capture and storage (CCS), but can assist meeting climate goals as part of a comprehensive approach.**

**In IEA scenario analysis, even with limited CCS, CCU delivers less than 13% of the emissions reduction that would otherwise be provided from CO<sub>2</sub> storage.**

<https://www.iea.org/reports/putting-co2-to-use>

# Market – What to do with CO<sub>2</sub> ?

CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



## Europe

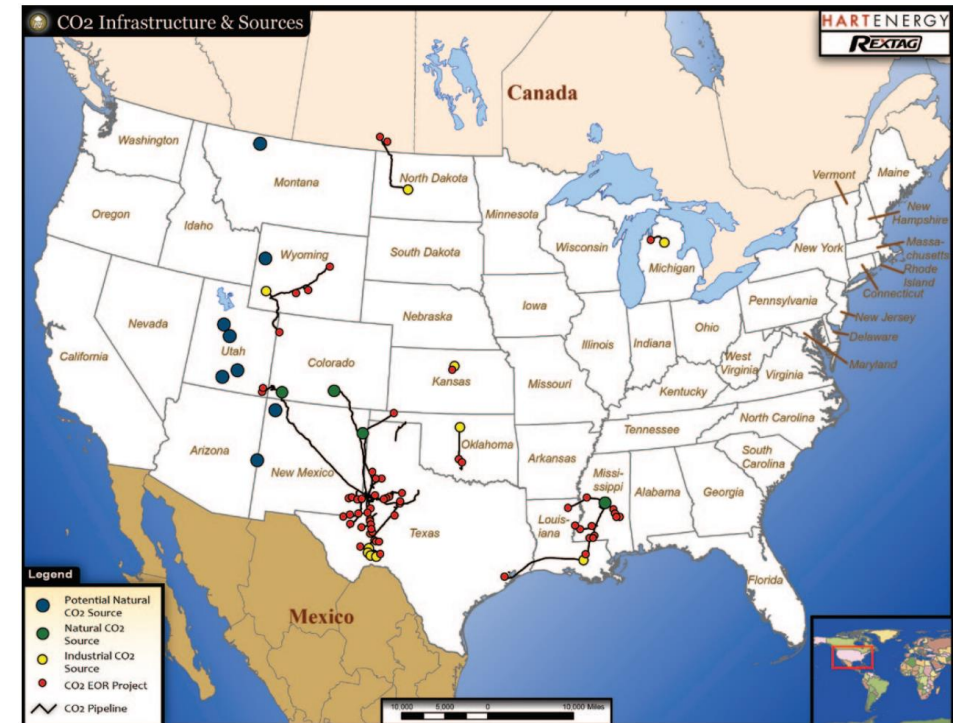
CO<sub>2</sub> Sequestration (CCS) Hub Development Projects:



Many CCU Projects are also being developed, for example HeidelbergCement's algae project in Morocco, and recycled cement fines CO<sub>2</sub> adsorption

## US

Mainly Enhanced Oil Recovery (EOR) use, for which there is already extensive infrastructure:



Source: Hart Energy/Rextag, 2012

Europe and the US either have, or are targeting significant CO<sub>2</sub> infrastructure

# Market – from 2030

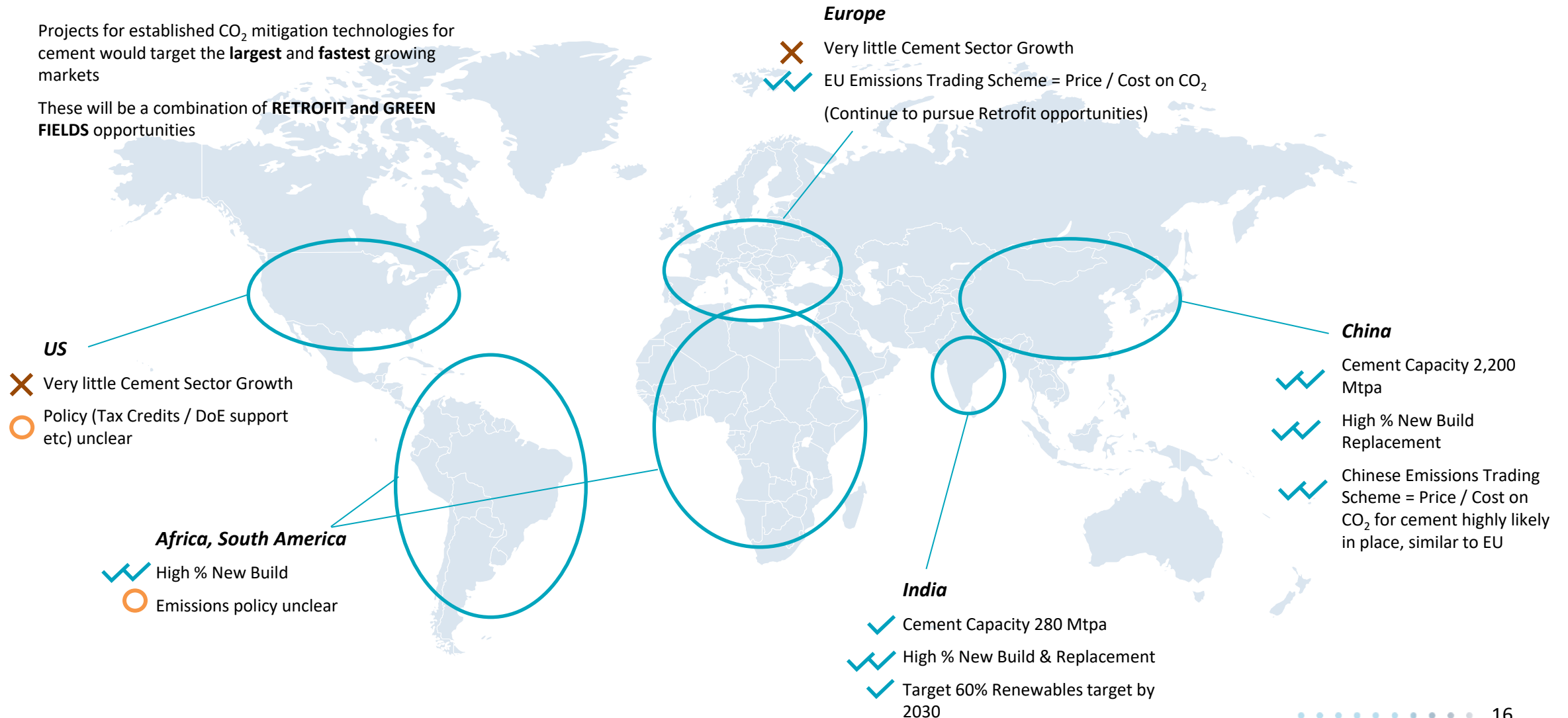
## CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT



From 2030, we will target the largest and fastest growing markets with the technology once “Blueprinted”

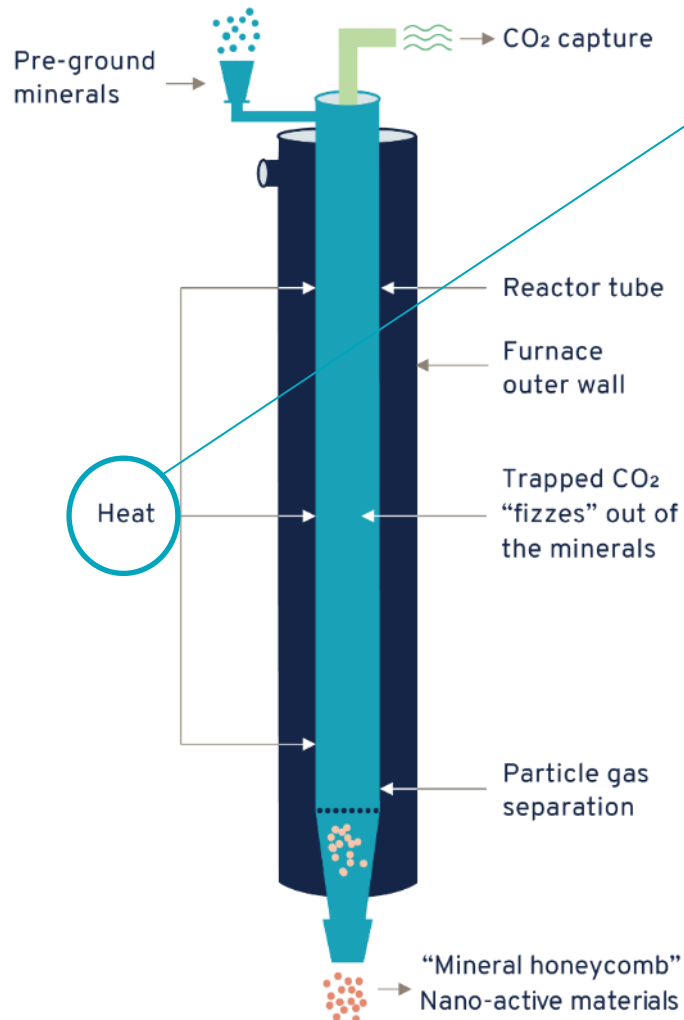
Projects for established CO<sub>2</sub> mitigation technologies for cement would target the **largest** and **fastest** growing markets

These will be a combination of **RETROFIT** and **GREEN FIELDS** opportunities



# The cement plant of the future .... run on renewable power

CO<sub>2</sub> MITIGATION FOR LIME AND CEMENT – INDUSTRIAL ELECTRIFICATION

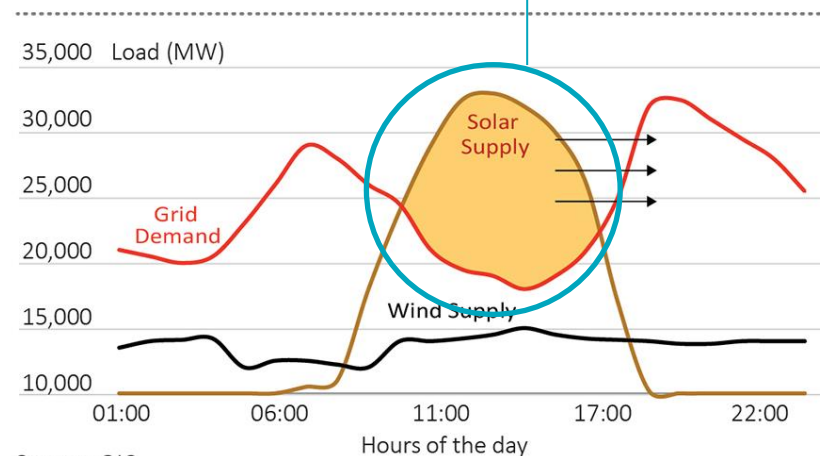


Calix's LEILAC technology is energy-agnostic – “heat” can come from traditional fossil fuels, biomass, hydrogen or even **electricity**...

...thus the LEILAC technology paves the way for **electrification of the cement and lime** industries

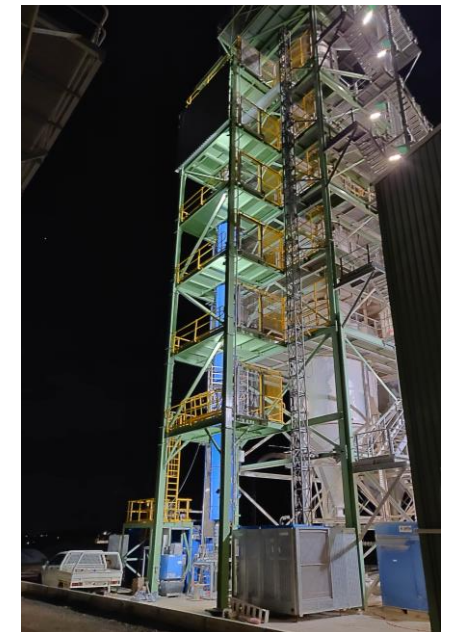
In the LEILAC-2 Project, we are working with Engie's research arm – Engie Laborelec – on electrification studies and **load balancing** opportunities

Load balancing (along with energy storage) will be increasingly vital in stabilising the electricity grid, as higher proportions of renewable generation comes on-stream



Source: QIC

Figure from Queensland Investment Corporation - <https://www.qic.com.au/knowledge-centre/technology-disruptions-affecting-infrastructure-20160414>



Calix's first fully-electric calciner “BATMn” for battery materials research, but also now testing cement and lime

# Other Applications

CO<sub>2</sub> MITIGATION – OTHER CORE TECHNOLOGY OPPORTUNITIES



There are numerous opportunities for Calix's technology into potentially very large CO<sub>2</sub> markets

Application	CO <sub>2</sub> Mitigation Potential (Mtpa)	Development Pathway	Target Commercialisation Timeframe	Key Commercialisation Triggers
Magnesia (Refractories)	13	Core Tech	ASAP	Sustained CO <sub>2</sub> cost / value First (possibly equity risked) project
Lime (Steel, Pulp and Paper, Glass, Water etc)	350	Core Tech	ASAP following LEILAC-1	Sustained CO <sub>2</sub> cost / value Full technical (operational) proof – LEILAC-1 First (possibly equity risked) project
Shipping	800	Core Tech + Calix "RECAST" Patented System	Future...	Sustained CO <sub>2</sub> cost / value Full technical (operational) proof
Direct Air Capture (DAC)	Potentially Huge – Very Early Stage	Core Tech + Partner Capture System – Lime or Magnesium Based	Future...	Sustained CO <sub>2</sub> cost / value – US\$45Q + US State-based incentives (eg Cal. US\$180 / ton)
Base Load Energy Storage Systems (BESS)	Potentially Huge – Very Early Stage	Core Tech + SOCRATCES (EU) Project – Lime + Solar Concentrator	Future...	Sustained growth in Renewables into grid energy systems

# The Opportunity – Significant technical development done

IN SUMMARY...OUR CO<sub>2</sub> BUSINESS



## Calix is approaching deployment into huge markets...



Over **\$60m**  
**already invested**,  
and another **\$27m**  
**already secured**, to  
develop the technology  
to commercial  
demonstration  
by 2024



**Cement:**  
TAM > 2BTpa CO<sub>2</sub>  
**Multi-\$B Opportunity**  
  
Once proven at scale,  
the opportunity is only  
limited by speed of  
deployment



**Other Applications:**  
TAM > 1BTpa CO<sub>2</sub>  
**Multi-\$B Opportunity**  
  
Shipping, Direct Air  
Capture, Lime (Steel,  
Water, Pulp and Paper,  
Glass etc), Baseload  
Energy Storage Systems



Capital-light business  
model  
  
+ engineering  
services revenues  
  
+ licensing / royalty  
income



At scale, theoretically  
the cheapest cement  
and lime CO<sub>2</sub>  
mitigation option.  
  
Patent Protected



# Board of Directors



**Peter  
Turnbull, AO**  
Non-Executive  
Chair

- Experienced chairman and non-executive director with significant board and senior executive experience in the resource, energy and technology commercialisation sectors
- Current Chairman of Auxita Pty Ltd, non-executive director of Karoon Energy Ltd. (ASX: KAR), the Governance Institute of Australia and the Chartered Governance Institute
- Adjunct-Professor at the University of Queensland (2010 – 2016)
- Chair of Calix Rem and Nom Committee, and member of Calix Audit and Risk Committee



**Jack  
Hamilton**  
Non-Executive  
Director

30 years multidisciplinary experience in local and overseas energy industries, including as a Director of NWS Ventures (Woodside North-West Shelf project)

Currently the Chairman of AnteoTech Ltd (ASX:ADO). Previous Non-Executive Director positions include Renu Energy (ASX:RNE), and DUET Group (ASX:DUE)

Chair of Calix Audit and Risk and Technology Committees, and member of Rem and Nom Committee



**Phil  
Hodgson**  
Managing  
Director & Chief  
Executive Officer

14 years of multidisciplinary experience with Shell, including as the General Manager and Alternate Director of its subsidiary Fuelink Pty Ltd, a \$700m revenue, 300-employee distribution and sales subsidiary

7 years running a private consultancy providing strategy and M&A services

Joined Calix in 2013 as CEO, became a Director in 2014 and is a member of Calix's Technology Committee



**Lance  
O'Neill**  
Non-Executive  
Director

London-based director of DFB Australia, with 36 years of experience in international securities and investments in the UK, Australia, USA and Far East

Chair of MediaZest Plc and EP&F Capital Plc



**Dr Mark  
Sceats**  
Director And  
Chief Scientist

Co-founder of Calix

Qualified physical chemist with over 46 years' experience, previous roles academic roles, and numerous fellowships and recognitions

Author of more than 140 academic papers in physical chemistry and inventor of 36 patented inventions



Because there's only one Earth...



...Mars is for quitters

**Phil Hodgson**

Managing Director & CEO

phodgson@calix.global

+61 2 8199 7400

**Darren Charles**

CFO & Company Secretary

dcharles@calix.global

+61 2 8199 7400

**Simon Hinsley**

Investor Relations

simon@nwrcommunications.com.au

+61 401 809 653

**Follow us on Twitter**

**@Calixlimited**

**Subscribe to Calix News:**

[https://calix.us12.list-manage.com/subscribe?u=d8ec283c87df16bf92540cfcf8&id=52abcf4a05&utm\\_source=calix-website&utm\\_campaign=newsletter-subscription](https://calix.us12.list-manage.com/subscribe?u=d8ec283c87df16bf92540cfcf8&id=52abcf4a05&utm_source=calix-website&utm_campaign=newsletter-subscription)