

Emefcy Group Limited (ASX: EMC): Transforming Wastewater Economics



Richard Irving, Executive Chairman
Eytan Levy, CEO
Ross Haghighat, Non-Executive Director

July 2016

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Emefcy's commercially available wastewater treatment solution potentially disrupts the economics of large existing markets while addressing a growing global need for water



Corporate Overview



Capital Structure¹

Exchange Listing Details	Exchange: Ticker	ASX: EMC
Ordinary Shares on Issue ^{2,4}	No.	201,684,721
Share Price (as at 8 Jul 16)	A\$/share	0.735
Market Capitalisation	A\$m	148.2
Redeemable Note Outstanding ³	A\$m	2.7
Cash (as at 30 Jun 16)	A\$m	8.1
Enterprise Value	A\$m	142.8
52 Week High	A\$/share	1.00
52 Week Low	A\$/share	0.185

Top Shareholders⁴

Holder	Shares Held	% of IC
Pond Venture Nominees III Limited	28,944,080	14.4%
Plan B Ventures I LLC and Plan B Ventures II LLC	16,018,178	7.9%
Employee Equity Administration Pty Ltd	14,573,642	7.2%
Israel Cleantech Ventures	11,133,603	5.5%
Bori Liberman (BHL Pension Pty Ltd)	10,108,295	5.0%
Eytan Levy (Co-Founder and CEO)	9,267,180	4.6%
Ronen Shechter (Co-Founder and CTO)	9,267,180	4.6%
Energy Technology Ventures LLC	7,001,707	3.5%
GE Ventures Limited	4,015,719	2.0%
Total	110,329,584	54.7%

Notes:

- Assumes AUD:USD exchange rate of 0.7512.
 - After balance of First Milestone shares (3,985,807 in total) are issued. Excludes an additional 22,500,000 shares to be issued to Emefcy vendors subject to satisfaction of the Second Milestone. Excludes options outstanding.
 - Redeemable Note to True North Venture Partners L.P for US\$2m issued as consideration for the sale of their equity interest in Emefcy, of which half the value is payable and the balance is subject to satisfaction of the Second Milestone. Non-convertible interest free note.
 - Post the issue of the First Milestone Deferred Consideration Shares. Announced to the ASX on 12th April 2016.
- Source:** Bloomberg as at July 8th 2016. Company Announcements.

Share Price Performance



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Investment Highlights



- ✓ **SABRE Shipping and SABRE2 Manufactured:** Product shipping now addresses multi-billion dollar global market opportunity
- ✓ **Growing Reference Sites:** Two customer plants built & operating, two signed & in progress enable selling in Americas, Europe, Middle East & Africa
- ✓ **China:** Clear strategy and timeline to address potential A\$20B China market opportunity
- ✓ **Water-as-a-Service:** Clear strategy and timeline addressing multi-billion dollar opportunity to sell water in US, Australia, Caribbean and beyond
- ✓ **Production Expansion:** Production facilities support A\$30m/year in sales with high-volume China production planned during 2017
- ✓ **Financial Strength:** Over A\$1m in sale contracts and a strong existing balance sheet with US\$6.1m in cash (30 June 2016)
- ✓ **Goals Ahead of Schedule:** Full CY 2016 goals achieved by mid-year – “We under-promise, over-deliver”

Seasoned Team Experienced in Building a Global Enterprise



Richard Irving - Executive Chairman, Emefcy

- US\$3B in shareholder value created
- Multiple startups, 2 Nasdaq IPOs – 30 years in operating & investor roles
- Proven ability to disrupt large, existing markets: LiveRail, Microcosm, Transitive, Brooktree, & more
- \$240M Venture funds founded, raised & managed



Eytan Levy - Founder & CEO, Emefcy

- Former Partner, Israel Cleantech Ventures
- Co-founder and CEO of AqWise, a Global Wastewater Treatment company with 350 installations in more than 30 countries
- BSc (cum laude) in Chemical Engineering (Technion) and an MBA



Ross Haghighat, Non-executive Director, Emefcy

- Chairman, Triton Systems; Managing Partner, Newburyport Partners
- Founded 9 private and public cos with combined shareholder value of US\$3.8B & two billion dollar plus exits (Coretek, Aduro)
- Raised nearly \$500M private & Public Funds
- Director at Aduro Biotech (Nasdaq: ADRO), Chairman of FRX Polymers and Founder & Chairman Triton Systems Group



Peter Marks, Non-executive Director, Emefcy

- 30+ years experience in corporate finance, specializing in capital raisings (for listed and unlisted companies), underwriting, IPOs and venture capital transactions.
- Participated in over \$2B in public and private capital raised
- Executive and Non-Executive Director of a number of listed entities on the ASX and AIM



Robert Wale, Non-executive Director, Emefcy

- Managing Director of BlueSand Consulting
- 30+ years of executive level experience in the global water industry in multiple roles in Australia, USA & throughout the Asia-Pacific region
- Significant experience managing businesses across the cycle, from early stage startup to maturity including Memtec

Our Vision is to Replace This...



Large, centralized wastewater treatment plant:

- **Huge footprint** – Not in my backyard
- **Very high capex** for long-term capacity
- **Very energy-intensive** – high opex
- **Noisy, smelly, very obvious**
- **Very hard to reuse water** without huge new pipe network – more capex

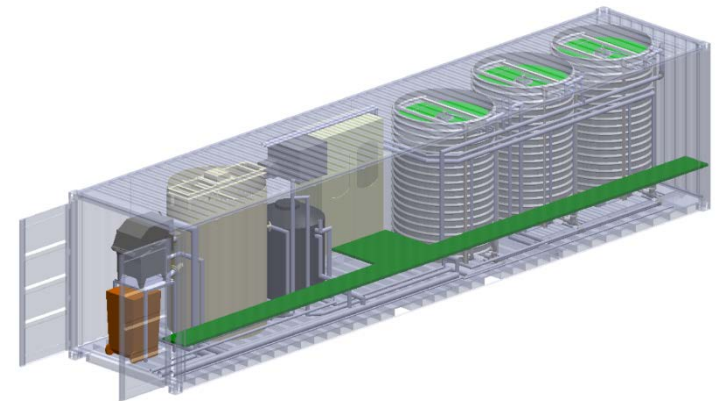


...With Emefcy's Solution



Small, distributed wastewater treatment plant:

- Flexible footprint **blends into neighborhood**
- **Just-in-time capex** for near-term capacity
- **Very energy-efficient** – low opex
- **No odour, quiet, neighborhood-friendly**
- **Local water reuse** avoids huge pipe capex



Emefcy's Strategy To Transform Wastewater Treatment



Global Reference Sites for Sales

NOW: EMC plants are deploying & operating in multiple regions

China

2016: Enter potential A\$20B China market: demo plants to gain certification, supply chain partners, & added manufacturing capacity
2017: Ramp sales via local partners



Water-as-a-Service (WaaS)

2017: Sell WaaS in addition to selling plants - more profitable
2018: Expand into new territories

EBR and future product lines

Ongoing: Deliver continual cost reduction & new product roadmap (SABRE 3, SUBRE, EBR)

Target by 2020:
Global leadership in target segments

2016 Goals For 2020 Target of Market Leadership: Updates



Goal	Why This Matters
<ul style="list-style-type: none"> First revenue from Ha-Yogev project in Q1 2016 - ACHIEVED Complete 1st municipal deployment by June 2016 – on track Secure at least 2 new SABRE contracts including at least one new geography by December 2016 – ACHIEVED 2 new bookings in 2 new geographies Achieve cumulative signed contracts of A\$1M in 2016 – ACHIEVED A\$1.05M booked in 1st half 2016 SABRE 2 market-ready by Q4 – production line upgraded, prototype built, starting testing Continue new product development – SUBRE, EBR – on track Establish China business model for SABRE solutions and appoint a China business partner by Q4 – Partner selection & terms in progress, 1st pipeline projects Develop a business model to sell water by Q4 – BUSINESS MODEL DONE, partner selection in process, 1st pipeline project Build pipeline via key trade shows – 1st prospective China, Australia & sale-of-water projects in pipeline 	<ul style="list-style-type: none"> Proves SABRE technology on a <u>commercial scale</u> - an important reference for future customers Winning contracts beyond Israel provides <u>further reference sites</u> to support SABRE 2 in 2017, expected to yield <u>larger contracts & higher margin</u> sales
<ul style="list-style-type: none"> SABRE 2 market-ready by Q4 – production line upgraded, prototype built, starting testing Continue new product development – SUBRE, EBR – on track Establish China business model for SABRE solutions and appoint a China business partner by Q4 – Partner selection & terms in progress, 1st pipeline projects Develop a business model to sell water by Q4 – BUSINESS MODEL DONE, partner selection in process, 1st pipeline project Build pipeline via key trade shows – 1st prospective China, Australia & sale-of-water projects in pipeline 	<ul style="list-style-type: none"> Next generation product serves <u>markets exceeding A\$2.5B</u> at <u>anticipated higher margins</u>. Potential Chinese partners indicate <u>substantial market opportunity</u> for distributed treatment – many villages & small towns. A partner helps <u>expedite SABRE roll out</u> Emefcy's low-cost solution enables a <u>recurring revenue model by selling recycled water for irrigation</u>, replacing high-cost water and wastewater treatment
<ul style="list-style-type: none"> Establish a relationship with a North American capital markets communication advisor in Q1 - ACHIEVED Make key hires – Ahead of hiring plan Secure non-dilutive financing - ACHIEVED 	<ul style="list-style-type: none"> Assists Emefcy to <u>reach strategic investors</u> & communicate with investors Enables us to hit plan Minimizes shareholder dilution

Sales To Global Reference Sites



Operating Emefcy Plants: Caesarea & Ha-Yogev



22 Months In Field : Proves long-term reliability, performance, automation, and maintenance-free operation



Need & Benefit

- 20,000 litres/day demo plant to irrigate golf course with recycled water – savings repay capex in 2 years

Status & Next Steps

- Flawless plant operation for 22 months
- Health Ministry approval received
- Next – discuss upgrade to full-scale recycling plant

Proves off-grid wastewater treatment and recycling for agriculture

Need & Benefit

- 125,000 litres/day recycling off-grid municipal wastewater for agricultural reuse
- Value – A\$380K

Status & Next Steps

- Plant operation started
- Next – discuss added capacity towards full community need



Emefcy plant fits into tiny portion of old, non-compliant facility



Emefcy Plant Deployments In Progress: Americas & Africa



US EPA coverage ensures reference site through Americas – great proof point for water as a service economics



US Virgin Islands plant site



Modules shipping

Need & Benefit	Status & Next Steps
<ul style="list-style-type: none"> • 95,000 litres/day municipal treatment plant in residential area • Emefcy wins public tender: low energy use, neighborhood-friendly • Value A\$240K 	<ul style="list-style-type: none"> • Modules shipped, construction in progress • Next – commission plant, get US EPA approval, reference throughout Americas, negotiate expansion

Proves in-building water recycling & automated remote operation – great reference for developing world

Need & Benefit	Status & Next Steps
<ul style="list-style-type: none"> • 500-bed hospital discharging sewage in remote, water-stressed area • Needs 320,000 litres/day wastewater treatment & recycling plant for irrigation & toilet flushing • Value A\$430K 	<ul style="list-style-type: none"> • Plant designed, modules in manufacture, local contractor trained • Next – plant construction & commissioning

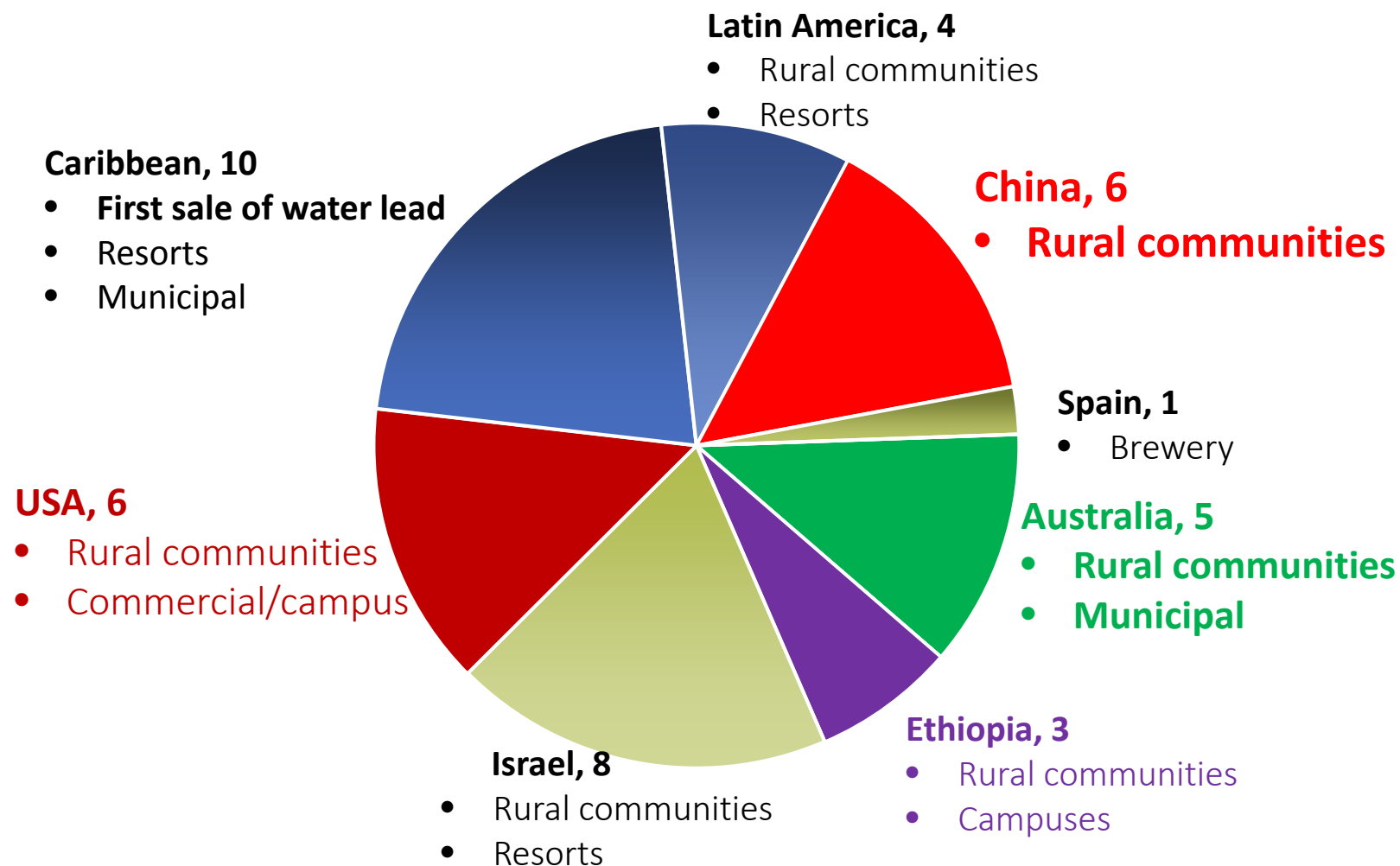


Mekele Hospital, Ethiopia

Current Sales Pipeline:

44 Projects, Potential A\$18M Contract Value

More China Opportunities, plus 6 US states



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China



China: Huge Market Opportunity Helping 400M People



China's new 5 year plan:
**Target increase in rural
wastewater treatment from 10%
to 70% benefiting 400M+ people**



Most rural
surface water is
now polluted

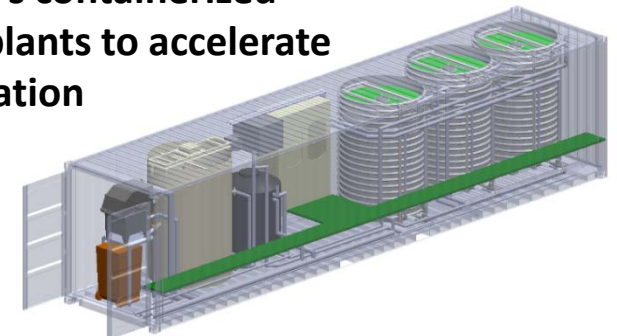
Most rural
wastewater is
untreated



**A\$20B potential
opportunity**
over next 5-7 years
directly relevant to
EMC products and
product roadmap

EMC revenue
per plant estimated
**between A\$50K and
A\$1M or more**

**Emefcy's containerized
demo plants to accelerate
certification**



EMC China Vision: Become Market Leader For Rural Wastewater Treatment In China By 2020



Requirement	Why This Matters
Establish Corporate Structure – HK sub with one or more China WFOEs	<ul style="list-style-type: none"> Provides maximum flexibility for future growth, protects EMC's interests, provides legal transparency, & facilitates any future local liquidity event
Build China management team	<ul style="list-style-type: none"> Establishes and maintains close relationships with customers, distribution & supply chain partners and other key influencers Minimises time to plant installation & ensures ongoing plant performance
Build, own and operate expandable China manufacturing capability	<ul style="list-style-type: none"> Protects intellectual property, ensures product quality and consistency, & optimises product profitability & availability
Establish supply chain partners to source all EMC materials	<ul style="list-style-type: none"> Partners carry inventory risk - avoids large & highly variable working capital need as production ramps to meet demand
Sign market access partners – SOEs, private companies, PPP with strong financial backing	<ul style="list-style-type: none"> Jointly select initial sites for paid demo plants enabling expedited certification in region; integrated teams enable transparency into project pipelines; secures payment for plant at time of sale
Sign experienced engineering partners	<ul style="list-style-type: none"> Limits Emefcy's involvement to the plant sale and implementation, not ongoing operation; minimises EMC's exposure to payments collection issues

China: Target Goals And Dates



	Goal	Target Date*
Corporate Structure	Establish Hong Kong subsidiary of EMC	Q3 2016
	Establish China Wholly Foreign-Owned Entity	Q4 2016
Local Team	Hire China General Manager, China Customer Support Leader, China Business Development & Sales Leader, China plant manager	Q1 2017
Manufacturing Capability	Sign contract for initial manufacturing facility Complete China production line design	Q3 2016
	Hire production line operator	Q4 2016
	Test China production line in Israel	Q2 2017
	Bring up & ship from China production line adding to Israel capacity	Q4 2017
Supply Chain Partners	Engage key Chinese supply chain partners	Q4 2016
	Build prototype of China-sourced MABR product	Q1 2017
	Successfully complete China-sourced MABR product	Q2 2017
Market Access Partners	Sign 1 st distribution partner including paid demo plant	Q3 2016
	Sign 2 nd & 3 rd distribution partner including paid demo plant	Q4 2016
	Commission first demo plant	Q4 2016
	Obtain first provincial certification to enable commercial sales	Q1 2017
Engineering Partners	Engage first engineering partnership	Q4 2016

* Subject to risk factors as set out in separate China strategy announcement

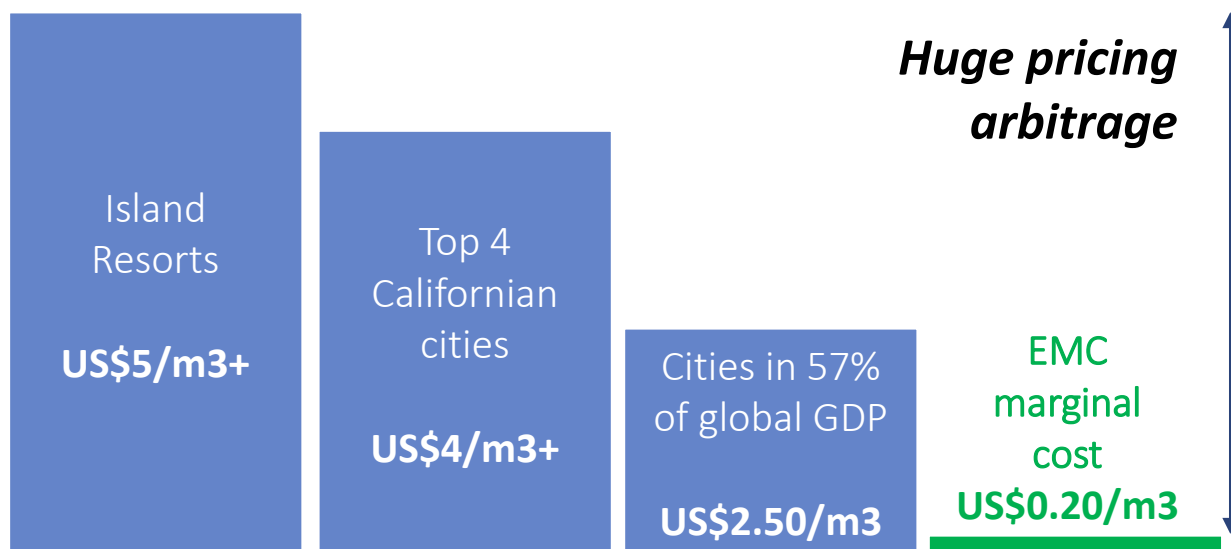
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Water-as-a-Service (WaaS)

Selling Water versus Product:

Emefcy Targets 20+% IRR In Many Geographies & Enables Net-Zero Water Recycling



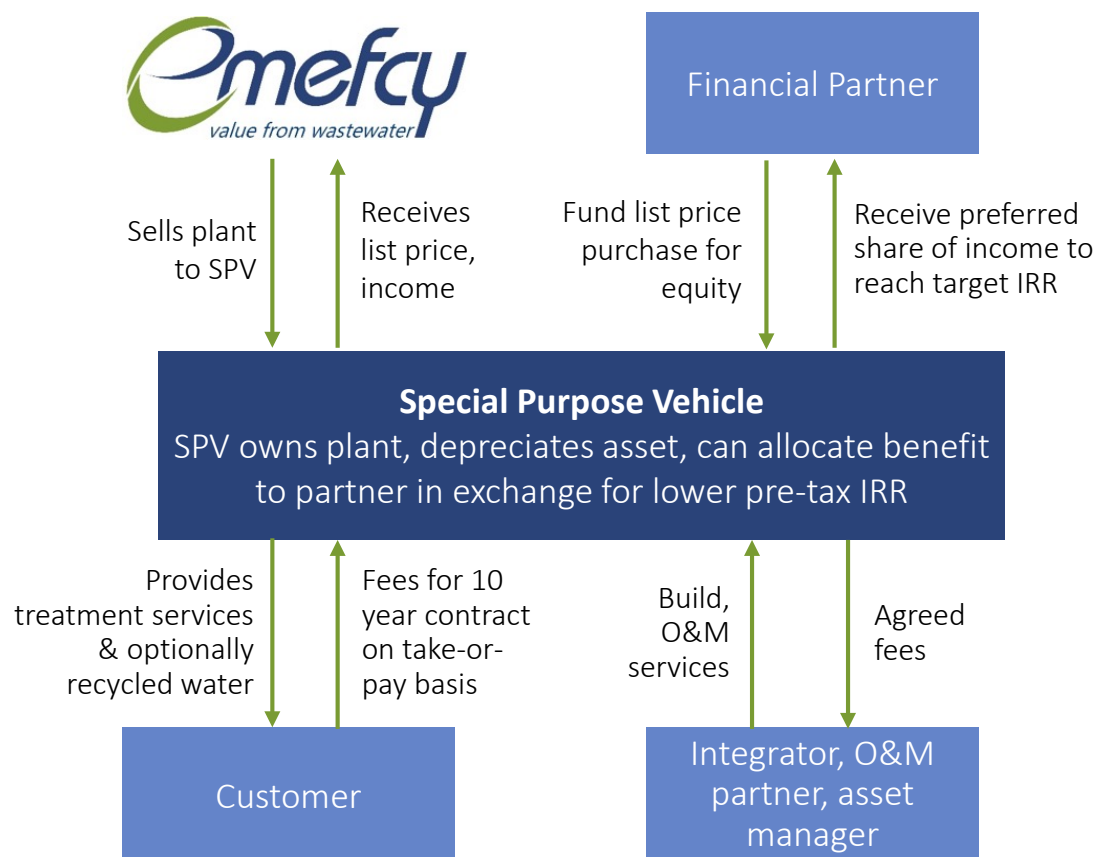
- ▶ On-site recycling mandated in some California commercial buildings, encouraged elsewhere
- ▶ An Emefcy water recycling plant offsets combined water & wastewater costs, easily solar-powered



Water Sale Strategy: A Win For Customers, Financial Partner & Emefcy Intend To Execute In Coming Months



- ▶ **Solution metrics:** Emefcy solution uses 90% less energy, halving operating costs versus competitors; plus lower capex results in typical IRR on a recycling project in mid-20s % over 10 year contract
- ▶ **Customers:** Get water security, save 30% or more in water opex, avoid capex, and lower energy demand
- ▶ **Financial partner:** Makes double-digit IRR over 10 years, 5 year capital recycling on low-risk projects secured against investment-grade customers
- ▶ **Emefcy:** Typically makes **5x** the profit margin over 10 years vs selling product, avoids carrying balance sheet debt



**Example at US\$2/m3/day on 10-year take-or-pay contract of plant capacity*

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Executing Water as a Service Strategy



Step	Target Date
Validate business model with potential financial partners	DONE ✓
Validate business model with resorts & commercial buildings	DONE ✓
Validate business model with municipalities	Q3 2016
Sign terms sheet with selected financial partner	Q3 2016
Build sale of water sales pipeline of at least 10 projects	Q4 2016
Secure initial sale of water contract	Q4 2016
Implement internal organization to manage this business	Q4 2016
Sign contract with selected financial partner	Q4 2016
Sign first multi-unit sale of water contract	Q2 2017



Future Products Expand Target Markets



SABRE2 Is Coming



Higher Capacity, Higher Margin Product Supports Larger Contracts, Sale of Water & China

- Production line upgrade complete - enables SABRE2 and SUBRE manufacturing
- First SABRE2 module manufactured – testing begins shortly, on track for Q1 2017 launch
- **Triples module water treatment capacity**
- **Increases plant capacity to A\$30M p.a., product gross margin of plant output by over 2x**
- Supports larger contracts



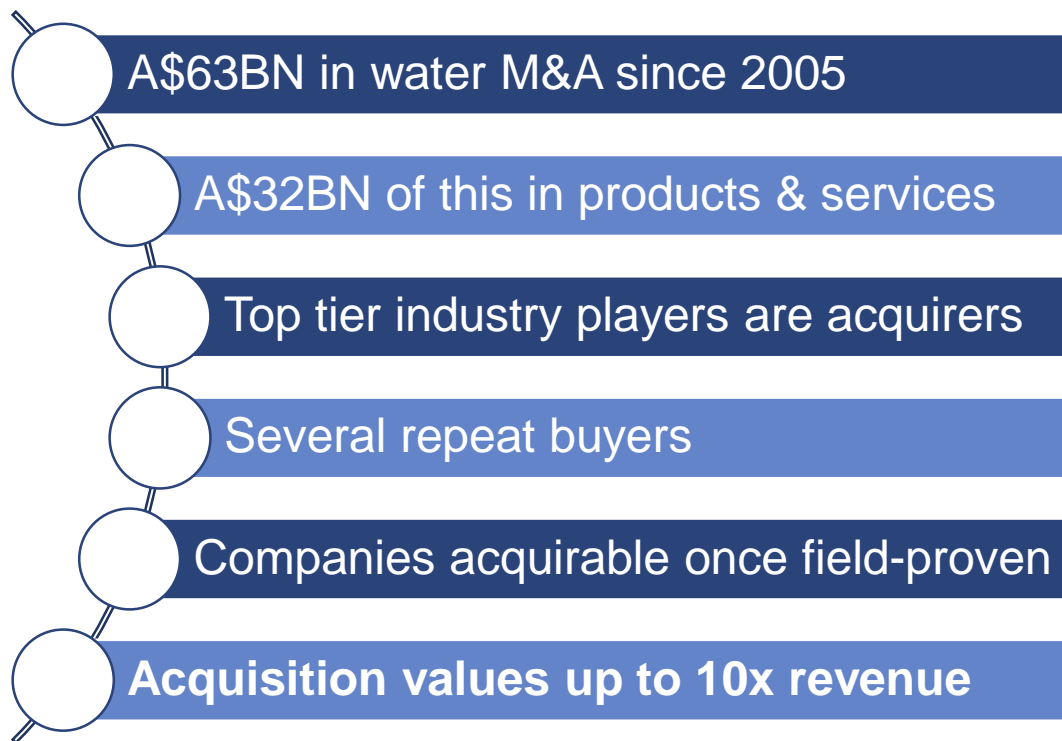
New Products Increase Margins, Served Market Size



Product	Market Need	Status & Target Next Steps
SABRE2	Triples capacity, doubles margin for municipal treatment and water recycling	Testing started – Q1 2017 availability
SABRE3	China-made, China materials – optimized cost and capacity for China & global markets	Build & test in Q1 2017 Complete in Q2 2017 Ship from China plant Q4 2017
SUBRE	A\$2.5B market addressing nitrogen pollution in large wastewater treatment facilities	2016 field pilot 2017 availability
EBR	Further A\$2.7B market handling difficult organic industrial wastewater - Unique, ZERO-OPEX solution that makes electricity from wastewater while treating it	2017 field pilot 2018 commercial availability



Industry Valued At High Multiples: 10 to 18 Times Revenues



(4 M&A)



(12 M&A)



(9 M&A)



(5 M&A)



2011 - Inge bought by BASF for A\$145M with revenues of A\$15M

2014 - NanoH2O bought by LG Chem for A\$274M with under A\$14M of revenues

2015 – Beijing Origin Water Ltd. (300070:CH) A\$550 M revenues & A\$10B market cap = 18X Revenues

Summary



World class founders & investors with sector expertise, a proven track record of over US\$2B capital raised and a combined US\$7B in shareholder value created

Successful ASX fundraise of A\$13.8M joins blue chip investor base (A\$21M invested by GE Ventures, Pond Ventures, IC V, Plan B Ventures)

Sales ramping and plants deploying successfully - proves in-field product performance & reliability

Geographic expansion ahead of plan – Israel, Caribbean, Africa contracts in deployment – China & US entries planned

Clear China and Water-as-a-Service strategies to seek leadership in these markets

Production facilities upgraded to support A\$30M capacity, China plant planned to substantially increase this in 2017

Strong customer economic incentive & value proposition

Technology platform backed by strong IP base provides pipeline of products for broad markets and geographies

Key Contacts



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