

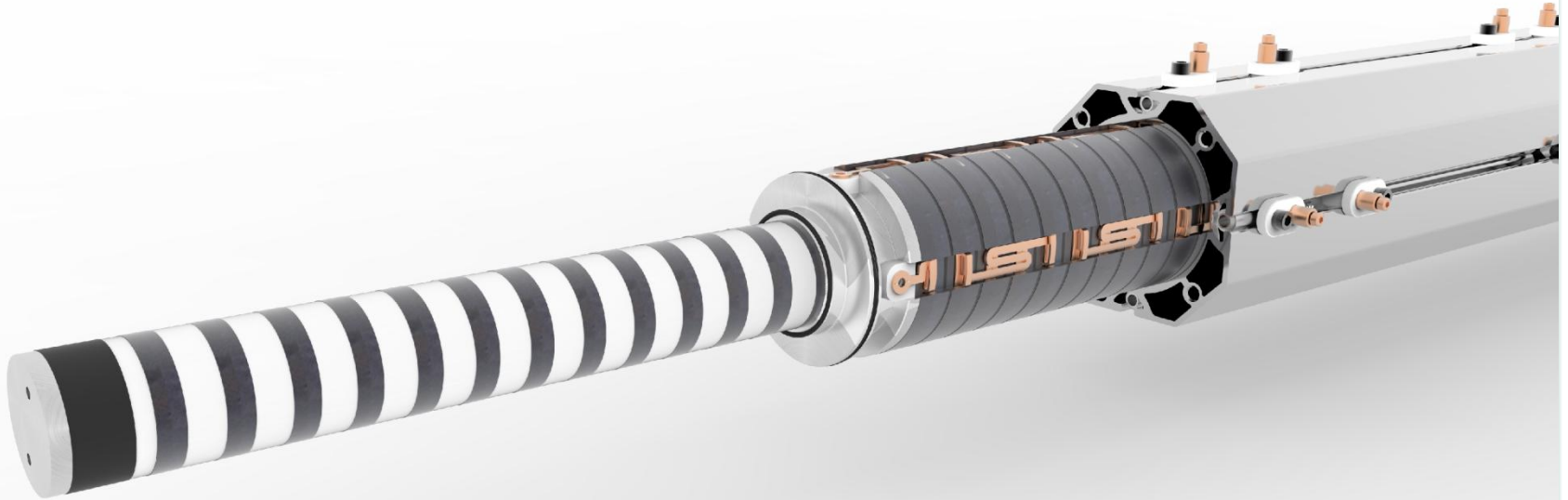
LIBERTINE

LINEAR POWER SYSTEMS

Sam Cockerill, CEO

www.libertine.co.uk

Linear electrical machines and free piston devices for distributed power generation and linear motion



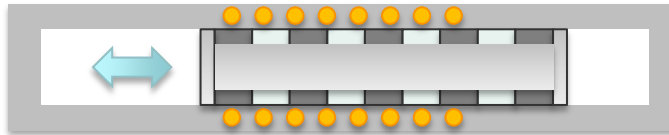
Lower losses than crankshaft based generators

Precise linear force & displacement

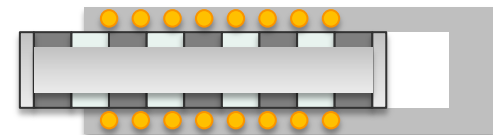
Free piston engines & heat-to-power

Motors, actuators & pumps

How it works



Linear electrical machine generates power as gas on either side expands



Linear electrical machine produces linear force and displacement

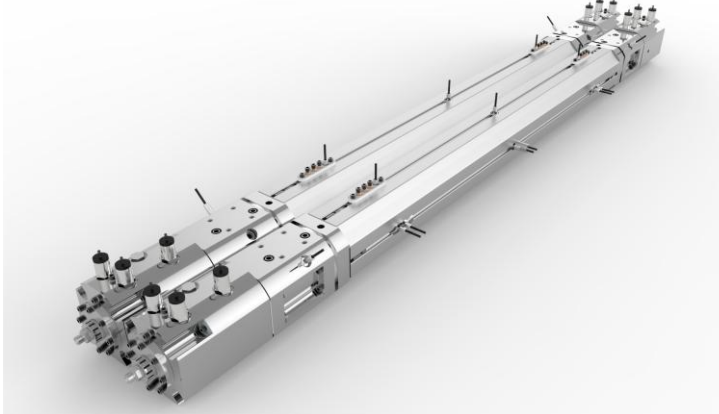
Why it's different

Improved motion control, more efficient power generation

As fast as servo-hydraulics, but more efficient, quieter & lower maintenance

Application example

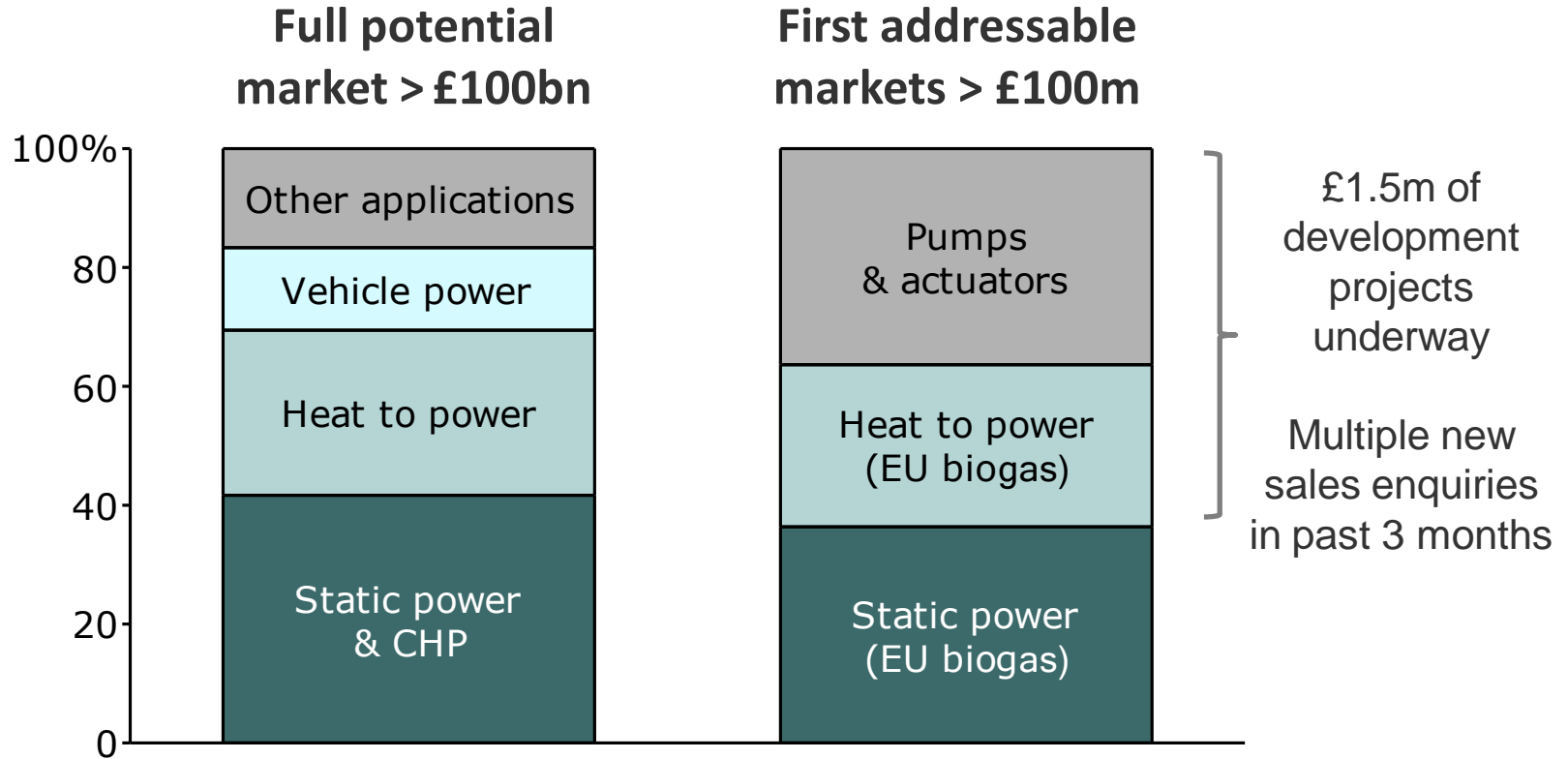
20kWe waste heat recovery expander (2015)



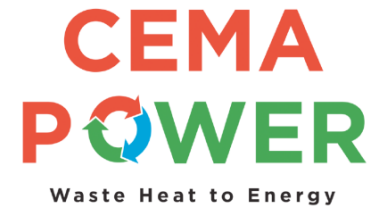
Automotive testing actuator (2015)



The market opportunity



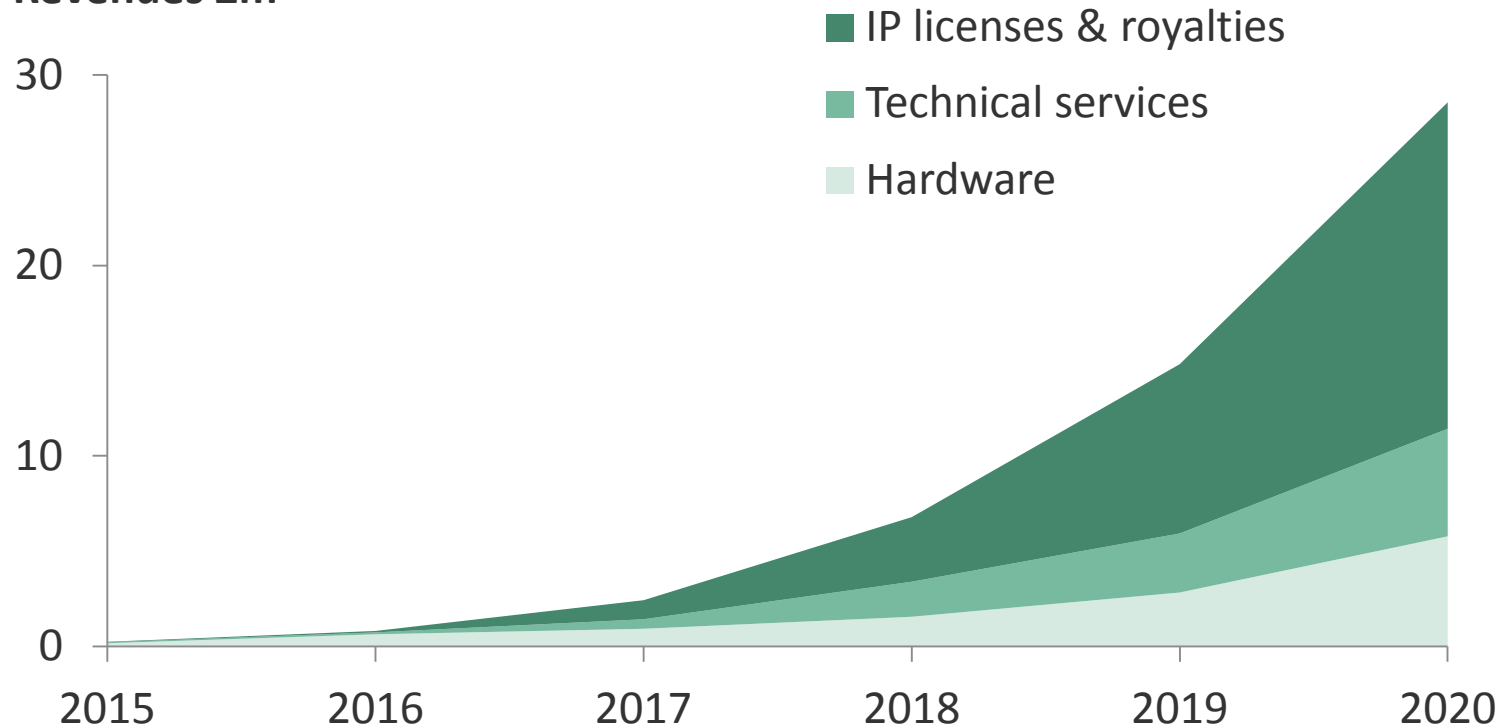
Leading industrial and academic partners



**First revenues +
growing sales pipeline**

Cash positive growth from 2017 driven by IP sales

Revenues £m



£2.2m funding to date
(£1.3m equity, £0.9m grants)

People



Dr Derek Shepherd, Chairman
Aggreko main board
Aggreko international CEO



Sam Cockerill, CEO
Cosworth
The Technology
Partnership
Bain & Company



Sir Robin Saxby
Advisor & Investor
ARM Holdings plc
Founder, CEO &
Chairman



Ed Haynes, CTO
Cosworth
The Technology
Partnership
Williams F1



Sir Rob Margetts,
Advisor
Energy Technologies
Institute (Chairman)
ICI main board

What we're looking for

1. Angel co-investors in a £500k round in 2015, alongside current investors
2. Corporate partners for £1.5m new investment in 2016
3. Strategic fit with corporate investor's current technology & markets



Use of funds

- Expansion of UK-based technical team and R&D facilities
- Product development and marketing of core technology IP
- Working capital to support new revenue projects

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