



QUBE
renewables

SMALL SCALE AD TECHNOLOGY
CONVERTING YOUR WASTES INTO RENEWABLE ENERGY

OUR HISTORY

- 2011 MOD requested an AD solution for Forward Operating Bases in Afghanistan as fuel costs were over \$200 per litre.
- Aardvark EM have worked in the AD sector since 2000's were unable to find anything on the market.
- 2013 Aardvark EM and UK based engineering firm, Loglogic Limited, established QUBE Renewables. Their first anaerobic digester is still producing biogas today.
- 2021 Qube received an equity position by Blue Planet of Singapore



QUBE RENEWABLES LTD DESIGN & BUILD SMALL-SCALE, LOCALLY EMBEDDED BIOGAS-ENERGY GENERATING SYSTEMS



OUR TECHNOLOGY



Modular anaerobic digestion technology providing compact biogas system packaged in multiples of standard 20ft or 40ft shipping containers



The rapidly deployed version of bioQUBE designed to sanitise waste and create biogas for energy recovery



Flexible, modular covers for lagoons or open top tanks to collect gas and intercept rainwater.



Generate electricity and hot water from on site biogas production



Fabric based dry digester designed for biodegradable stackable feedstocks



What is the problem?

Fugitive Emissions:

Ammonia

Methane

Scale

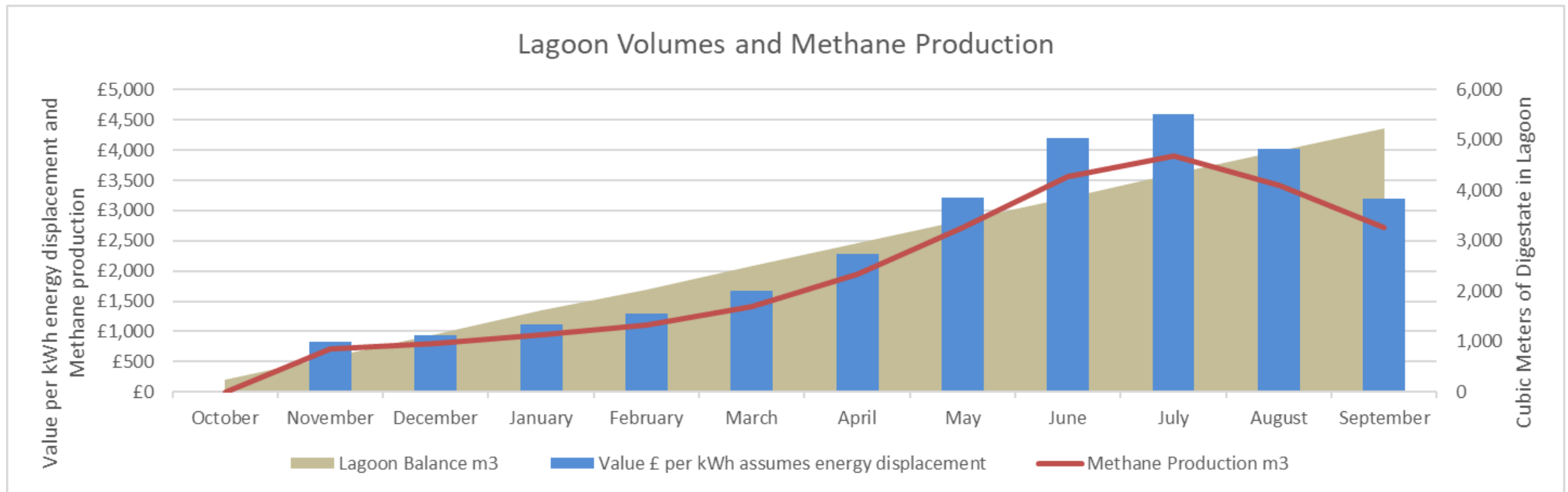


Typical 5500m³ lagoon – say 40 x 40m

Material with 5%DM and 80%VS

Temperature is ambient in Somerset

We estimate that around 46,479m³ biogas emissions per year, based on one empty per year



Major Factors affecting this:

DM but importantly VS content every % is equivalent to around 11,620m³ biogas

Temperature every degree increase is 16% more biogas, until 7°C



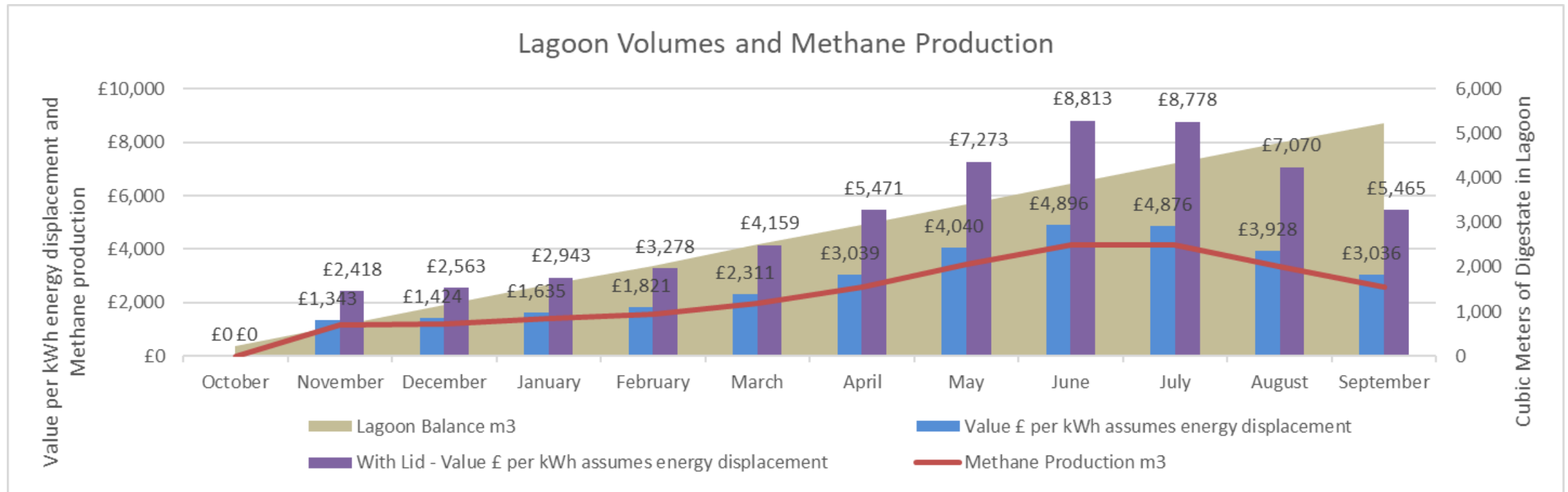
Typical 5500m³ lagoon – say 40 x 40m

Material with 5%DM and 80%VS

Temperature is ambient in Somerset

We estimate that around 46,479m³ biogas emissions per year, based on one empty per year

In energy terms as Electricity this could be worth £27,358 to £58,229 per year*



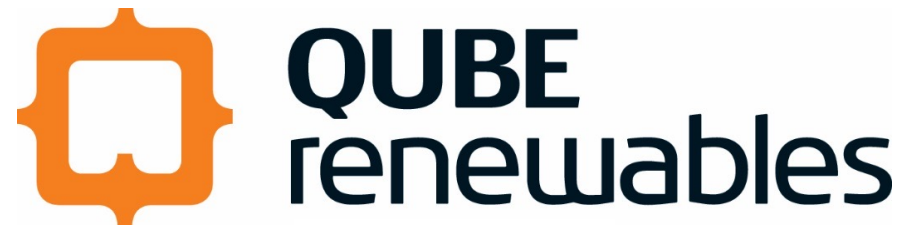
*CHP 27% efficient and Power prices 20p/kWh



LagoonQUBE is a flexible, removable cover that operates as a digester, floating on a lagoon or open top tank to collect biogas and importantly rain water, from the slurry



- lagoonQUBE floats and is removable to allow changing levels of slurry and maintenance of the lagoon
- ‘Pods’ or ‘full covers’ - the ‘pods’ each cover 94m², 11.4m in diameter, hexagon shaped and tessellate together to form full or partial covers.
- Mitigates Green House Gas emissions – biogas that is collected from the system would otherwise have been released into the atmosphere
- Rainwater landing on the cover area is captured and pumped from the cover increasing storage capacity
- Biogas from each lagoonQUBE can be collected and used in small scale CHPs, or in biogas boilers for hot water generation.



Tel: +44 (0) 1984 263263
www.quberenergistics.co.uk

Higher Ford, Wiveliscombe, Somerset, TA4 2RL