

LWP TECHNOLOGIES

14 JUNE 2016

LWP Technologies Limited (ASX:LWP) - Next-Generation Fly-Ash Based Proppants www.lwptech.com



This disclaimer forms part of and is incorporated in the accompanying material

The information in this presentation is an overview and does not include all information necessary for investment decisions. In making investment decisions, investors should rely on their own examination of LWP Technologies Limited, (LWP) or consult with their own legal, tax, business and/or financial advisors in connection with any acquisition of securities. This information has been prepared in good faith by LWP. However, no representation or warranty, express or implied is made, in relation to the accuracy or completeness of the information provided in this document or any other information by LWP otherwise provided to the recipients. Whilst every care has been taken with preparation of the information contained in this document, no responsibility is accepted by LWP or any of its representatives, directors, partners, employees or professional advisers for any information provided in this document or otherwise provided to the recipients or for any action taken by the recipients on the basis of such information. In particular, no representation or warranty is given as to the accuracy, likelihood of achievement or reasonableness of any forecasts, prospects or returns contained in the information. Such forecasts, prospects or returns are by their nature subject to significant uncertainties and contingencies. Each recipient of the information should make its own independent professional advice in relation to the information and any action taken on the basis of the information.

This presentation includes forward looking statements within the meaning of the Corporations Act. These forward looking statements may be identified by words such as "may," "will, "expect," "intend," "anticipate," "believe," "estimate," "plan," "project," "could," "should," "would," "continue," "seek," "target," "guidance," "outlook," "forecast" and other similar words. These forward looking statements are based on LWP's current objectives, beliefs and expectations, and they are subject to significant risks and uncertainties that may cause actual results and financial position and timing of certain events to differ materially from those described in the forward looking statements: failure of a proposed transaction to be implemented; the challengers of cost and closing, integrating, restructuring and achieving anticipated synergies; the ability to retain key employees; and other economic, business, competitive, and/ or regulatory factors affecting the business of LWP generally, including those set forth in LWP's business plan, in particular, the "Risk Factors" section. Any forward looking statements speak only as of the date hereof or as of the dates indicated in the statements. LWP assumes no obligation to publicly update or supplement any forward looking statement to reflect actual results, changes in assumptions or changes in other factors affecting these forward looking statements except as required by law.

© LWP Technologies Limited



KEY FINANCIALS

$\mathsf{ASX}:\mathsf{LWP}$

Average daily liquidity over 12 months: 17,118,000 SHARES

Market Cap: \$25 Million

Cash & Equity Investments: \$3.9 Million, Mar QTR16

No Debt

\$3.5 Million Brisbane Plant

R&D Tax Grants Due: \$2.7 Million Q3, Q4 2016

Shares on Issue: 4.1 Bn.

Approx. Cash Burn: \$1.6 Million/Year = Approx. 4 Years Working Capital

LWP Technologies (*ASX: LWP*) is an Australian oil & gas technology firm that has developed a next generation, flyash based, proppant for use in hydraulic fracturing of oil & gas wells globally.



KEY MILESTONES

- **MARCH 2015:** Acquired Ecopropp & its disruptive proppant technology
- MAY: Brisbane scale-up pilot plant construction completed on time and on budget
- JUNE: Engaged Eddie Sugar & EAS Advisors as US Corporate advisor
- JULY: Raised \$6.6 million @ 1.1 cents/share
- JULY: Inked 60/40 Hallmark JV to acquire 12,000 TPA factory in Pune, India
- **DECEMBER:** Technology scale-up completed, proppants sent to US Expert laboratories for testing
- **JANUARY 2016:** Technology scale-up completed, outstanding Expert test results received, US CEO appointed
- MAY: New low cost proppant developed and tested, to compete with mined frac sand on price. In discussions with several parties for proppant technology licenses
- JUNE 2016: Investment in ground-breaking Graphene Battery Technology
- **ONGOING:** Examining other opportunities to utilize LWP's 2,100 shareholder base & strong cash position.



RECHARGEABLE BATTERY MARKET

Several parties investigating Graphene as a solution

23 Global Lithium manufacturers and growing

Tesla building US\$5 Bn. Mega factory

Volkswagen announced € 13 Bn. Mega factory

BMW predicts 50% of cars will be electric by 2025

Norway, Austria, Netherlands and India targeting 100% electric cars by 2025

Toyota working on magnesium, as Lithium is regarded as an unstable metal prone to fire risk





THE RACE IS ON TO PERFECT GRAPHENE BATTERIES

Eminent researchers working on graphene batteries include:

Stanford University Manchester University **Rice University** University of Cambridge University of Notre Dame **Beihang University** Tsinghua University Kansa State University **Beijing Institute of Technology** Tohoku University, Japan University of Cordoba Yonsei University, South Korea Dresden University of Technology Sydney University of Technology Monash University North Carolina State University California NanoSystems at UCLA Sapienza University, Rome Hong Kong Polytechnic University Korean Sungkyunkwan University University of Wollongong Brown University, Rhode Island, USA Western Reserve University, Ohio China University of Science & Technology Fudan University, Shanghai Kumamoto University, Japan



LITHIUM-ION BATTERY vs. Al-GRAPHENE BATTERY

Comparison of Al-Graphene Battery with Tesla 85 kWh Lithium-Ion Battery			
Property	Lithium-Ion Battery Source: Tesla	Al-Graphene Battery Source: V Volkov	Benefit
Power	85 kWh	100 kWh	15% more power
Energy Density	265 Wh/kg	2,000 Wh/kg	7.5x stored energy
Range	426 km	3,500 km	8x range
Recharge time	4.5 hours	15 minutes	not much longer than refueling with petrol
Weight	544 Kg	387 kg	30% lighter
Dimensions (cm)	10.16 x 284.48 x 177.8 for 16 modules	7 x 200 x 100 for 8 modules	54% smaller
Estimated cost	A\$22,200	A\$11,450	50% less
Durability	8 years (est.)	15 years (est.)	Lasts almost 100% longer
Accumulated battery loss	5% initially, then 1% per 3,000 km	1% initially, then 1% per 3,000 km	Retains peak efficiency longer
Estimated Manufacturing cost	~A\$200/kWh	A\$20/kWh	Reduced Manufacturing Cost

Also see Graphene vs. Lithium http://graphenewholesale.com/graphene-battery



GRAPHENERA BATTERY TECHNOLOGY

Graphenera Pty Ltd has acquired rights to lodged Patents on technologies that LWP has options on developing, including Patents that cover the Synthesis of Graphene.

The Research and Development is already completed, with 3 Australian Patent applications lodged:

- #1 Aluminium Graphene Oxygen Battery, & Synthesis Graphene
- #2 Aluminium Graphene Composite
- #3 Aluminium Graphene Ion Ultra fast rechargeable Battery

About the Inventor

- Australian Russian inventor. Victor Volkov B.Sc. Engineering, MAI State University of Aerospace Technology. B.Sc. (Economics) MAI. Post Grad cybernetic. Plekhanov Institute, Moscow.
- Nano Technology / Software analyst, specialising in the application of leading-edge physical methods in the process of metal-based conductive composite with improved mechanical and chemical properties. In particular relating to a method for producing graphene-aluminium composite material, with more than 12 years engaged in nano-technology research.
- Holds 7 provisional patents relating to synthetic ligature aluminium alloys with titanium and zirconium, titanium diboride synthesis, synthesis graphene, synthesis of lead-zinc-coating, and a method of producing lead battery electrodes.
- Victor's international scientific group has 2 priority references: (1) A method of synthesis of lead-graphene composites, and (2) Synthesis of aluminium-, magnesium-, alyumomagny-graphene composite.

GRAPHENERA BATTERY – TRANSACTION SUMMARY

- LWP has agreed to invest \$1.6 million for a 50% interest in joint venture company, GraphenEra to exploit patent #1. Based on positive results, the JV partners intend to commence the exploitation of patents #2 and #3.
- Development program, 6 to 12 month timeframe:
 - Construct prototype battery
 - Prototype battery testing by independent experts during numerous charge/ discharge cycles
 - Build up to 5 batteries for evaluation by potential licensees
- LWP controls marketing & commercialisation & IPO



LWP CERAMIC PROPPANT TECHNOLOGY

Technology

Scale up capability proven by independent expert reports January 2016

Points of difference

- Lowest manufacturing cost, the only ceramic proppant that can compete with mined frac sand on price
- 40% stronger than kaolin clay
- 40% lighter than bauxite
- Reduced deployment costs
- Low (or no) transportation and logistics costs, as LWP recycles the abundantly available byproduct of coal fired power plants, often close to shale oil and gas reserves



EFFECT OF LOW OIL PRICE ON PROPPANT DEMAND

- The low oil price has forced producers to target shallow oil and gas wells, delay deep wells
- This has necessitated LWP looking at different applications of its technology
- To compete in the "new world", LWP have developed a low cost proppant that can compete with mined frac sand on price
- The new proppant can be manufactured at a low cost to compete with frac sand, but has all the advantages of a ceramic proppant:
 - Stronger = Less fines
 - Higher sphericity and roundness = increased production
 - Lighter weight = 14% more proppants
 - Low transport and handling costs.



LWP'S VISION

Market Leading Energy Technologies for Today and Tomorrow



CERAMIC PROPPANT COMMERCIALISATION AND MONETISATION OPPORTUNITIES

- Secure offtake agreements for Indian JV plant. On 20,000 tons/year production, indicated revenues US\$5.28 million, EBITDA US\$3 million.
- License LWP's technology to existing proppant manufacturers to modify existing plants. Potential prospects in USA and China.
- One off License fee = \$2.5 to \$5 million depending on geographical area, PLUS ongoing royalties of 10% of revenue. Indicated annual royalty, 100,000 tons/year plant = US4.4 million/year.
- Partnerships and/or Joint Venture arrangements to build new commercial scale plants to produce LWP proppants. Prospects in Australia, Canada, Middle East, US and Mexico.



MANAGEMENT TEAM

SIEGFRIED KONIG

Chairman

Entrepreneur and Ecopropp Co-Founder. 30-years experience in business management, Successful listing of 3 start-up companies on ASX. Global relationships in capital markets & public company sector.

DR. DAVID HENSON

Executive Director

Ecopropp Co-Founder based in Houston TX, former CEO of Siemens conceptual engineering services & project manager at \$3.8 Bn. Gas to liquids export facility. PhD in Chemical Engineering.

SEAN CORBIN

Executive Director & Company Secretary

Sean has worked as an executive at CEO and CFO level in a wide range of industries in various stages of each business.

JIM IRVINE

Non-Executive Director

Founder and President of Fly Ash Direct based in Cincinnati, OH. Director of subsidiaries LWP LLC & Epropp LLC

BILL SCHOCH

Chief Financial Officer

Extensive experience in accounting, tax, audit and in CFO roles in listed and unlisted companies.

DR. RALPH ENDERLE

Chief Scientist

Principal of Drend Solutions which provides conceptual designs for thermal processing and associated equipment & materials development.



CONTACT

SIEGFRIED KONIG CHAIRMAN, LWP TECHNOLOGIES LIMITED

MOBILE: +61 411 111 193

US CELL: +1 201 238 9080

OFFICE: +61 7 3122 2233

EMAIL: <u>sb.konig@lwptech.com</u>



LWP Technologies Limited (ASX:LWP) - Next-Generation Fly-Ash Based Proppants www.lwptech.com