

Latrobe Magnesium

Presentation

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David Paterson
Chairman

ASX:
LMG

Presentation

1. Corporate background
2. LMG opportunity
3. LMG process
4. LMG current activities
5. Timelines and milestones
6. Financial overview



1. Corporate Background

Valuation Fundamentals and Performance

- Shares issued 927 million at 0.5 cents Market Capitalization \$5m
- Shares price history

2011	High 4.2 cents	Low 2.2 cents
2012	High 2.4 cents	Low 1.2 cents
2013	High 1.2 cents	Low 0.4 cents
2014	High 1.1cents	Low 0.4 cents

- Top 4 major shareholders represent 28% of share capital

K Torpey	95m
D Paterson	92m
J Wolfe	42m
M Gibbs	34m



1. Corporate Background

People

Directors and Staff

- David Paterson Executive Chairman
- Kevin Torpey Director & mining consultant
- John Lee Non executive director
- Philip Bruce Non executive director
- Jim Siemon Project director

Consultants

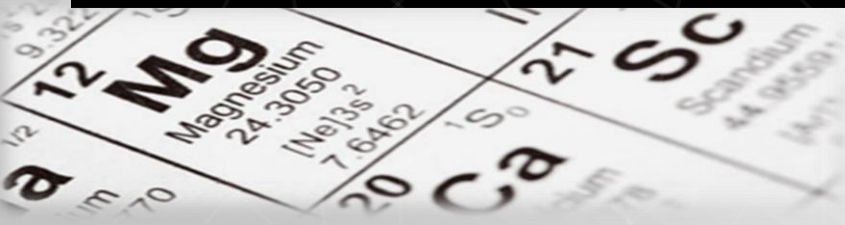
- CSIRO - Melbourne – Magnesium and smelter processors.
- Clark & Marron - Magnesium industry experts.
- GHD - Engineers for PFS.
- Beijing Tieforce Engineering - Magnesium smelter construction company.
- Curtin & Monash Universities - Mineralogy analyses & alternative process consultants.
- Ecoengineers and Amdel Perth Laboratories - Hydromet advisor and laboratory.
- Engineered Material Solutions, Daksh Baweja - Cement advisor.
- JJ Wolfe Consulting – Property advisor



1. Corporate Background

Brief History

- Listed on Australian Stock Exchange (LMG) in 2002.
- Dealing with Latrobe Valley fly ash for over 12 years.
- Tested every proven magnesium process technology.
- Breakthrough with Ecoengineer's hydromet process some 3 years ago.
- Conducted over 300 lab tests and 80 retort tests in proving that LMG's hydromet process can extract Mg and cementitious material from brown coal fly ash.
- Completed the prefeasibility study in October 2011 and finalized the adjustment study in March 2013.
- Completed concept study on RWE Power brown coal fly ash in February 2014.



2. LMG opportunity

90% of fly ash waste converted into: %

• Magnesium	10
• Cementitious Material	65
• Char	7
• Silica	8

	90

Up to 23 tonnes of carbon credits created per tonne of Mg.



2. LMG opportunity

Magnesium uses	%
• Steel desulphurization	22
• Titanium sponge	11
• Alloy in aluminium can production	33
• Motor car parts for strength & weight savings	33

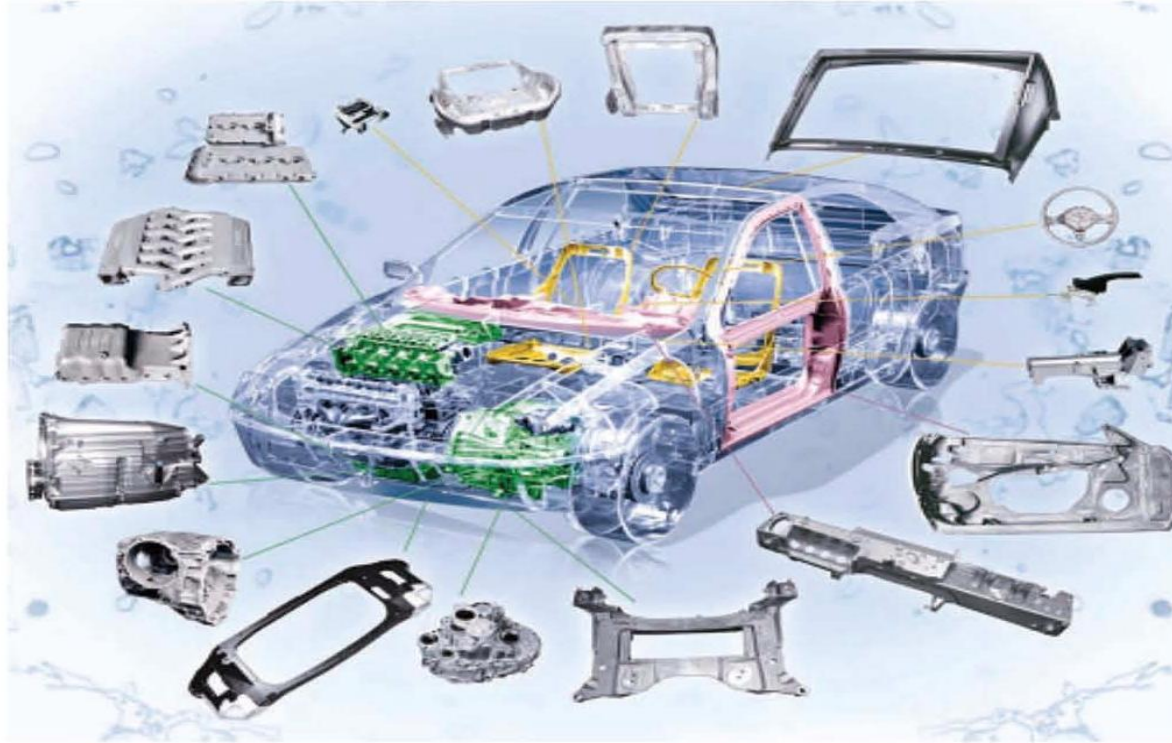
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New uses – planes and trains and consumer products (laptops, mobile phones etc)



2. LMG opportunity

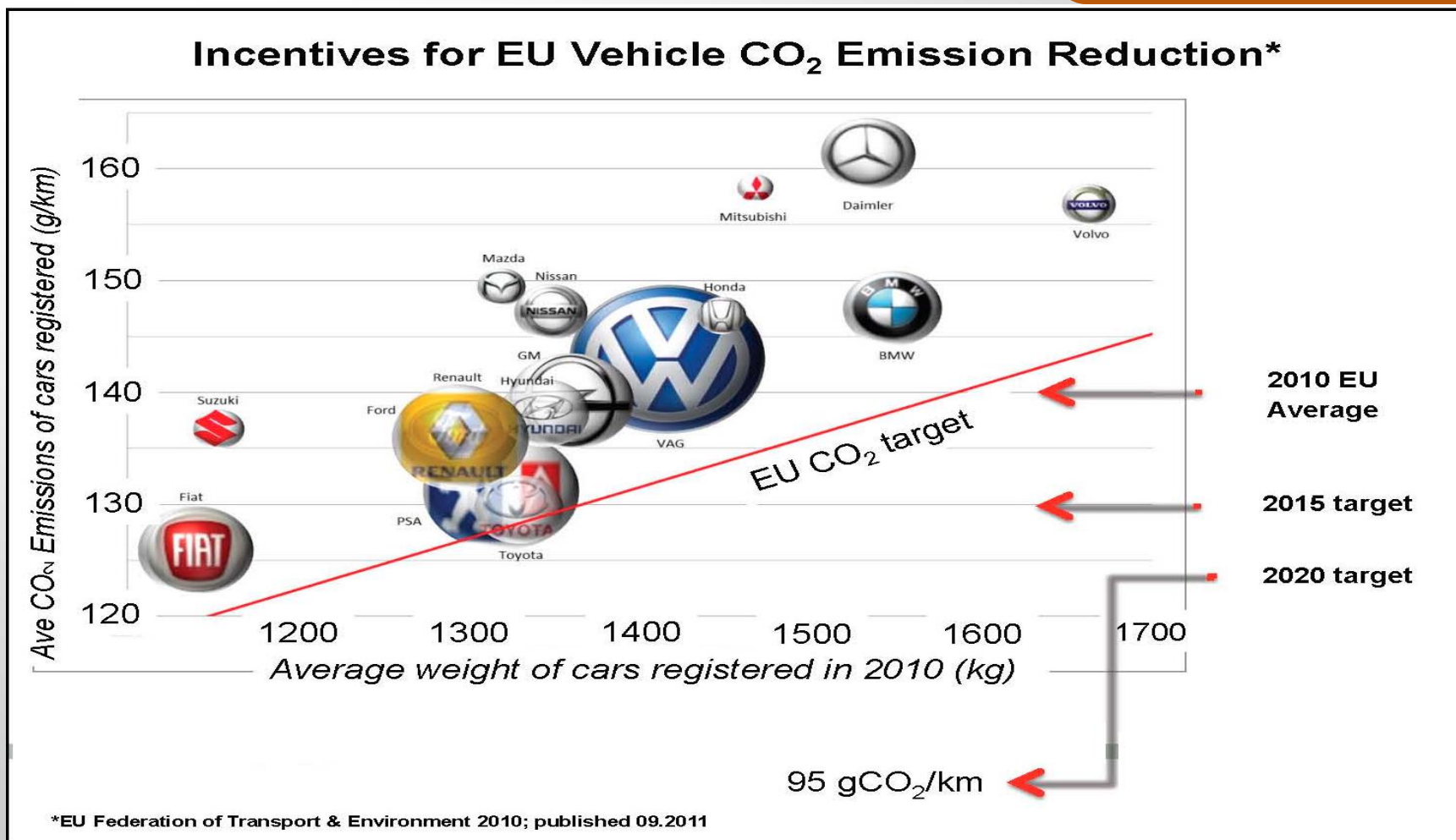
Magnesium alloy applications replacing aluminium and steel is a focus for all automotive manufacturers



Industry drivers



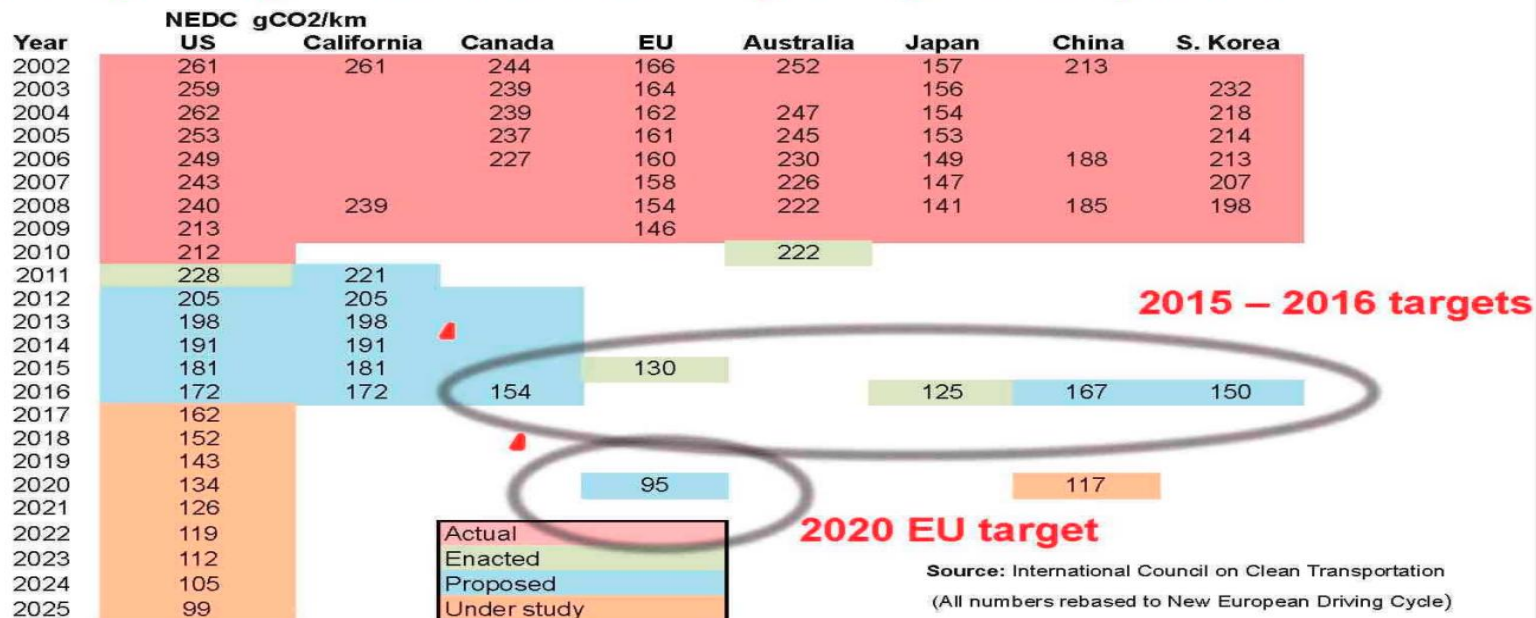
2. LMG opportunity



2. LMG opportunity

Vehicle emission legislation – global comparisons

100 kg of weight reduction reduces ~10g of CO₂ emission per kilometre



Under the EU 'Cars Regulation', fleet average for all new cars is 130g of CO₂/km by 2015 - phased in from 2012 - and 95g/km by 2020. The regulation is currently undergoing amendment in order to implement the 2020 target. Updated 30 July 2012

Industry drivers

2. LMG opportunity

Automotive Opportunity

CO2 per kms

EU 2012 figure

120 g

EU 2020 target

95 g

Emission reduction

25 g

Weight reduction required

250 kgs

or 15% of medium sized car.

USA Auto study revealed that the above weight reduction could be achieved by replacing steel and Al parts with 150kgs of Mg parts. If happened would multiply current market 10 times.

Auto parts example – Bonnet (Steel 6kgs, Al 1kg, Mg 0.7kg)



2. LMG opportunity

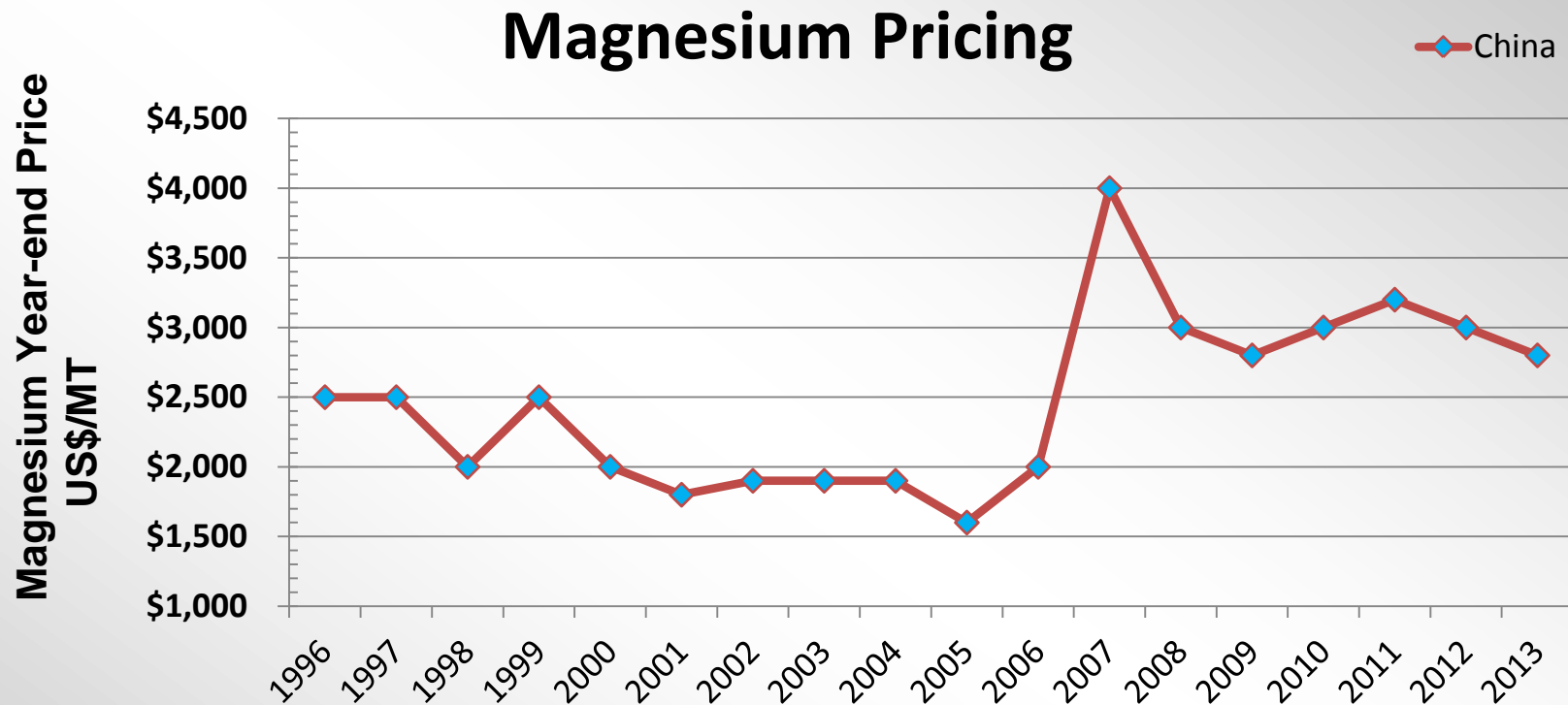
Primary Magnesium metal production

- 2000 210,300 tons
- 2012 693,000 tons
- 2013 792,000 tons
- 2023 projected production 1,600,000 tons

Average annual growth in the range between 6% to 7%. The above does not include alloys and powders. China produces some 85% of world production.



2. LMG opportunity



Note: US magnesium price was approx 50% above the FOB China Price for this period.



3. LMG process

LMG business parts

- Access to brown coal fly ash with sufficient MgO .
- Use of proprietary Hydromet technology.
- Construction expertise contracted for the thermal reduction process and its modernization.
- Availability of existing infrastructure and personnel in Latrobe Valley.
- Accessible local and overseas markets for both magnesium and cementitious products.



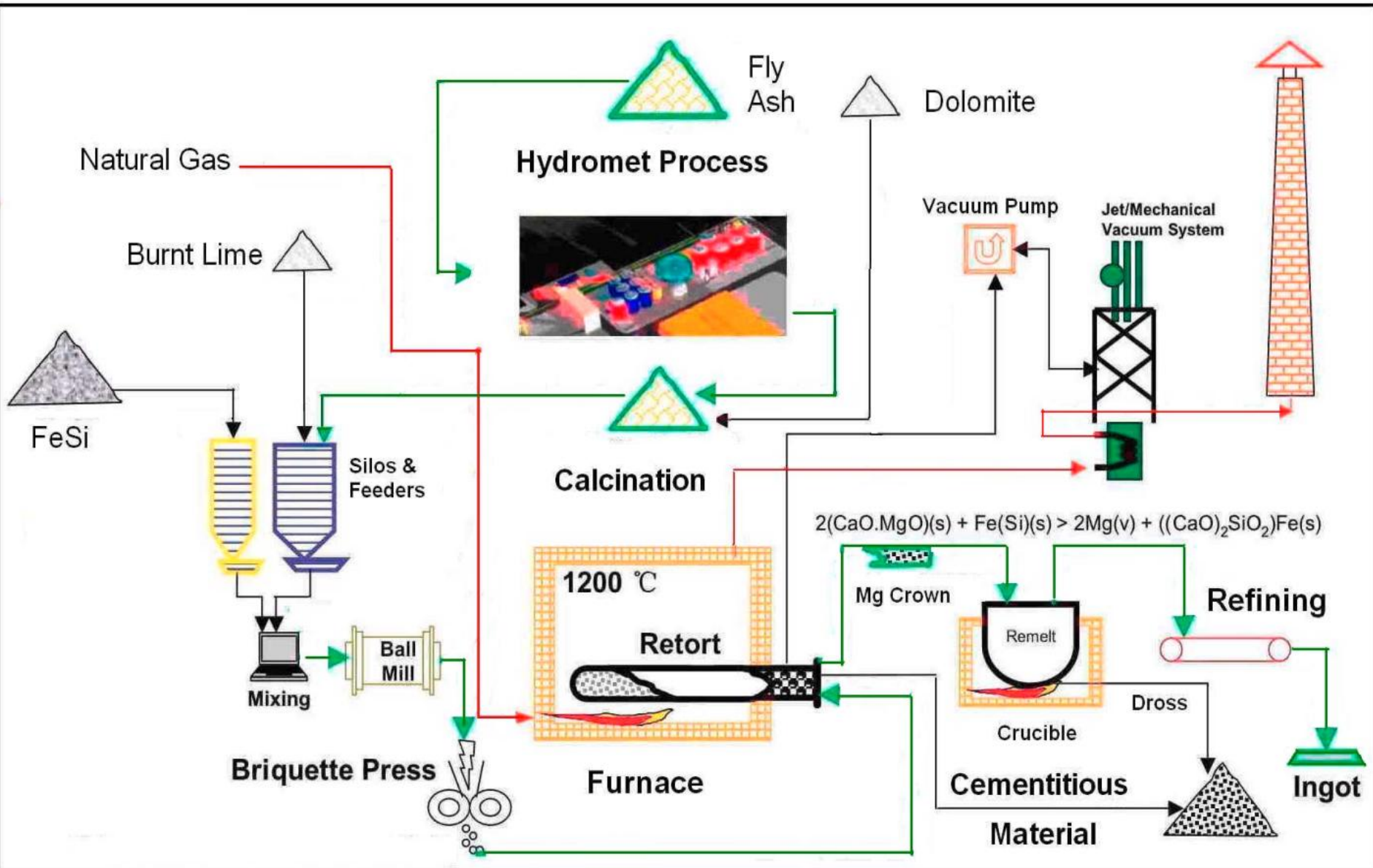
3. LMG process

Unique and proprietary process

- Process is a combination of its unique patented hydromet process with the proven thermal reduction process been in operation since 1941.
- Hydromet process uses standard industrial reagents to remove impurities from the ash - Sulfur, Iron, Silicon.
- Hydromet process simply described as a cyclone extraction process followed by two agitator tank systems.
- Beneficiated material used as feedstock to the established thermal reduction process to produce magnesium.
- Owing to high Mg recoveries and process, the resultant cementitious product resembles a portland cement.



3. LMG process



3. LMG Process



Swop Line
from
Yallourn

Swop Line
from
Hazelwood

Natural
Gas
Pipeline

Proposed
Slurry
Pipeline

320
Tramway
Site

4. LMG Current Activities

Current Activities:

- Finalizing the Latrobe Valley fly ash agreement.
- Processing a bulk sample through commercial retorts in China.
- Completing a detailed assessment of the cementitious material.



5. Timelines & milestones

Key Dates

- Sept 2014 results of the Chinese bulk sample.
- Oct 2014 receive results from the cementitious analyses.
- Dec 2014 conclude MOU with major customers and suppliers
- Mar 2015 complete bankable feasibility study.
- Jun 2015 start installation of 5,000 tonnes plant.
- Jun 2016 start production of 5,000 tonnes plant.
- Jun 2017 expand the plant to 40,000 tonnes capacity.
- Jun 2017 start installation of RWE Power plant.



6. Financial overview

Financial Parameters	5,000 tonnes A\$/tonne	40,000 tonnes A\$/tonne
Magnesium revenue	4,218	4,218
Net Cash operating costs	(3,840)	(2,635)
Operating surplus	378	1,583
Capex	A\$45M	A\$285M
NPV at 12% discount factor	A\$100M to A\$125M	
China operating costs range between US\$2,200 to US\$2,500/t		

6. Financial Overview

Cost improvements through further process optimisation –

- Further iron reduction in BFA reduces FeSi usage possible savings up to A\$350 per tonne of Mg.
- Possible new magnetite product.
- Use of vertical retorts may save 20% in capital costs and A\$360 per tonne of Mg in operating costs.
- Possible savings in freight and consumables of up to A\$100 per tonne of Mg.

Total Savings targeted of up to A\$800 per tonne of Mg



Disclaimer

- This presentation may contain forward looking statements that are subject to risk factors associated with the magnesium business.
- It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially including but not limited to: price fluctuations, actual demand, currency fluctuations, production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.
- Investors should undertake their own analysis and obtain independent advice before investing in LMG shares.
- All reference to dollars, cents or \$ in this presentation are to Australian currency, unless otherwise stated.

