



# CHAPMANS

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## **FIRST AGREEMENT FOR LARGE SCALE COMMERCIALISATION OF SYN DYNAMICS WASTE-TO-ENERGY TECHNOLOGY**

### **HIGHLIGHTS**

- Syn Dynamics Australia Pty Ltd (SDA) proposes to enter into a Joint Venture Agreement with an Asia Pacific registered corporate with significant operations across the mining, oil and gas industries (the JV Partner).
- Under the proposed JV, SDA's breakthrough waste-to-energy technology will be used to treat hazardous waste materials for the JV Partner including waste stockpiles and continuously generated hazardous waste.
- The JV is a major opportunity for the large scale commercial application of SDA's technology with strong prospects for multiple long term site installations.
- Chapmans, via it's subsidiary Chapmans Opportunities Limited (COL), has a majority, strategic 80% interest in SDA.
- SDA is a breakthrough plasma gasification waste-to-energy business that converts a wide range of hazardous carbon-based waste materials into a high-value synthetic gas known as 'syngas'.
- The JV Partner is a leading corporate operating in the mining, oil and gas sectors.
- Both parties will now undertake due diligence and with plans to enter in to the formal Joint Venture Agreement within four months.
- SDA's potential to secure large scale, long term commercial contracts for its plasma gasification waste treatment technology positions COL's investment to be highly value accretive.

The Directors of Chapmans Limited (ASX: CHP) (Chapmans, the Company) are pleased to announce that clean-tech business Syn Dynamics Australia Pty Ltd (SDA) proposes to enter into a Joint Venture Agreement (Joint Venture) with a leading Asia Pacific registered corporate with well established and significant operations across the resources and energy sectors (the Joint Venture Partner).

Under the proposed Joint Venture, SDA's breakthrough waste-to-energy technology will be utilised to treat hazardous waste materials. The Joint Venture represents a major opportunity for the large scale commercial application of SDA's technology. Subject to performance and commercial discussions, the SDA and the JV Partner plan to expand activities throughout the Asia Pacific region. The JV Partner cannot be named at this time due to confidentiality provisions.

The Joint Venture is proposed to be an equal 50:50 agreement.



**Specifically, under the proposed Joint Venture SDA and the JV Partner will;**

- Further develop and refine SDA's technology through continued testing of various waste feedstock at CSIRO's Queensland Centre for Advanced Technology, viability analysis and commercial modelling;
- Install and operate a commercial pilot plant, and install and operate other commercial plants at other locations as required to meet the JV Partner's needs;
- Develop a commercially viable product offering, utilising SDA technology, for a range of hazardous waste materials; and
- Process waste feedstock at the commercial plants such that it is suitable for the manufacture of secondary products (such as syngas), and sell the secondary products;

The parties will also obtain any environmental approvals required for the construction of, and processing of, waste feedstock at the pilot plant, and any other commercial plants constructed under the Joint Venture.

The JV Partner will supply waste feedstock samples for process testing and analysis with SDA's batch plant test facility commissioned by CSIRO at its QCAT site in Brisbane.

SDA will licence the SDA Technology to the proposed Joint Venture, and the licence region which will consist of selected countries in the Asia Pacific and selected strategic sites.

Chapmans subsidiary company, Chapmans Opportunities Limited (COL), has a majority, strategic 80% interest in SDA. SDA has developed a next-generation plasma gasification technology that converts a wide range of waste material into a high value syngas product. It is able to convert 100% of waste material feedstock into syngas - other competing technologies typically achieve conversion rates of only 30% - 50% and produce tars and toxic chemicals which limit their adoption.

Both parties will now undertake a due diligence process, and also confirm the processing capabilities of the SDA technology to treat specific waste feedstocks, to the satisfaction of both parties, before entering into the formal Joint Venture Agreement. The parties will use their best endeavours to satisfy these conditions within four months.

### **About Plasma Gasification and Syn Dynamics Technology**

SDA's patented plasma hyropyrolysis technology is designed to address the performance, efficiency and scale characteristics of existing gasification technology with the objective of optimising conversion, cost and accessibility requirements of global waste mass markets.

Gasification is a process by which carbon based material is converted in to a gaseous fuel, namely a mixture of carbon monoxide, hydrogen and carbon dioxide – also known as synthetic gas or syngas.

Plasma gasification is a next-generation extension of the gasification process and has undergone a surge in interest and commercial application over recent years. It uses an ionized gas (a plasma) to convert the organic matter into syngas or solid waste.

It has the advantages, relative to other gasification systems, of having no formation of tars which are detrimental to gasification systems and no toxic chemicals (such as dioxins) produced in the gas stream..

Syngas is a global commodity in its own right and represents a key building block of modern chemical industry, with a wide range of commercial uses and applications. These include electricity generation and as a liquid fuel source.



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Syn Dynamics' plasma gasification technology has two compelling technical advantages;

- Its extremely high waste-to-syngas conversion rate which contributes to its cost effectiveness; and
- Its ability to treat a wide range of waste material including hazardous waste, biomass and landfill, in addition to solid hydrocarbons such as coal.

Combined, these factors open up substantial global commercial market opportunities in the corporate and government sectors, as large organisations seek new waste utilisation and storage solutions.

SDA is well placed to capitalise on the significant market opportunities to solve widespread financial, environmental, and health and safety issues caused by large stockpiles and continuous production of hazardous waste materials via the commercialisation and deployment of its waste processing and conversion technology.

ENDS

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**About COL**

Chapmans Opportunities Limited (COL) is a subsidiary of ASX-listed diversified investment company Chapmans Limited (ASX: CHP). It is an investment entity focused on making non-controlling investments in small to medium Australian companies, predominantly providing active expansion capital in the technology sector. COL plans to seek an ASX-listing in due course.

**About Chapmans**

Chapmans (ASX: CHP) is an ASX listed diversified investment company engaged in special situation investments across a diverse range of industries, with a focus and expertise in the mobile and advanced industrial technology sectors. It seeks to be an active strategic investor in high growth areas of the market, and to identify and work with emerging high growth companies. The Company's investment philosophy and approach are based on a unique mix of high conviction and special situation features, characterised by advisory and equity investments structured around specific events and assets for both public and large private corporates.