

SYNERTEC

<u>Subber</u>

SYNERTEC CORPORATION LIMITED (ASX: SOP) Commercialising Innovative Environmental Technology

March 2021

expertise experience

ABOUT SYNERTEC CORPORATION LTD (ASX: SOP)



Synertec is a diversified technology design and development growth company providing environmentally friendly and energy efficient engineered technology for major global end markets



Multi-disciplinary engineering expertise and a Tier-1 blue chip customer base underpin our capabilities in technology design and development:

- **Critical Infrastructure** (Rail, Water, Bulk Liquid Terminals)
- Energy (Oil & Gas, Liquefied Natural Gas (LNG))
- Regulated Industries
 (Pharmaceuticals, Defence)



We are an entrepreneurial and agile organisation that has generated more than \$100m in revenue since 2014 and pursued a disciplined strategy of reinvesting cash flow from value-adding solutions to commercialise our portfolio of highly prospective energy technologies, both in-house and through strategic partners



Synertec was incorporated by Founder and Managing Director Michael Carroll in Australia in 1996, **listed on the Australian Securities Exchange in 2017 under stock code (ASX: SOP)** and now employs 50+ professionals: including engineers and scientists, project and construction managers and manufacturing / quality specialists

REPEAT TIER-1 CUSTOMERS DRIVING GROWTH & TECHNOLOGY DEVELOPMENT



SINCE ASX LISTING: \$50M+ REVENUE, CONSISTENT STRONG CASH POSITION, INCREASING MARGINS

SYNEE

- With over 80% of revenue derived from repeat clients, Synertec delivers with unrivalled experience into a global market where ~US\$3.7 trillion in global infrastructure spend is expected to 2040¹
- Access to the latest technology in the global energy, water, transport and pharmaceutical sectors.

1: Oxford Economics: Global Infrastructure Outlook July 2017.

SYNERTEC'S COMPETITIVE ADVANTAGE



Deep Customer Relationships

We partner with our customers to deeply understand their needs and develop fit-for-purpose engineering technology solutions



Enhance and Extend Offering

Our proprietary IP reinforces and enhances our core business and reputation for technology development: more than 80% of work since FY17 is from repeat clients





We identify 'universal solutions' in live projects with broad commercial application and **develop proprietary IP products**, leveraging input from our larger customers

Replication and Expansion

We commercialise and scale up our high value proprietary IP products by **collaborating with potential end-user customers** and then targeted marketing into global markets

IP PROTECTION, INCLUDING PATENTS, RETAINS SYNERTEC'S COMPETITIVE ADVANTAGE







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TECHNOLOGY MARKET OPPORTUNITIES

Technology Solution	Overview	Current process & environmental impact	Our process & environmental improvement	Market opportunity
CDP Composite Dry Powder	The patent-pending Composite Dry Powder (CDP) provides a quick, effective and affordable way to process water-based oil & gas drilling mud into non- polluting, high-strength construction materials	Current process involves months/years of contaminated mud stored in artificial ponds for sun exposure to sufficiently dry mud for transportation to landfill. Must be trucked away carefully to avoid spillage, to a secondary process.	In a low capex and opex operation, mud is safely dehydrated using CDP and proprietary equipment within hours to a sandy soil with any contaminants securely bound so the soil can be used as raw material in various by-products	China is substantially increasing investment in shale production, expected to deliver 20,000+ wells drilled annually. Based on current contract economics; Total serviceable available market estimated at approximately A\$20 Billion per annum.
CTS Custody Transfer System	When transferring large, valuable volumes of LNG, an exceptionally accurate, certified, safe and reliable CTS is crucial, as errors of 1% are common and can dramatically impact profitability. The CTS is an IP-protected, field proven and environmentally- friendly module suitable for all LNG applications including shipboard and floating LNG operations.	As LNG sales agreements continue to evolve to meet the expectations of a changing supply and demand market, producers and buyers are insisting on greater precision, reliability, real- time cargo release and compliance with recognised international measurement standards. Traditional custody transfer systems are being challenged to meet requirements in terms of precision, speed, and environmental compliance.	Synertec's LNG custody transfer system is certified by both the National Measurement Institute (Netherlands) and EffecTech (UK) ensuring the most precise and fastest measurement of loaded LNG in the world . Synertec's IP- protected compact and economical marine CTS application is environmentally friendly, emitting no toxic gases.	Based on global marine LNG storage, trade and transport mega-trend, and LNG import/export terminals planned in this decade; Total serviceable available market estimated at approximately A\$4 Billion.

CDP STORY; ONE OF PROGRESS



COMPOSITE DRY POWDER (CDP): TREATING HYDROCARBON DRILLING MUD

Right: Photos from a CDP pilot program show:

a) drilling mud in its original liquid state which was then treated with CDP

b) GreenTech's proprietary processing equipment treating liquid-like drilling mud with the CDP technology.

This becomes dried dirt, which may be reconstituted as soil or used as a raw material in bricks or road base.















PRODUCTS

Synertec partnered in 2020 with Sichuan GreenTech Environmental Co., Ltd. (GreenTech) to commercialise innovative technology that provides a unique, environmentally friendly and costeffective solution to treat toxic sludge and various wastewaters

The patent-pending Composite Dry Powder (CDP) provides a quick, effective and affordable way to process water-based oil & gas drilling mud into non-polluting, high-strength building materials, road base and/or other potential by-products

CDP is customisable for **diverse** global applications beyond energy production, including mine tailing sludge and municipal sewage sludge

GreenTech has granted Synertec an exclusive worldwide technology license. The first commercial contracts for sale of the CDP chemicals and technology to major **Chinese State-Owned Enterprises** (SOEs) are being negotiated, presenting significant potential upside

CDP PROVEN & COMMERCIALISED ON CHINA'S LARGEST OIL FIELDS



Site establishment of proprietary equipment at a drilling facility on the major Chinese oil field in Changqing



Dispersion

Solidification

Following mixing of the CDP with the affected soils, a fourstep process produces a clean dry soil powder. Level of decontamination will vary based on local site conditions.

Absorption

Synertec provides full environmental management and delivery of site solutions using an expert team of engineers, scientists and field operations personnel.

Drying

THE NEED FOR CDP: GLOBAL SHALE ENERGY MEGA-TREND LED BY CHINA



Shale gas production in China is forecast to triple from 30bn m³ in 2020 to 90bn m³ in 2030. This is creating a huge glut of toxic sludge as mud is constantly pumped to the drilling bit to provide lubrication



Each rig typically produces between 5,000 and 10,000 tons per annum of this toxic by-product. Although oil and water-based drilling sludge needs to be treated to reduce its environmental harm, the majority of China's sludge **currently goes to landfill**



Energy environmental regulations are increasingly strict in China and other jurisdictions, making sludge processing **a difficult**, **laborious and expensive process** for oil & gas companies



Significant forecast growth in shale gas and oil demand and production is expected to drive **strong demand for innovative sludge treatment solutions**





Shi Weijun Shanghai

20 October 2020



PetroChina predicts massive Chinese gas demand growth

The country's consumption of the fuel will double over the next 15 years, the company says

China's top natural gas supplier signalled a surprisingly bullish outlook for the fuel at an industry conference in Shanghai today. Beijing's recent landmark decision to overhaul its coal-dominated energy system puts gas on track to be the only fossil fuel that will expand its share of the Chinese energy mix.

The goal of carbon-neutrality by 2060 will require China to kick its longstanding addiction to coal while building unprecedented amounts of intermittent wind and solar capacity. This opens the door for the country's annual gas demand to roughly double over the next 15 years, reaching 600bn m³/yr by 2030 and 620bn m³/yr by 2035, are presentative of PetroChina Natural Gas Marketing Co. told delegates.

The extremely ambitious projections, which are considerably higher than long-term energy outlooks from the IEA and BP, highlight the rising confidence felt in the Chinese gas industry after it effectively weathered the short-term demand shock caused by Covid-19.

LOCAL ADDRESSABLE MARKET FOR CDP: AUSTRALIAN NATURAL OIL & GAS BASINS

SYNERTEC WORKS WITH AT LEAST 70% OF THE MAIN AUSTRALIAN PLAYERS IN OIL AND NATURAL GAS

- Cooper/Eromanga Basin (Santos, Beach Energy) (both customers of Synertec)
- Perth Basin (Beach Energy, Mitsui, Strike Energy, Warrego Energy)
- Bass/Gippsland Basin (Beach Energy, onshore moratorium lifted in 2020) (customer of Synertec)
- Otway Basin (Beach Energy, Lochard Energy) (both customers of Synertec)
- Surat Basin (Origin Energy, Arrow Energy, QGC, Santos) (customers of Synertec)
- Macarthur/Beetaloo Basin (Empire Energy, Origin Energy, Santos)

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Australia's major oil resources

Australia's major gas basins



CUSTODY TRANSFER SYSTEM (CTS): SYNERTEC'S LEAD PRODUCT IN LNG



When transferring large, valuable volumes of LNG, an exceptionally accurate, certified and reliable custody transfer system (CTS) is crucial, as errors of 1% are common and can **dramatically impact profitability**.



The market-proven Synertec CTS can **unlock additional profit** of \$25 million per year, every year, for the life of a typical facility that generates \$5 billion worth of LNG per year. The technology is **suitable for all LNG applications** across both land and marine-based facilities.



The Synertec CTS can deliver **material financial gains**, having built a proven track record with organisations including Chevron and Exxon. Our clients tell us **our CTS is market-leading**, and they consider it the most precise in the world.



Synertec's CTS as deployed for Gorgon and Wheatstone – the marinised solution is substantially scaled down but employs similar technology



CUSTODY TRANSFER SYSTEM (CTS): SYNERTEC'S LEAD PRODUCT IN LNG



Synertec's CTS has gained the certification and endorsement of EffecTech, the global leader in gas measurement for the energy industry. This led to Synertec becoming EffecTech's exclusive APac regional representative from 2020

Synertec has successfully delivered multiple land-based CTS systems in Australia, including the Gorgon and Wheatstone projects in WA (circled at right), earning more than \$30m revenue since 2014

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MINEWS



PM Scott Morrison unveils plan for gas-led economic recovery

Posted 15 Sep 2020, 112pm Prime Minister Scott Morrison says gas will play a vital role in Australia's renewable energy future - and it's not afraid to step in if the private sector doesn't agree. Source ABC News Duration timin Date

Topics: industry oil-and-gas electricity-energy-and-utilities newcastle-7300



Wheatstone LNG installation, Onslow, Western Australia

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SYNERTEC'S IMMEDIATE OPPORTUNITY IN MARINE-BASED CTS



Total Addressable Market:	> US\$200 billion Capital expenditure on new LNG plants expected by 2025 ¹	
Serviceable Available Market:	> US\$4 billion Estimated global capital expenditure on new and brownfield LNG CTS	

1: Wood Mackenzie 2019, 'LNG primed for \$200 billion capex boom - will it drive cost inflation?

- Synertec's development of **best-in-class LNG Custody Transfer System (CTS) technology** allows the Company to take the solution from land to sea and install marine-based CTS on new and existing LNG vessels
- Synertec is now collaborating with **a global major owner, operator and manager of LNG carriers** to jointly develop and deploy Synertec's patented marinised CTS
- Synertec's partner is a European-based internationally listed company
- This collaboration will provide **proof of concept, investment validation** and is expected to position Synertec favourably for **future awards on floating LNG projects**

- Strategic alliance signed in 2018 with Trelleborg Group, a global leader in oil & gas transfer technology, allows Synertec to leverage Trelleborg's global marine salesforce which offers reach into more than 50 countries
- Synertec is exploring ways to present this technology through innovative financial models that can minimise clients' capex outlay and provide **longer-term recurring revenue streams**



THE NEED FOR CTS: GLOBAL MARINE LNG MEGA-TREND

- The main type of "bunker" oil for ships is heavy fuel oil, the emissions from which contain sulphur, causing respiratory illness, lung disease and acid rain
- In 2020, the International Maritime Organization (IMO) imposed **the steepestever cut to sulphur emissions**, slashing them by more than 80% to help fight harmful air pollution
- Ship owners are responding by investing in cleaner-burning vessels and are shifting towards LNG propulsion, particularly for larger vessels. According to standards agency DNV GL, there are 184 LNG-fuelled ships currently on order and more than the 170 vessels currently in operation
- Each such award could be worth \$0.5m to \$2.0m in revenue to Synertec, with dozens of potential new projects to target globally each year
- Consultancy Wood Mackenzie expects the use of LNG for bunkering to rise roughly seven-fold by 2025 to 9 million tonnes per year. To prepare for this boom, over the next three years, the greatest number of floating production storage and offloading (FPSO) project sanctions in any one period in history is expected
- Shell plans to double its existing LNG bunkering infrastructure on key international trade routes by the mid-2020s

Synerie



Source: International Group of LNG Importers 2020 Annual Report

STRONG ESG CREDENTIALS

Environment	 Supporting the energy transition Reducing the carbon footprint of legacy processes and repairing past damage Responding to tightening environmental regulations with innovative 'green' technologies
Social	 Working with industry to reduce its carbon footprint, recycle and deliver cleaner energy, water, products and services to us all Supporting local economies with sustainable employment
Governance	 ASX-listed – strong requirements to ensure transparency, accountability and regular reporting to shareholders Product transparency Solutions formed in collaboration with jurisdictional environmental regulators



KEY PLANNED MILESTONES IN 2021

Through CDP and CTS, Synertec is wellplaced in 2021 to benefit from the global mega-trend across the next decade in rising shale gas and oil production and floating storage, transportation and trade of LNG.

Synertec is currently developing other 'green' technologies.



CDP

- Successful completion of Composite Dry Powder (CDP) pilot programs
- Leading to large long-term commercial contracts in 2021 with some of the world's major energy companies



CTS

- Proof of concept for Synertec's patent-pending marine LNG Custody <u>Transfer</u> System
- Commercial awards are expected in 2021



Other Technologies

 Proof of concept through customer collaboration and piloting of another proprietary IP product currently under design

OUR PATH TO GLOBAL SCALE



Executing on **an immediate global growth opportunity** by leveraging a blue-chip existing client base, delivering into multibillion-dollar markets on the cusp of acceleration



Cashflow to fund growth comes from Synertec's competitive advantage providing specialised engineering solutions to clients in sectors with **high barriers to entry** and reputational risk



Strong exposure to attractive global thematics in the environmentally friendly treatment of oil & gas waste, water tech and unique renewable energy solutions; currently assessing additional green technologies as opportunities for growth through new partnerships SYNERTEC CORPORATION LIMITED (ASX:SOP) IS A DIVERSIFIED TECHNOLOGY DESIGN AND DEVELOPMENT GROWTH COMPANY COMMERCIALISING SCALABLE, ENVIRONMENTALLY FRIENDLY AND ENERGY EFFICIENT TECHNOLOGY FOR GLOBAL MARKETS IN ENERGY, INFRASTRUCTURE AND WATER



SYNERTEC

expertise experience

CONTACT



Michael Carroll Managing Director & CEO M: +61 419 351 676 E: michael.carroll@synertec.com.au



David Harris CFO & Company Secretary M: +61 434 408 668

E: david.harris@synertec.com.au

Head Office - Ground Floor, 2-6 Railway Parade, Camberwell, VIC, 3124 Tel: +61 3 9274 3000

Online: https://www.synertec.com.au

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