



Altech Chemicals
Limited

2017

Annual Report

COMPANY PROFILE

ABOUT ALTECH CHEMICALS LTD

Altech Chemicals Limited (Altech/the Company) (ASX: ATC) (FRA: A3Y) is aiming to become one of the world's leading suppliers of 99.99% (4N) high purity alumina (Al_2O_3) through the construction and operation of a 4,500tpa high purity alumina (HPA) processing plant at Johor, Malaysia. Feedstock for the HPA plant will be sourced from the Company's 100%-owned Meckering kaolin (clay) deposit, Western Australia, and shipped to the proposed Malaysian processing plant.

Altech's production process proposes to employ conventional "off-the-shelf" plant and equipment to extract HPA using a hydrochloric (HCl) acid-based process. Production costs are anticipated to be considerably lower than established HPA producers - in the bottom quartile of the production cost curve.

Altech's HPA project is a high margin, high value proposition.



HIGH PURITY ALUMINA (HPA)

**ALTECH IS SET TO BECOME
A WORLD LEADING PRODUCER
OF HIGH PURITY ALUMINA (HPA)**



OUR VISION

to be one of the world's leading producers of high purity alumina (HPA)

HIGH PURITY ALUMINA:

- one of the purest forms of aluminium oxide (Al_2O_3)
- minimum purity level of 99.99% (4N)
- the critical ingredient for the production of synthetic sapphire
- increasingly consumed by the lithium-ion battery production sector

ALTECH IS ATTEMPTING TO TRANSFORM THE GLOBAL HPA INDUSTRY BY PRODUCING HPA DIRECTLY FROM KAOLIN (CLAY)

A hand wearing a white glove holds a transparent, rectangular solar cell panel. The panel is held at an angle, showing its thin profile. In the background, a laboratory setting is visible with a blue-tinted light and a rack of similar panels. The overall scene conveys a sense of advanced technology and scientific research.

**ALTECH'S HPA PROJECT WILL GENERATE
A NET PRESENT VALUE ^{7.5}
OF US\$0.5 BILLION AND PAYBACK 3.9 YEARS**

HIGH PURITY ALUMINA (HPA)

High purity alumina (HPA) is a high-value material that is essential in the manufacture of synthetic sapphire; there is no substitute for HPA in the synthetic sapphire production process. Synthetic sapphire wafer substrates are used in the manufacture of light-emitting diodes (LEDs), semiconductors and other high-tech applications. Synthetic sapphire glass is used in the production of scratch-proof lenses (wristwatch, optical windows), smartphone components (camera lens, fingerprint recognition, some display screens) and other applications requiring superior properties such as extreme strength, heat and scratch resistance, and electrical insulation.

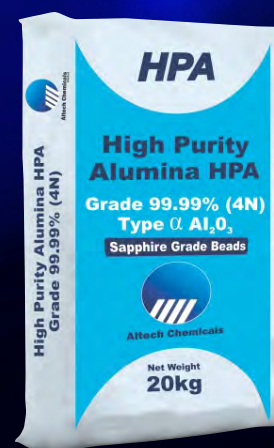
Along with its use in synthetic sapphire production, HPA (in powder form) is increasingly being used in the manufacture of lithium-ion batteries where it is applied as a coating to the sheets that separate the anode and cathode components of the battery.

**HPA IS
ALUMINIUM OXIDE Al_2O_3
OF 99.99% (4N) PURITY
OR GREATER**

SAPPHIRE GRADE 4N HPA (99.99%)

The finishing line of Altech's proposed HPA plant has been designed to produce HPA product for the synthetic sapphire industry. Altech's sapphire grade HPA product will be 4N (99.99% Al_2O_3) purity in the form of a high-density bead of around 3-4mm in size.

The higher bulk density of HPA in beads (versus HPA in powder form) is preferred by synthetic sapphire manufacturers as it maximises the amount of HPA that can be placed into the furnaces and kilns used in the production of synthetic sapphire. The target loose bulk density of Altech's high-density HPA beads will be approximately 2.2t/m³.



SAPPHIRE GRADE SPEC

Alumina	Al_2O_3	>99.99%
Silica	Si	<20ppm
Sodium	Na	<10ppm
Magnesium	Mg	<10ppm
Calcium	Ca	<10ppm
Iron	Fe	<10ppm
Copper	Cu	<10ppm
Bulk Density*	t/m ³	2.2
Crystal Structure		alpha

*Dry Basis(1100°C)

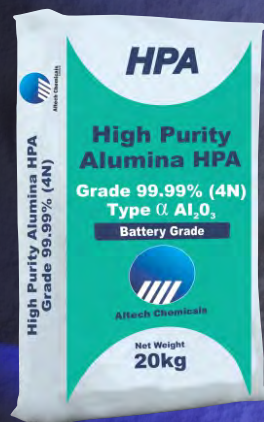
LITHIUM-ION BATTERY GRADE 4N HPA (99.99%)

The finishing line of Altech's proposed HPA plant has been designed to produce ultra-fine HPA used in the lithium-ion battery sector.

Electric vehicle manufacturers are increasingly demanding lithium-ion batteries with separator sheets coated with 99.99% (4N) HPA due to HPA's superior characteristics, such as fire resistance. The particle size of HPA used as the coating for this application is ultra-fine, less than 1 micron. Lithium-ion batteries using separator sheets coated with HPA consume between 40-120g of HPA per kilowatt-hour (kWh). With a forecast rapid expansion of the lithium-ion battery market driven by the demand from electric vehicles and green energy power storage, HPA consumption in this sector alone is forecast to rise from around 1,000tpa in 2016 to 15,000tpa by 2025.

LITHIUM-ION BATTERY GRADE SPEC

Alumina	Al ₂ O ₃	>99.99%
Silica	Si	<20ppm
Sodium	Na	<10ppm
Magnesium	Mg	<10ppm
Calcium	Ca	<10ppm
Iron	Fe	<10ppm
Copper	Cu	<10ppm
Particle Size	micron	<1.0
Crystal Structure		alpha



HPA DEMAND

In terms of value, the global HPA market is forecast to grow over two-fold, reaching to around US\$2.2 billion by 2024 according to Persistence Market Research (PMR).

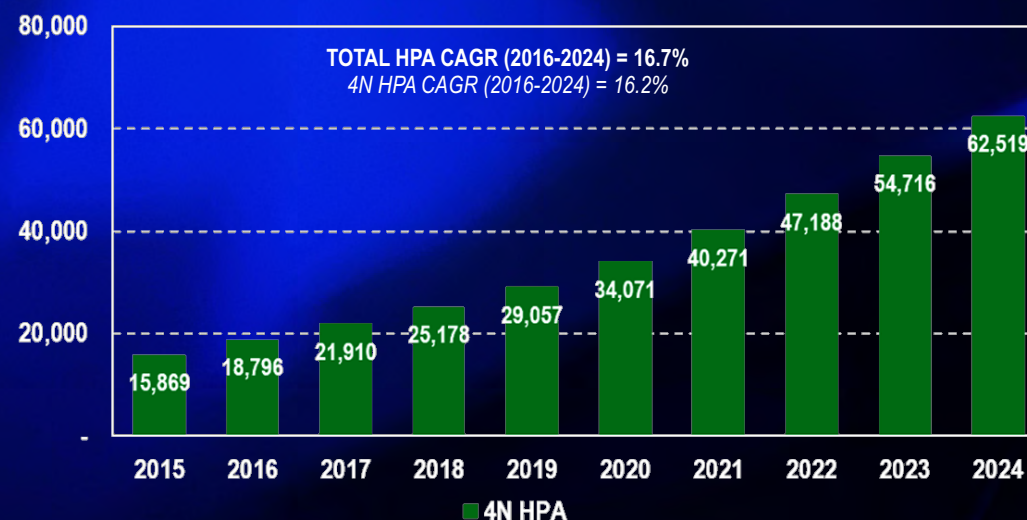
For 2016 the global HPA market was estimated by PMR at 25,315tpa and annual HPA demand is expected to increase to 86,821tpa by 2024.

HPA demand is currently rising at a forecast compound annual growth rate (CAGR) of 16.7% (2016-2024). Specifically, 4N HPA (99.99%) global demand is rising at a forecast CAGR of 16.2% for the same period.

Global HPA demand is underpinned by its status as the non-substitutable material for the production of synthetic sapphire and the use of synthetic sapphire for the manufacture of substrates used in the LED industry. The worldwide transition from energy-hungry, inefficient incandescent lighting to energy-efficient LED lights is ongoing. The continued increase in global electricity prices is expected to support the continued increase in LED production, which is forecast for an annual growth rate of 17.6% year-on-year between 2016 to 2024 (PMR).

HPA demand is generally highly concentrated within the Asia Pacific region, driven by China, Japan and South Korea. The Asia Pacific region was the largest market for HPA, accounting for nearly 72% of global HPA consumption in 2015. Consumption of HPA is generally concentrated in electronics production hubs, the majority of which are located in the Asia Pacific region.

FORECAST ANNUAL CONSUMPTION OF HPA (4N) 2015-2024



Source: Persistence Market Research

CHAIRMAN'S LETTER

Dear fellow shareholders,

Under the leadership of managing director Iggy Tan, the Company has made substantial progress during the year towards securing the project finance required for the construction of our proposed high purity alumina (HPA) plant at Johor, Malaysia.

As in previous years the Company has enjoyed the strong and continued support from its shareholders with a total of \$13.85 million raised during the 2016/2017 year to support the Company's detailed design, due diligence and financing activities. A number of new shareholders were welcomed throughout the year bringing the register total to over 1,800 members.

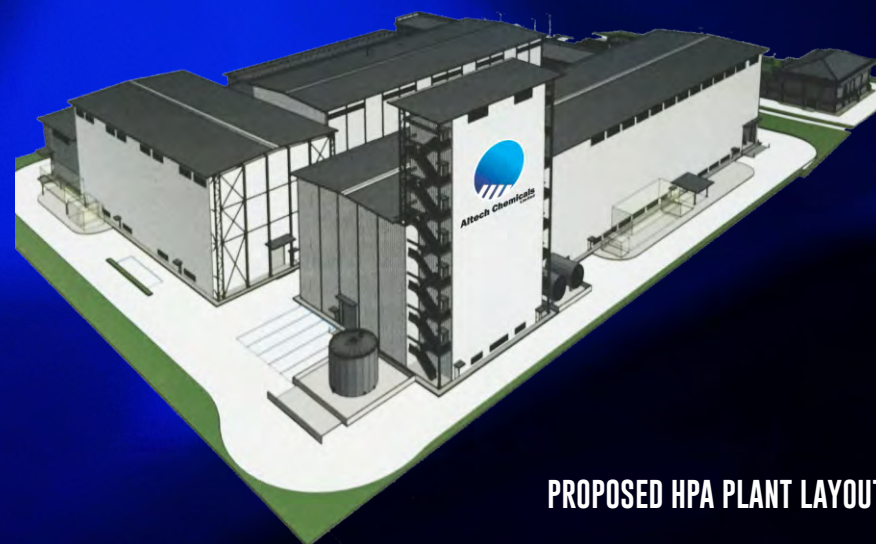
Looking ahead, I am very much looking forward to nurturing a close working relationship with KfW IPEX-Bank and SMS group during the construction, commissioning and operation of our HPA plant.

On behalf of the board and all shareholders I offer my congratulations to Iggy and his hard-working team for what has been another year of significant achievements. Taking the project from a standing start and getting to the point of debt financing in just under three years is outstanding. During this time, our market capitalisation has increased 5-fold to now around \$50 million. In addition the share price has increased by over 200% during this period.

Yours Sincerely



Luke Atkins
Non-Executive Chairman



PROPOSED HPA PLANT LAYOUT

**GLOBAL HPA DEMAND IS
APPROXIMATELY 25,315TPA
AND DEMAND IS GROWING AT AN
ANNUAL RATE OF 17% MAINLY DRIVEN
BY THE SYNTHETIC SAPPHIRE AND
LITHIUM-ION BATTERY SECTORS**

MONOCRYSTAL


6", 8" Sapphire Ingot

6, 8 寸蓝宝石晶棒

MONOCRYSTAL

4" Sapphire Ingot

4寸蓝宝石晶棒



THE COMPLETION OF INDEPENDENT
PROJECT DEBT FUNDING DUE DILIGENCE
WAS A MAJOR FOCUS
FOR ALTECH DURING THE YEAR

BOARD OF DIRECTORS



Mr Luke Atkins
Non-Executive Chairman

Mr Atkins is a lawyer by profession and one of the founders of the Company. He has extensive experience in the areas of mining, exploration, and corporate governance. Mr Atkins is also a non-executive director of Bauxite Resources Ltd (BRL). Mr Atkins formerly held the role of executive chairman of BRL after co-founding the company in 2007. Mr Atkins has had extensive experience in capital raisings and has held a number of executive and non-executive directorships of private and publicly listed companies.



Mr Peter Bailey
Non-Executive Director

Mr Bailey is a highly experienced and qualified engineer with over 40 years' experience in the mining and industrial mineral production industries. With an electrical engineering degree from the University of London, Mr Bailey's career spans across the iron ore, bauxite, zinc-lead-copper mining sector; and the alumina refining and chemicals sectors. Mr Bailey was president of Alcoa Bauxite & Alumina in 1996; he was responsible for Alcoa's eight alumina plants outside of Australia. He was also the chairman of the Alcoa Bauxite joint venture in Guinea, Africa. In 1998, he was appointed president of Alcoa Worldwide Chemicals' industrial chemicals department. Post Alcoa, Mr Bailey was CEO and co-owner of Sherwin Alumina, an alumina refinery located in Texas, USA.



Mr Iggy Tan
Managing Director

Mr Tan is a highly experienced mining and chemical executive with a number of significant achievements in commercial mining projects including successful capital raisings, funding, construction, start-ups and operations. Mr Tan has over 30 years' chemical and mining experience and has been an executive director of a number of ASX-listed companies. Having been involved in the commissioning and start-up of seven resource projects in Australia and overseas, including high purity technology projects, Mr Tan is an accomplished project builder and developer. He previously held the positions of managing director of Nickelore Limited, Galaxy Resources Limited and Kogi Iron Limited.



Mr Dan Tenardi
Non-Executive Director

Mr Tenardi is a highly experienced mining executive with over 40 years' experience in the industry, having worked with a number of global resource industry leaders across a range of commodities, including iron ore, gold, bauxite, and copper. Mr Tenardi previously spent 13 years with Alcoa at its bauxite mines in the Darling Range in Western Australia; and a further two years at Alcoa's Kwinana refinery in Western Australia. Mr Tenardi subsequently worked at executive level for Rio Tinto's Robe River Iron Associates. Mr Tenardi was formerly managing director of Bauxite Resources Ltd; and general manager of operations and chief operating manager at CITIC Pacific Mining. Mr Tenardi is currently non-executive director of Grange Resources Ltd.



Tunku Yaacob Khyra **Non-Executive Director**

Tunku Yaacob Khyra is the executive chairman of the Melewar Khyra Group of Companies (Melewar), a Malaysian-based diversified financial and industrial services group. He is the major owner and shareholder of Melewar. Tunku Yaacob sits on the boards of Khyra Legacy Berhad, Mycron Steel Berhad, MAA Group Berhad, Melewar Industrial Group Berhad, Ithmaar Bank B.S.C. (listed on the Bahrain Stock Exchange) and several other private companies.

Tunku Yaacob graduated with a Bachelor of Science (Hons) degree in economics and accounting from City University, London. An accountant by training, he is a Fellow of the Institute of Chartered Accountants in England and Wales and a member of the Malaysian Institute of Accountants.



Mr Uwe Ahrens **Alternate Director**

Mr Uwe Ahrens is executive director of Melewar Industrial Group Berhad and managing director of Melewar Integrated Engineering Sdn Bhd. He also sits on the boards of several other private companies. Mr Ahrens holds masters degrees in both mechanical engineering and business administration from the Technical University Darmstadt, Germany. Upon graduation, Mr Ahrens joined the international engineering plant supplier, KOCH Transporttechnik GmbH in Germany, now belonging to FLSmidth Group, where he held a senior management position for 12 years, working mainly in Germany, USA and South Africa.

He joined Melewar Group in 2002 and is also currently chief technical officer of the Melewar Group of companies being responsible for engineering, upgrading, modification and extension of machinery and plant as well as overall maintenance.

**HIGHLY CREDENTIALLED BOARD
WITH EXTENSIVE PROJECT DEVELOPMENT
AND ALUMINA INDUSTRY EXPERIENCE**

REVIEW OF OPERATIONS

MANAGING DIRECTOR

During the 2016/2017 year Altech continued to work closely with German government-owned KfW IPEX-Bank on debt finance structuring and the satisfaction of independent project due diligence. From August 2016 the Company was subject to an extensive independent due diligence program by KfW IPEX-Bank's appointed technical, legal, environmental and market expert consultants. The successful due diligence program concluded in August 2017 with no fatal flaws identified in the HPA project.

A Final Investment Decision Study (FIDS) then confirmed the robust financial metrics for the development of a 4,500tpa HPA plant at Johor, Malaysia and kaolin mine at Meckering, Western Australia. The FIDS incorporated up-to-date project assumptions including the final capital cost estimate, which included a fixed-price lump-sum EPC contract value for the construction of the Malaysian HPA plant by a consortium led by German engineering firm and EPC contractor SMS group GmbH (SMS). Based on the FIDS results, the Altech board decided that the project proceed to the next stage, the ECA application process. A positive ECA decision will mean Altech attains the US\$165 million "offer of cover" for the majority of the project debt and as the bank approvals process will run in parallel, the total target debt amount of US\$ 185 million.

Assuming that the ECA debt component is approved around mid-December 2017, the Company will focus on finalising the equity component of funding in the first half of 2018.



**PROJECT DEBT FINANCE MEETING WITH KfW IPEX-BANK,
SMS AND THE ALTECH BOARD**

MECKERING KAOLIN DEPOSIT

The Company's Meckering kaolin deposit is located over private freehold farmland approximately 140km east of Perth and 8km south-east of the town of Meckering, Western Australia. The Meckering kaolin deposit will supply the feedstock for the Company's proposed HPA processing plant in Malaysia.

An approximate 86 hectare mining lease application (M70/1334) was granted over the Company's Meckering kaolin deposit on 19 May 2016. The Company's wholly-owned subsidiary Altech Meckering Pty Ltd is the registered mining lease holder (M70/1334) and the Company holds a 100% interest.

In October 2017 the Company exercised its option to purchase the freehold land (approximately 94 hectares) over the boundaries of its Meckering mining lease (M70/1334), pursuant to a pre-negotiated purchase agreement executed with the owner of the freehold land.

In October 2016 the Company announced a maiden Ore Reserve (JORC 2012) of 1.2Mt @ 30% Al_2O_3 in the minus 300 micron fraction with a cut-off grade of 25% Al_2O_3 for the Meckering kaolin deposit, which is sufficient HPA plant feedstock supply for an estimated 30-year mine-life. The Ore Reserve lies within the Mineral Resources estimation of 12.7Mt at 30% Al_2O_3 in the same minus 300 micron kaolin fraction with a cut-off grade of 25% alumina; the Mineral Resources estimation would support a HPA processing operation for >250 years.



MECKERING MINERAL RESOURCE AND RESERVE ESTIMATES

	Category	Quantity (Mt)	Yield % of minus 300µm	Minus 300µm Al_2O_3 (%)
Ore Reserve	Proved	0.45	69	30.1
	Probable	0.77	71	30.0
	TOTAL	1.22	70	30.0
Mineral Resources (including Ore Reserve)	Measured	1.5		30.0
	Indicated	3.3		30.0
	Inferred	7.9		29.1
	TOTAL	12.7		29.5

REVIEW OF OPERATIONS

MECKERING PROJECT APPROVALS

All Western Australian (WA) state and local government statutory approvals required for the commencement of the Meckering kaolin mining operation were successfully obtained during the year. This means that construction and mining operations at the Company's mining lease M70/1334 are authorised to commence.

In March 2017 the Company's mining proposal and mine closure plan was approved by the WA Department of Mines, Industry Regulation and Safety (DMIRS) (formerly the Department of Mines and Petroleum/DMP).

The Company also submitted a works approval application for the supporting kaolin screening and loading facility to be located on-site, adjacent to the Meckering mining operation over M70/1334. The Company's works approval application was granted by the WA Department of Water and Environmental Regulation (DWER) (formerly Department of Environmental Regulation/DER) on 25 August 2017.

In addition to the above approvals the Native Title and Aboriginal heritage aspects of the proposed Meckering kaolin mine were also considered. Having executed a Noongar Standard Heritage Agreement (NSHA) with the South West Aboriginal Land and Sea Council (SWALSC) on behalf of the Ballardong People Agreement Group, a resultant heritage survey was undertaken, with an "Ethnographic Aboriginal Heritage Survey" report confirming that no sites of ethnographic significance as defined by Section 5 of the Western Australian Aboriginal Heritage Act 1972 (AHA) were identified within the M70/1334 tenement area.



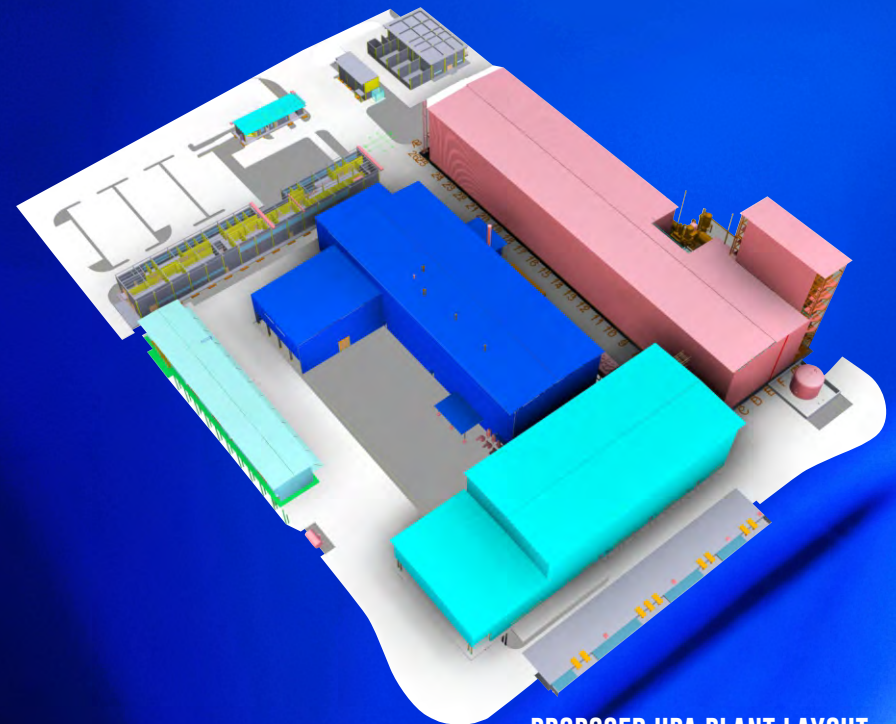
PROPOSED MECKERING KAOLIN SCREENING AND LOADING FACILITY LAYOUT

MALAYSIAN HPA PLANT

The Company secured the proposed HPA plant site within the established Tanjung Langsat Industrial Complex of Johor, Malaysia through the execution of a 30-year lease agreement with a 30-year renewal option with Johor Corporation. The 4 hectare site (PLO 14) is in a section of the industrial park specifically reserved for chemical facilities.

The Tanjung Langsat Industrial Complex is located approximately 40km to the south-east of the city of Johor Bahru and caters to light, medium to heavy industries. The industrial hub contains multinational production groups from petrochemical, oil and gas, resource-based, ferrous and non-ferrous metal, biofuel, marine, palm oil and oleochemicals. The Company's HPA plant site was specifically chosen for its proximity to hydrochloric acid and quicklime plants – all required consumables for the Company's proposed HPA plant. In addition, reticulated natural gas, high voltage power and access to processing water are all readily available.

In November 2016 the Company opened a local site office for its Malaysian subsidiary Altech Chemicals Sdn Bhd. Located within the Tanjung Langsat Industrial Complex, the site office is within walking distance from the Company's HPA plant site. Manned by a full-time project co-ordinator, the site office was the temporary base for visiting EPC engineers working on the HPA project's detailed design throughout the year. Various contractors involved in soil survey drilling (as part of the civil engineering design requirements) at the HPA plant site also used Altech's nearby site office as a base.



PROPOSED HPA PLANT LAYOUT

REVIEW OF OPERATIONS

EPC CONTRACTS

Altech appointed German engineering firm SMS group GmbH (SMS) as EPC contractor for the construction of the proposed Malaysian HPA plant. SMS will provide a fixed-price lump-sum EPC contract value for the construction of the Malaysian HPA plant by a consortium led by German engineering firm SMS group GmbH (SMS). SMS proposed a clear and concise guarantee to Altech for plant throughput. In addition, having prior experience with kaolin-HPA hydrogen chloride processing, SMS has proposed process and final product guarantees that will strengthen Altech's export credit project finance cover application. The additional guarantees proposed by SMS are extremely positive outcomes that significantly mitigate project risk.

SMS is a large privately owned German engineering firm with annual turnover of approximately 3.3 billion Euros. SMS has recent EPC contract experience in Malaysia, having successfully completed the Sakura smelting project in Sarawak, Malaysia.

The capital costs for the Malaysian HPA plant are entirely covered by the scope of the SMS EPC contract.

The SMS fixed-price lump-sum EPC contract includes a completion guarantee with liquidated damages provisions and throughput and process/quality guarantees supported by a substantial performance bond. All plant and equipment will be accompanied with warranty guarantees supported by a significant warranty bond.

Obtaining these extensive guarantees for a chemical processing plant is an exceptional outcome that significantly de-risks the project.

The SMS EPC contract provides for:

- Liquidated damages for delay;
- Liquidated damage for failure to perform; and
- Performance and warranty bonds.

The EPC contract for the proposed Meckering kaolin screening and loading facility (Western Australia) is with Simulus Engineers Pty Ltd (Simulus). The EPC contract provides for performance warranties and detailed process equipment tests. The parties to the Meckering EPC contract are Altech Meckering Pty Ltd, Altech Chemicals Ltd and Simulus Engineers Pty Ltd.

**SMS WILL PROVIDE A FIXED PRICE EPC
CONTRACT WITH COMPLETION, THROUGHPUT
AND PROCESS/QUALITY GUARANTEES**

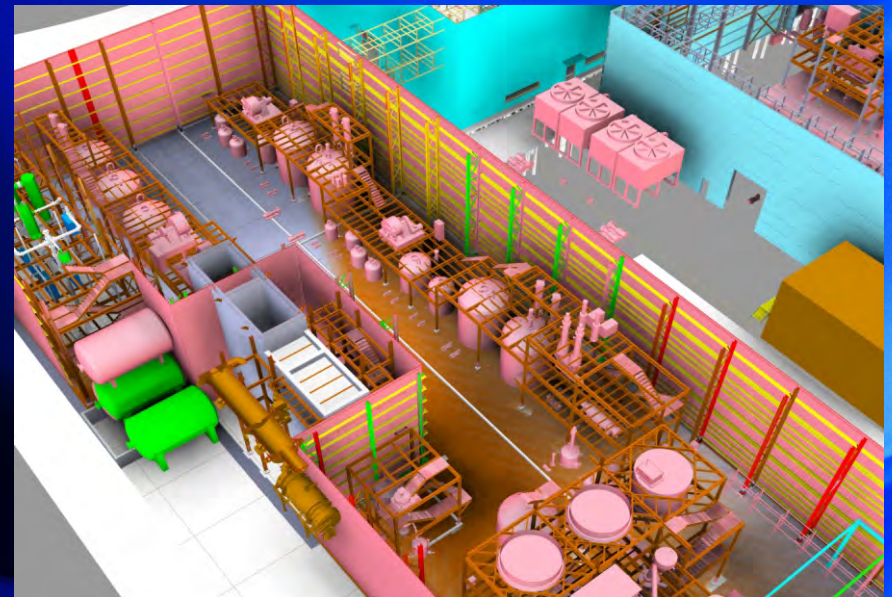
DETAILED DESIGN

Significant detailed design and engineering work on the Company's Malaysian HPA plant was undertaken during the year. The objective of the extensive detailed design work for the HPA plant is to obtain the final construction cost and engineering, procurement and construction (EPC) contract value for incorporation into the Company's application for German-government export credit agency (ECA) project debt finance cover.

Working in conjunction with its appointed German EPC contractor SMS, Altech completed optimisation of the plant process flow sheet. The HPA finishing section of the plant incorporates a flexible finished product line capable of producing HPA for both the synthetic sapphire industry (up to 4,500tpa of high density pellets) and HPA for the lithium-ion battery industry (up to 1,500tpa of powder at sub-micron particle size). Maximum plant output is designed at 4,500tpa HPA, with flexibility to balance the finished product mix.

The flexible product finishing line is designed to initially grind all HPA to an average particle size of less than 1 micron by wet milling using bead mills. Upon the milled HPA achieving the designated particle size range it will be dried via a conventional spray drier. The finely ground, dried HPA will then be aggregated in beads for heat treatment in a tunnel kiln; the finished product being HPA beads for use in the synthetic sapphire industry. Alternatively, the finely ground HPA will be fed to a de-agglomeration unit (microniser) to produce fine HPA powder for use in the lithium-ion battery industry. Both products will be bagged via an automated bagging machine.

Superior lining materials have been incorporated in equipment proposed for the back-end of the HPA plant (after roasting) to minimise final product contamination risk. Whilst the lining materials command a higher price than the original design, their incorporation further de-risks the process by enhancing plant capability to achieve the required 4N (99.99% Al_2O_3) finished product purity standard. Further, the proposed HPA plant emissions targets are significantly more conservative compared to local standards due to international requirements (Equator Principles and OECD Common Approaches).





**ALTECH IS IN THE PROCESS OF SECURING
PROJECT DEBT FINANCING OF APPROXIMATELY
US\$ 185 MILLION FROM KFW IPEX-BANK,
OF WHICH US\$ 165 MILLION IS EXPECTED TO BE
BACKED BY GERMAN EXPORT CREDIT AGENCY (ECA)**

PROJECT FINANCIALS

FINAL INVESTMENT DECISION STUDY (FIDS)

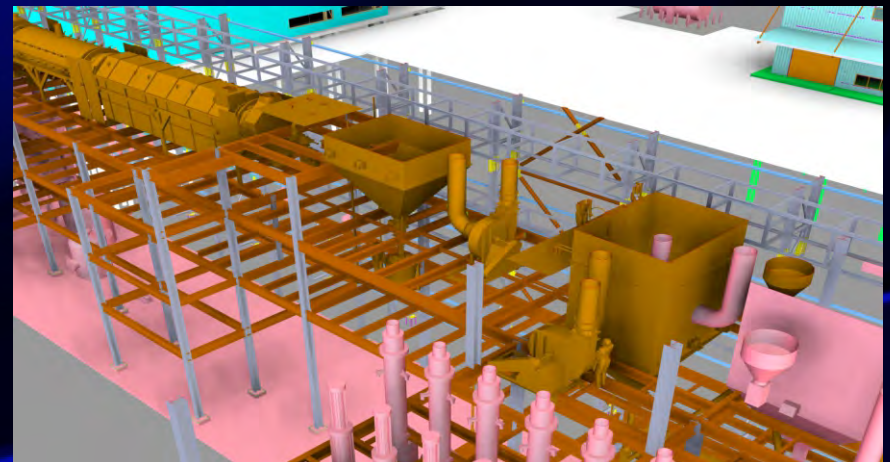
In October 2017, the positive results from a Final Investment Decision Study (FIDS) for the development of a 4,500tpa HPA plant at Johor, Malaysia and kaolin mine at Meckering, Western Australia, were announced by Altech.

The FIDS includes and considers:

- Significant detailed design and engineering work;
- Final EPC fixed contract values for both Johor and Meckering;
- Updated operating costs;
- Status of permitting and financing due diligence;
- HPA market analysis of potential product sales and revenue; and
- Financial analysis and scenario modelling.

The financial metrics from the FIDS are extremely robust. Project Net Present Value (NPV) is US\$ 505.6 million at a discount rate of 7.5%, payback (at full rate) is 3.9 years and annual EBITDA is US\$ 75.7 million at full production. The internal rate of return (IRR) is 22% with a gross margin on sales of 63%. The Company's weighted cost of capital (WACC) has been recalculated taking into account the higher planned debt and assumed interest, debt mix, and total project costs; it is reflected as the discount rate of 7.5% used in the 30-year discounted cash flow model for the FIDS. The beta used in the calculation is 0.83.

The HPA price assumption used in the FIDS is based on an independently supplied forward HPA price curve from Persistence Market Research (Persistence). The HPA price used in the project financial model is US\$ 33.72/kg in year 1, reducing to US\$ 26.18/kg in year 9 and maintained at this level until year 30. This results in a weighted average HPA price of US\$ 26.90/kg over the 30-year project life. In its market report Persistence noted that the current market price of HPA in Japan is around US\$ 40/kg; in this context the 30-year average HPA price of US\$ 26.90/kg from the FIDS financial model is conservative. If a HPA price of US\$ 40/kg was applied to the FIDS financial model (High Case), the project financial metrics are: NPV of around US\$ 1.09 billion, payback (at full rate) of 2.2 years, annual EBITDA of approximately US\$ 133 million at full production and an IRR of 33%.



CAPITAL COSTS (FIDS)

The FIDS incorporates up-to-date project assumptions including the final capital cost estimate. The estimate includes: a fixed-price lump-sum engineering, procurement and construction (EPC) contract value for the construction of the Malaysian HPA plant by a consortium led by German engineering firm SMS group GmbH (SMS); and a fixed-price lump-sum EPC contract value for construction of the Meckering kaolin container loading facility by Perth-based Simulus Engineering Pty Ltd. In addition the capital cost estimate includes owner costs during HPA plant commissioning and the initial kaolin mining campaign. HPA plant capacity is now 4,500tpa (was 4,000tpa) and assumptions for operating costs, HPA selling price, HPA plant production ramp-up, exchange rates, total envisaged debt, and the expected German government export credit finance amount have been updated in the FIDS to reflect current conditions and outlooks.

Significant engineering and test work has been conducted in order to reduce the risk of product contaminations (for example, roasting tests, special linings in the ACH roaster and HPA calciner). All major capital costs expected for the HPA plant in Malaysia are now covered by the SMS EPC contract.

In compiling the final EPC price, SMS detailed the majority of the previously “factored” construction costs by requesting firm quotations from vendors and service providers. Previously “factored” costs include freight, mobilisation and demobilisation, temporary facilities, final engineering, insulation and commissioning. Overall quotations were substantially higher than was originally factored. The final capital cost includes the land purchase costs for both Johor and Meckering; owner costs during commissioning; the first mining campaign, first fills; insurance; and other establishment costs.

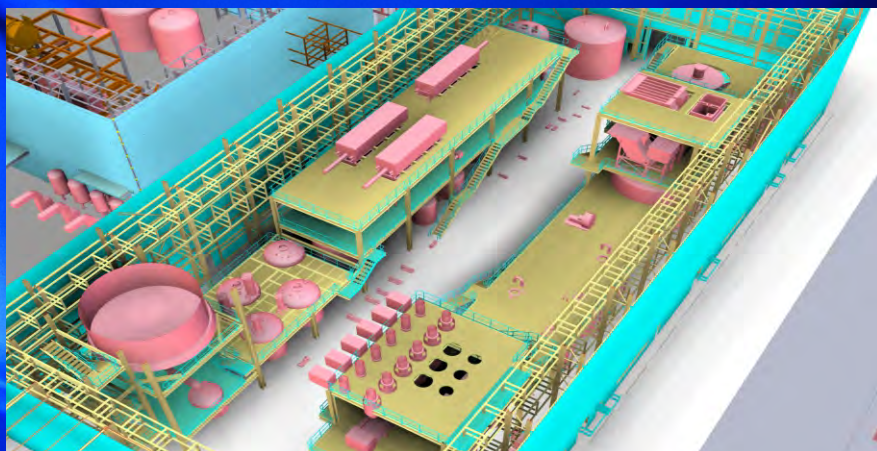


PROJECT FINANCIALS

OPERATING COSTS (FIDS)

The FIDS operating costs include updated firm quotations from key services and consumables suppliers; where appropriate. This includes quotations for; contract mining at Meckering; land transport and shipping of containerised kaolin from Meckering to Johor; HPA plant consumables such as electricity, natural gas, hydrogen chloride, limestone, and other materials. A detailed manning schedule has also been fully costed using local Malaysian and expatriate labour rates.

Operating costs are forecast at US\$ 44.6 million p.a. at full production with a cost of goods sold of US\$ 9.90/kg.



FIDS FINANCIAL METRICS (EQUITY MODEL) WITH HIGH CASE (CURRENT MARKET PRICE)

4,500tpa HPA Project US\$	FIDS Avg. Price ~US\$27/kg	High Case Price US\$40/Kg
Project Capital Costs	297.6	293.6
Revenue p.a.	120.3	180.0
Operating Costs p.a.	44.6	46.9
EBITDA p.a.	75.7	132.7
Net Present Value (NPV) @ 7.5%	505.6	1,087
Payback (incl. ramp-up)	4.5 years	3.3 years
Payback at full production	3.9 years	2.2 years
Internal Rate of Return (IRR)	21.9%	32.9%
NPV/Capex Ratio	1.70	3.66
Project Life	30 years	30 years
Annual HPA Production	4,500tpa	4,500tpa
HPA Production Costs	US\$ 9.90/kg	US\$ 10.5/kg
Long term Sale Price (Avg.)	US\$ 26.9/kg	US\$ 40.0/kg
Gross Margin on Sales	63%	74%
USD:AUD	0.75	0.75
Construction Period	24 months	24 months
Production Ramp-up	3 years	3 years
Corporate Costs	US\$ 7.7 million	US\$ 7.7 million
Target Total Project Debt	US\$ 185 million	US\$ 185 million
Target ECA Covered Debt	US\$ 165 million	US\$ 165 million

PROJECT FINANCE

German government-owned KfW IPEX-Bank has proposed a revised total target debt package of US\$ 185 million and is aiming to obtain debt approval as sole debt provider. This is subject to the sourcing split and eligibility for German government export credit cover (ECA cover) of up to US\$ 165 million. The ECA cover loan is targeted as long tenure and at attractive terms. The balance of US\$ 20 million will be a 5-year tenure loan at customary lending terms.

By comparison to typical project finance the proposed debt is extremely attractive, which is why the Company persisted with the longer-than-expected due diligence and approvals process. The target date of 14 December 2017 remains unchanged as the date for the final assessment by the German government inter-ministerial committee (IMC) for the ECA cover application. At the same time KfW IPEX-Bank aims to obtain its credit approval by the competent bodies of the bank.

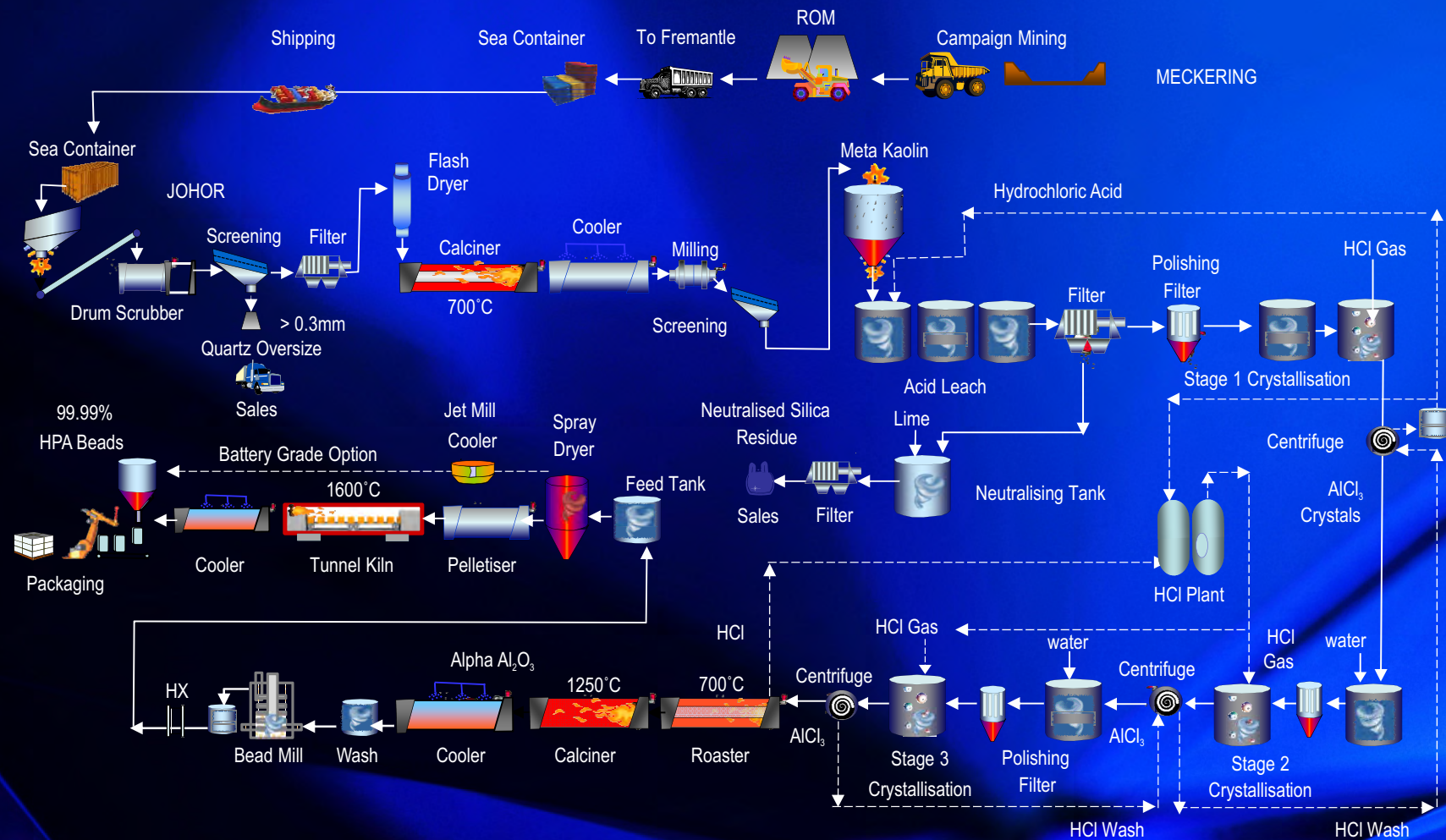
A positive decision from the IMC will result in a legally binding offer of cover to Altech by the Federal Republic of Germany for up to US\$ 165 million of the total proposed US\$ 185 million loan. An offer of cover acceptable to Altech will position the Company to then proceed to securing project equity.

Commenting on the FIDS, Altech's managing director Mr Iggy Tan said, *"The FIDS has confirmed the financial and technical robustness of the Company's HPA project. The focus for Altech over the next few months is to continue to work closely with KfW IPEX-Bank and the appointed independent expert consultant to prepare for the German government IMC meeting in mid December 2017. A positive outcome will mean we attain the US\$165 million "offer of cover" for the majority of the Project debt and as the bank approvals process will run in parallel, the total target debt amount of US\$ 185 million"*, he concluded.



EPC MEETING WITH SMS GROUP AT ALTECH'S MALAYSIAN SITE OFFICE, JOHOR

ALTECH HPA PROCESS



CAPITAL RAISING

On 29 May 2017 the Company completed a \$2 million placement of shares at \$0.14 per share to existing Malaysian cornerstone investor MAA Group Berhad (MAAG). MAAG is a Malaysian publicly-listed insurance, investment, credit and finance group and an existing shareholder of Altech. The Company issued 14,285,714 shares to MAAG for the placement, taking the total shareholding of MAAG in the Company to 25,913,621 shares representing 8.72% of shares on issue at end Q4 2017.

In June 2017 the Company raised AU\$1.85 million via a Share Purchase Plan (SPP) and concurrent placement of shares to various professional and sophisticated investors. The issue price of the SPP shares and the placement shares was \$0.11 per share, which was a 5% discount to the VWAP of shares as traded on the ASX during the 5 days up to and including 7 June 2017, rounded down to the nearest half cent.

The Company was also delighted to welcome a number of new European-based shareholders that were placed shares at the June 2017 SPP price. In April 2017 Altech dual-listed its shares on the Frankfurt Stock Exchange to support the growing awareness in Europe of the Company's HPA project, especially in Germany. Altech shares trade under the code A3Y. Altech also launched a German-language version of its website to cater to this growing readership.

Post year-end, Altech received commitments to raise \$17.2 million (before costs) through the placement of approximately 122.9 million fully paid ordinary shares (at an issue price of \$0.14 per share). The placement (subject to shareholder approval) was corner-stoned by EPC contractor SMS with a US\$4 million (A\$5.1 million) commitment, and A\$3 million commitment from Melewar Group (associated with Altech non-executive director Tunku Yaacob Khyra).



"The Company very much welcomes the direct investment by SMS in Altech; it strongly demonstrates their commitment and confidence as EPC contractor to the project. The ongoing support of Melewar Group is equally important; the group has supported the Company since 2015 and is a strong believer of our HPA project. The placement leaves us well capitalised to complete the optimal funding arrangements for the HPA project in 2018", Iggy Tan said.

Proceeds from the placement will be used to continue the development of the Company's HPA project. This will include payments for land at Meckering, Western Australia and Johor, Malaysia; detailed engineering design; working capital and general corporate purposes.

CORPORATE

Altech Chemicals Limited

ABN 45 125 301 206

DIRECTORS

Luke Atkins	Non-executive Chairman
Iggy Tan	Managing Director
Peter Bailey	Non-executive Director
Dan Tenardi	Non-executive Director
Tunku Yaacob Khyra	Non-executive Director
Uwe Ahrens	Alternate Director

COMPANY SECRETARY

Shane Volk

SHARE REGISTRY

Automic Registry Services
Level 2, 267 St Georges Terrace
Perth, Western Australia, 6000
1300 288 664 (within Australia)
+61 2 9698 5414 (international)
hello@automic.com.au

STOCK EXCHANGE LISTING

Australia Securities Exchange
ASX Code: ATC
Frankfurt Stock Exchange
FRA Code: A3Y

AUDITORS

Moore Stephens
Level 15, Exchange Tower,
2 The Esplanade,
Perth, Western Australia, 6000

SOLICITORS

Steinepreis Paganin
The Reid Buildings
Level 4, 16 Milligan Street
Perth, Western Australia, 6000

BANKERS

Australian & New Zealand Group (ANZ)
7/77 St Georges Terrace
Perth, Western Australia, 6000

FINANCIAL INFORMATION

(as at 30 June 2017)

Share Price:	\$0.14
Shares:	297.3m
Unlisted Options:	3m
Performance Rights:	20.7m
Market Cap:	\$41.6m
Cash:	\$1.4m

CHANGE OF SHARE REGISTRY

As of 7 August 2017, the Company's provider for shareholder registry services changed from Security Transfer Australia Pty Ltd to Automic Registry Services (Automic). Shareholders can easily and efficiently manage their Altech shareholdings via Automic's secure and highly accessible online Investor portal. The portal provides an online interface to update and manage shareholder details, view balances and transaction history. To sign-up please register online via Automic's website <https://investor.automic.com.au>

Should shareholders have any queries in relation to their shareholding with Altech Chemicals Ltd, please contact Automic at hello@automic.com.au, or via telephone on 1300 288 664 (within Australia) or +61 2 9698 5414 (outside Australia).

COMPETENT PERSONS STATEMENT

The information in this announcement that relates to Mineral Resources and Ore Reserves is extracted from the report entitled "Maiden Ore Reserve at Altech's Meckering Kaolin Deposit" released on 11 October 2016; the report is available to view of the Company's website www.altechchemicals.com. The Company confirms that the new information or data used in its Financial Investment Decision Study (FIDS) does not materially affect the information included in the original market announcement and, in the case of estimates of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and that any changes do not impact the estimates. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

FORWARD-LOOKING STATEMENTS

There is no certainty that German government project finance export credit cover (ECA) and/or project debt finance will be approved. The Company makes no representations or warranties whatsoever as to the outcome of the ECA application process. This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward-looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward-looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.





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