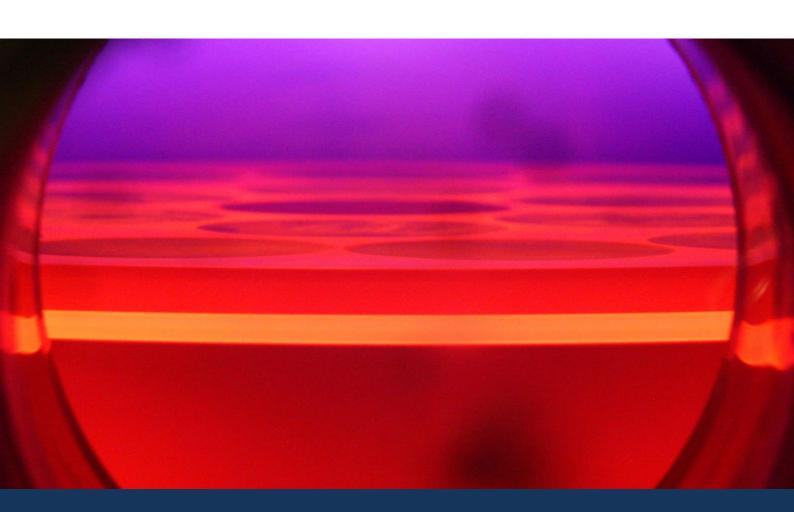


# INTERIM FINANCIAL REPORT FOR THE HALF YEAR ENDED 31 DECEMBER 2018



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#### **DIRECTORS' REPORT**

Your directors present their report on the company and its controlled entities for the half-year ended 31 December 2018.

#### **Directors**

The names of directors in office at any time during or since the end of the half year are:

Dr William Johnson

Mr Giles Bourne

Mr Vivek Rao

Mr James Walker

Mr Stephe Wilks

#### **Principal Activities**

The principal activity of the consolidated entity during the half year was the further development and commercialisation of novel technology for the manufacture of epitaxially grown gallium nitride at low temperature. BluGlass is also engaged in research activities in developing other high efficiency nitride devices.

All research and development activites are conducted in BluGlass Limited. There were no other significant changes in the nature of the consolidated entity's principal activities during the half year.

#### **Operating Results**

Total revenue has increased by \$34,850 up 2.7% to \$1,326,760 due to the following factor:

Interest income up 63.9% to \$137,162 (2017: \$83,665).

Gross expenditure has increased by \$779,834 up 23.9% due to the following factors:

- Consulting fees up 119.8% to \$226,932 (2017: \$103,251).
- Engineering, consumable & repairs expense up 63.5% to \$1,061,022 (2017: \$648,614)
- Patent and trademark expense up 114.7% to \$162,066 (2017: \$75,473)

The consolidated loss for the period amounted to \$2,704,519 up 38% (2017: \$1,959,535).

The company's net assets as at 31 December 2018 was \$22,904,882 (30 June 2018: \$25,388,999).

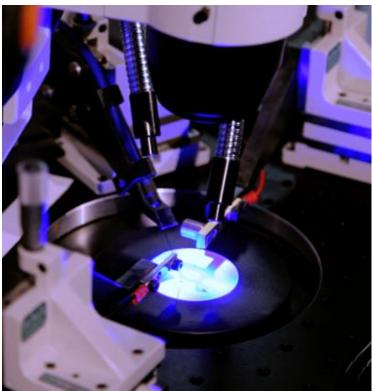
The Statement of Financial Position does not include a value for the increasing number of patents granted during the period since listing on the ASX in 2006 as all research and development costs are expensed as incurred and not capitalised.

#### **Dividends Paid or Recommended**

No dividends were paid or declared during the period.

#### **REVIEW OF OPERATIONS**

During the first half of the 2019 financial year we continued to drive the cutting-edge development and innovation that will see BluGlass achieve our vision of delivering the patented *remote plasma chemical vapour (RPCVD)* technology to market - as a mainstream solution; and ultimately see our technology implemented in high brightness LEDs, microLEDs and power electronics applications across the globe.



BluGlass made significant advancements towards proving the commercial value proposition of the RPCVD technology, building on our existing technology capabilities for LEDs, microLEDs and power electronics. We announced a breakthrough in the development of low temperature RPCVD tunnel junctions, critical enabling technology for cascade LEDs. These stacked LEDs are a potential game-changer for high-performance LED applications such as the rapidly growing automotive LED segment, predicted to be worth \$22B, and capturing 23% of the total market by 2024 amongst other high-powered LED and laser diode applications.

While we continue to work towards commercialising the competitive

advantages of RPCVD, our focus remains on the following areas to maximise the opportunity of delivering RPCVD to market at scale:

- development of the RPCVD technology to create a commercially viable manufacturing technique
- scaling the technology to customer ready adoption
- joint development of applications with industry customers and partners for high-performance LEDs, microLEDs and power electronics applications
- continued protection of associated intellectual property using global patents

#### The Half Year in Review:

#### Silverwater Facility and Capability Expansion

The major facility upgrade and expansion that commenced at the start of the half year, once complete, will be a step-change of our capacity and development capabilities at BluGlass. Previously, BluGlass operated with two RPCVD platforms, which constrained our strategic developments and growing project pipeline.

Our new facility will more than double our RPCVD output capacity and allow BluGlass to pursue multiple development opportunities on unique RPCVD platforms, allowing us to rapidly accelerate hardware optimisation and meet the individual requirements of our customer and partner needs.

The installation of two new cleanroom 'production bays' at our Silverwater facility are nearing completion, with both of the new platforms now at the Silverwater facility ready to be installed and retrofitted. The first of these two systems, the BLG-300II is expected to come online towards the end of April 2019.

#### Facility Upgrade – Two New RPCVD Platforms

# New Production Bay 1



- New BLG-300™ RPCVD system (19x2")
- Increase RPCVD industry project capacity
- RPCVD foundry services

# **New Production Bay 2**



- Installation and retrofit of commercial scale Aixtron G4 Planetary Reactor (capable of 6x6" or 42x2")
- Next generation of RPCVD retrofit – larger area and improved uniformity
- Suitable for LED production for select customers

The initial use of these new systems will be for:

- a) the RPCVD scaling demonstration on the AIX 2800 G4, targeting multi wafer uniformity and performance and
- b) a second BLG-300™ the BLG-300II, suitable for working on current industry projects and further RPCVD development projects.

The construction of the cleanrooms has been designed so that the lab spaces within each cleanroom can be isolated and avoid interuption to the other cleanrooms and development projects. These production bays are capable of housing and supporting a wide variety and size of deposition equipment with a key goal of maintaining flexibility in the deposition processes (and RPCVD projects) that can occur, and are anticipated to be used to build our first RPCVD equipment for customers.

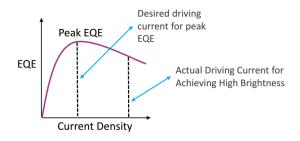
#### **Technology Update**

In December 2018, BluGlass announced a breakthough with the successful demonstration of functioning tunnel junctions, capitalising on the unique low temperature advantages of RPCVD. Tunnel junctions are a key building block for cascade LEDs.

A cascade LED is where two or more LEDs are grown in a continuous vertical stack using a tunnel junction to interconnect multiple LEDs in a single chip. This is highly desirable as it could prevent the fundamental challenge of 'efficiency droop' in high performance LEDs, by decreasing the required electric current while increasing the light-output. Cascade LEDs are expected to enable smaller, cheaper and higher performing LEDs – the three key interest areas of the LED industry. To date, functioning tunnel junctions, and therefore cascade LEDs have been prohibitively difficult to produce.

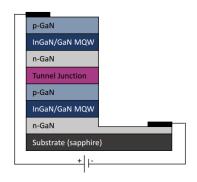
There is significant interest in the potential of cascade LEDs and tunnel junctions, as efficiency droop is a well-known problem associated with high performance GaN-based LEDs. It is a fundamental property of LEDs where the efficiency of the light-output drops as the driving current increases, which means that the majority of today's high-powered LEDs are being operated outside of their peak efficiency.

# EFFICIENCY DROOP IS A MAJOR ISSUE FOR HIGH BRIGHTNESS LED APPLICATIONS



#### **CASCADE LEDS:**

- Compact size & lower cost due to more LEDs grown in a single wafer – high brightness in a small area
- Good candidate for automotive lighting application



BluGlass Chief Technology Officer, Dr. Ian Mann presented a paper on RPCVD for LED applications, including our tunnel junction capabilities at SPIE Photonics West in San Francisco on 7<sup>th</sup> February 2019.

Since our December announcement, BluGlass has received strong interest from the industry and this presentation will help facilitate these discussions.

#### **RPCVD Value Proposition Roadmap**

During the past several years BluGlass has significantly increased its RPCVD capabilities, taking the technology from its first demonstration of good quality single crystal n-GaN (the bottom layer of an LED) and then demonstrating our proof of concept milestone - showing a performance improvement in LEDs by using RPCVD (on top of the industry incument MOCVD grown LEDs) for the p-GaN layers (very top layers of the LED), a hybrid device.

BluGlass has since developed capabilities for the critical light emitting layers of the LED, the multiquantum wells (MQW) layers, in multiple colours from blue, green, yellow, orange and heading towards red LEDs. Our new tunnel junction capabilities further advance our capabilities and RPCVD value proposition.

At Photonics West, BluGlass outlined a roadmap for RPCVD, where we will continue to mature and advance the RPCVD technology from a complementary deposition platform for early market entry to a stand-alone platform with full-suite capabilities with a number of unique performance advantages.

These incremental developments and improvements of our technology further de-risk the RPCVD technology, and significantly advance our industry acceptance and adoption plans.

#### All RPCVD RPCVD + MOCVD RPCVD RGB LEDs RPCVD Tunnel Junction for cascade LED to overcome efficiency droop RPCVD VALUE ADDS Hybrid MOCVD/RPCVD solution to help enhance or enable: RPCVD p-GaN for high performance LEDs Standalone RPCVD solution for RPCVD Tunnel Junction for ITO group III-Nitride based applications replacement of LEDs B, In, Ga, Al Nitrides RPCVD + MOCVD Large Si substrates CMOS integration TIME

#### RPCVD ROADMAP – FROM A COMPLEMENTARY SOLUTION TO A STAND-ALONE PLATFORM

#### **Custom Service Business**

The EpiBlu business continues to be a strategic vehicle for BluGlass. Our service arm attracts new customers and potential collaboration partners who are working on innovative nitride applications and that could benefit from the low temperature advantages of our unique RPCVD technology. This forms an important part of our industry acceptance and marketing strategy for our technology.

BluGlass and EpiBlu have featured at a number of key industry events as speakers and exhibitors including the International Workshop on Nitrides and SPIE, Photonics West. BluGlass is also a Gold Sponsor of the 2019 Compound Semiconductor International Conference and will be exhibiting both as this event and Display Week in the coming half year.

#### **Scaling Project & AIXTRON Collaboration**

BluGlass is building its largest RPCVD platform to date – compatible with modern LED manufacturing and capable of multiple 6" wafers. The newest RPCVD chamber design will be capable of 6x6" wafers (or 42x2").

BluGlass has selected an AIXTRON AIX 2800 G4 MOCVD planetary style deposition system for our scaling project, as the best fit to help improve the uniformity over a commercial deposition area. This dual rotation style of deposition tends to average out the thin film properties across the revolving and rotating wafers.

In January 2019, BluGlass announced that it has entered into a collaboration with the AIX G4 manufacturer AIXTRON SE, a global leading manufacturer of semiconductor equipment. This collaboration has two objectives; to expedite and successfully deliver the scaling project on the G4, and also for AIXTRON to evaluate the performance potential of RPCVD for its customers.

We are very pleased to have the support from AIXTRON for this major and complex scaling project of our technology. This is an important step towards demonstrating the commercial viability of RPCVD in large scale manufacturing.

AIXTRON's Group Innovation Officer, Dr Ken Teo, said of the collaboration "At AIXTRON, we are constantly striving to bring novel technologies onto our platforms in order to provide our customers with advanced capabilities. We want to explore the potential of RPCVD technology for low temperature deposition of nitride layers which may open up new possibilities for opto/electronic devices; we look forward to working with BluGlass in integrating RPCVD and evaluating the technology".

This collaboration also forms part of the BluGlass strategy to develop an equipment partnership to enable the mass production of RPCVD deposition equipment and deliver our unique technology to market at scale.

## **Intellectual Property Update:**

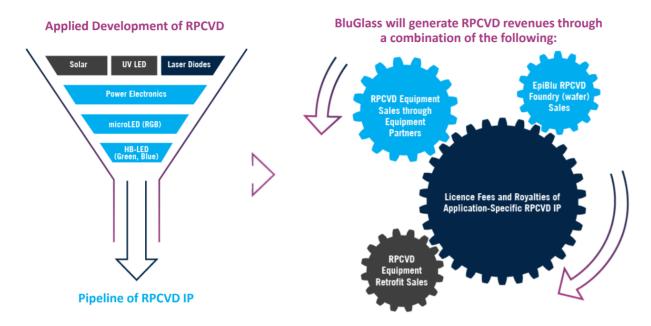
To maximise our commercialisation potential, our Intellectual Property Portfolio is one of the most important aspects to BluGlass' asset base. During the period significant emphasis was placed on continuing to grow and strengthen our patent portfolio, aided by the significant technology progress made by the Company.

BluGlass currently has 63 internationally granted patents across 8 patent families in key semiconductor markets, including the US, Europe, Japan and China.

#### Paths to Market for the RPCVD Intellectual Property Portfolio

As outlined at the Company's AGM, BluGlass continues to deliver on its strategy to create significant revenues and monitise the RPCVD technology via all a combination of:

- Licensing and royalty payments based on the growing IP portfolio
- Retrofitting installed MOCVD equipment on customer sites;
- Equipment partnership (JV / strategic partnership) with one of the major equipment manufacturers; and
- Through RPCVD custom epitaxy and foundry services



#### The Year Ahead:

As we head into 2019, BluGlass' immediate focus is on completing the significant upgrade to our Silverwater facility. BluGlass looks forward to updating the market on the facility upgrade and plans to host an Investor Open day on site following its completion.

BluGlass' business objective for the near-term continues to be to deliver commercial outcomes for the technology with one or more of our industry partners. To this end BluGlass continues negotiations with our strategic partner, Lumileds on a non-exclusive basis for their field of use. The Company has also commenced a number of conversations with the industry to market our disruptive breakthrough Tunnel Junction capabilities.

Operating expenses for this financial year will be materially higher than last year mainly due to increased research and development costs associated with continuing our technology commercialisation efforts.

The BluGlass Board and Management look forward to keeping the market up-to-date on the progress and development by the Company in the half year ahead.

**Director William Johnson** 

**Director Giles Bourne** 

Dated this 14th day of February 2019



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# Auditor's Independence Declaration to the Directors of BluGlass Limited

In accordance with the requirements of section 307C of the Corporations Act 2001, as lead auditor for the review of BluGlass Limited for the half-year ended 31 December 2018. I declare that, to the best of my knowledge and belief, there have been:

- no contraventions of the auditor independence requirements of the Corporations Act 2001 in relation to the review; and
- no contraventions of any applicable code of professional conduct in relation to the review.

Grant Thornton Audit Pty Ltd

Grant Thornton

**Chartered Accountants** 

P J Woodley

Partner - Audit & Assurance

Sydney, 14 February 2019

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# CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE HALF YEAR ENDED 31 DECEMBER 2018

	Note	Consolidated Group	
		31.12.2018	31.12.2017
		\$	\$
Revenue		202,456	268,149
Other Income		1,124,304	1,023,761
Employee benefits expense		(1,586,410)	(1,483,077)
Professional fees		(120,758)	(110,999)
Board and secretarial fees		(190,696)	(137,457)
Corporate compliance & legal expenses		(75,417)	(139,179)
Consultant fees		(226,932)	(103,251)
Rent expense		(142,665)	(139,263)
Travel and accommodation expense		(118,827)	(90,103)
Engineering, consumable & repairs expense		(1,061,022)	(648,614)
Depreciation expense		(91,735)	(101,918)
Other expenses		(416,817)	(297,584)
Loss before income tax		(2,704,519)	(1,959,535)
Income tax expense		-	-
Loss for the period		(2,704,519)	(1,959,535)
Other comprehensive income		-	-
Total comprehensive loss attributable to members of the parent entity		(2,704,519)	(1,959,535)
Loss attributable to:			
- members of the parent entity		(2,704,519)	(1,959,535)
		(2,704,519)	(1,959,535)
Total Comprehensive loss attributable			
- members of the parent entity		(2,704,519)	(1,959,535)
		(2,704,519)	(1,959,535)
Loss per share			
Basic loss per share (cents per share)		(0.65)	(0.51)
Diluted loss per share (cents per share)		(0.65)	(0.51)

These financial statements should be read in conjunction with the accompanying notes.

# **CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2018**

ASSETS         31.12.2018         30.06.2018           Current Assets         Current Assets         11.720,200         15,353,774           Cash and cash equivalents         11.724,639         2,253,440           Inventories         105,910         53,890           Other current assets         141,367         54,602           TOTAL CURRENT ASSETS         13,242,116         17,715,706           Non-Current Assets         2,492,308         258,966           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           Current Liabilities         751,242         529,701           Short-term provisions         438,869         433,368           Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,669           Non-current Liabilities         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         334,431         317,604           TOTAL LIABILITIES         37,504,504		Consolidated Group	
Current Assets         11,720,200         15,353,774           Trade and other receivables         1,274,639         2,253,440           Inventories         105,910         53,890           Other current assets         141,367         54,602           TOTAL CURRENT ASSETS         13,242,116         17,715,706           Non-Current Assets         2,492,308         258,966           Property, plant and equipment         2,492,308         8,695,000           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           Current Liabilities         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         1,190,111         963,069           Long-term provisions         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882<		31.12.2018	30.06.2018
Cash and cash equivalents         11,720,200         15,353,774           Trade and other receivables         1,274,639         2,253,440           Inventories         105,910         53,890           Other current assets         141,367         54,602           TOTAL CURRENT ASSETS         13,242,116         17,715,706           Non-Current Assets         2,492,308         258,966           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         24,429,424         26,669,672           Current Liabilities         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         1,190,111         963,069           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY         46,669,736	ASSETS	\$	\$
Trade and other receivables         1,274,639         2,253,440           Inventories         105,910         53,890           Other current assets         141,367         54,602           TOTAL CURRENT ASSETS         13,242,116         17,715,706           Non-Current Assets         2,492,308         258,966           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         1,190,111         963,069           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY         Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses	Current Assets		
Inventories   105,910   53,890   Chlor current assets   141,367   54,602   TOTAL CURRENT ASSETS   13,242,116   17,715,706   Non-Current Assets   2,492,308   258,966   Intangible assets   8,695,000   8,695,000   TOTAL NON-CURRENT ASSETS   11,187,308   8,953,966   TOTAL ASSETS   11,187,308   8,953,966   TOTAL ASSETS   24,429,424   26,669,672   Chloridate	Cash and cash equivalents	11,720,200	
Other current assets         141,367         54,602           TOTAL CURRENT ASSETS         13,242,116         17,715,706           Non-Current Assets         2,492,308         258,966           Property, plant and equipment Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Current Liabilities         751,242         529,701           Short-term provisions         438,869         433,368         1,90,111         963,069           Non-current Liabilities         1,190,111         963,069         Non-60,069         Non-Current Liabilities         1,190,111         963,069         Non-60,069         Non-Current Liabilities         1,190,111         963,069         Non-60,069         Non-Current Liabilities         1,20,041         317,604         Non-60,069         N	Trade and other receivables	1,274,639	2,253,440
TOTAL CURRENT ASSETS         13,242,116         17,715,706           Non-Current Assets         2,492,308         258,966           Property, plant and equipment         2,492,308         258,966           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Current Liabilities         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	Inventories	105,910	53,890
Non-Current Assets           Property, plant and equipment         2,492,308         258,966           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Current Liabilities           Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (41,338,197)	Other current assets	141,367	54,602
Property, plant and equipment         2,492,308         258,966           Intangible assets         8,695,000         8,695,000           TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Current Liabilities           Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	TOTAL CURRENT ASSETS	13,242,116	17,715,706
Intangible assets   8,695,000   8,695,000     TOTAL NON-CURRENT ASSETS   11,187,308   8,953,966     TOTAL ASSETS   24,429,424   26,669,672     LIABILITIES	Non-Current Assets		
TOTAL NON-CURRENT ASSETS         11,187,308         8,953,966           TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Current Liabilities           Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	Property, plant and equipment	2,492,308	258,966
TOTAL ASSETS         24,429,424         26,669,672           LIABILITIES         Current Liabilities           Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	Intangible assets	8,695,000	8,695,000
LIABILITIES         Current Liabilities       751,242       529,701         Short-term provisions       438,869       433,368         TOTAL CURRENT LIABILITIES       1,190,111       963,069         Non-current Liabilities       Ung-term provisions         Long-term provisions       334,431       317,604         TOTAL NON-CURRENT LIABILITIES       334,431       317,604         TOTAL LIABILITIES       1,524,542       1,280,673         NET ASSETS       22,904,882       25,388,999         EQUITY         Issued capital       67,380,834       67,380,834         Reserves       (626,736)       (653,638)         Accumulated Losses       (43,849,216)       (41,338,197)	TOTAL NON-CURRENT ASSETS	11,187,308	8,953,966
Current Liabilities           Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	TOTAL ASSETS	24,429,424	26,669,672
Trade and other payables         751,242         529,701           Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         Long-term provisions         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	LIABILITIES		
Short-term provisions         438,869         433,368           TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	Current Liabilities		
TOTAL CURRENT LIABILITIES         1,190,111         963,069           Non-current Liabilities         Long-term provisions         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	Trade and other payables		
Non-current Liabilities           Long-term provisions         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY           Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	Short-term provisions	-	
Long-term provisions         334,431         317,604           TOTAL NON-CURRENT LIABILITIES         334,431         317,604           TOTAL LIABILITIES         1,524,542         1,280,673           NET ASSETS         22,904,882         25,388,999           EQUITY         Issued capital         67,380,834         67,380,834           Reserves         (626,736)         (653,638)           Accumulated Losses         (43,849,216)         (41,338,197)	TOTAL CURRENT LIABILITIES	1,190,111	963,069
TOTAL NON-CURRENT LIABILITIES TOTAL LIABILITIES 1,524,542 1,280,673 NET ASSETS 22,904,882 25,388,999  EQUITY Issued capital Reserves (626,736) (625,638) Accumulated Losses (43,849,216) (41,338,197)	Non-current Liabilities		
TOTAL LIABILITIES  NET ASSETS  1,524,542 1,280,673  22,904,882 25,388,999  EQUITY  Issued capital Reserves (626,736) (626,736) (653,638)  Accumulated Losses (43,849,216) (41,338,197)	Long-term provisions	334,431	317,604
NET ASSETS       22,904,882       25,388,999         EQUITY       Issued capital       67,380,834       67,380,834         Reserves       (626,736)       (653,638)         Accumulated Losses       (43,849,216)       (41,338,197)	TOTAL NON-CURRENT LIABILITIES	334,431	317,604
EQUITY Issued capital 67,380,834 67,380,834 Reserves (626,736) (653,638) Accumulated Losses (43,849,216) (41,338,197)	TOTAL LIABILITIES	1,524,542	1,280,673
Issued capital       67,380,834       67,380,834         Reserves       (626,736)       (653,638)         Accumulated Losses       (43,849,216)       (41,338,197)	NET ASSETS	22,904,882	25,388,999
Issued capital       67,380,834       67,380,834         Reserves       (626,736)       (653,638)         Accumulated Losses       (43,849,216)       (41,338,197)	FQUITY		
Reserves       (626,736)       (653,638)         Accumulated Losses       (43,849,216)       (41,338,197)		67,380,834	67,380,834
Accumulated Losses (43,849,216) (41,338,197)		(626,736)	(653,638)
		(43,849,216)	(41,338,197)
		22,904,882	25,388,999

These financial statements should be read in conjunction with the accompanying notes.

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE HALF YEAR ENDED 31 DECEMBER 2018

	Issued Capital	Share based payments Reserve	Other Reserve	Accumulated Losses	Total
	\$	\$	\$	\$	\$
Balance at 1 July 2017	56,630,507	1,157,633	(982,452)	(38,103,777)	18,701,911
Total comprehensive loss for the period	-	-	-	(1,959,535)	(1,959,535)
Transactions with owners in their capacity as owners:					
Share options issued	-	168,409	-	-	168,409
Exercise of share options	334,200	(279,200)	-	-	55,000
Transfer to reserve	-	(605,842)	-	605,842	-
Dividends paid or provided for	-	-	-	-	-
Balance at 31 December 2017	56,964,707	441,000	(982,452)	(39,457,470)	16,965,785
Balance at 1 July 2018	67,380,834	328,814	(982,452)	(41,338,197)	25,388,999
Total comprehensive loss for the period	-	-	-	(2,704,519)	(2,704,519)
Transactions with owners in their capacity as owners:					
Shares issued during the year	-	-	-	-	-
Share options issued	-	220,402	-	-	220,402
Share options expired	-	(193,500)	-	193,500	-
Dividends paid or provided for	-	-	-	-	-
Balance at 31 December 2018	67,380,834	355,716	(982,452)	(43,849,216)	22,904,882

# CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE HALF YEAR ENDED 31 DECEMBER 2018

	Consolidated Group	
	31.12.2018	31.12.2017
	\$	\$
CASH FLOWS FROM OPERATING ACTIVITIES		
Interest & other income received	1,326,760	1,291,910
Payments to suppliers and employees	(2,635,257)	(2,073,832)
Net cash used in operating activities	(1,308,497)	(781,922)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(2,325,077)	(30,847)
Net cash used in investing activities	(2,235,077)	(30,847)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from options exercised	-	56,850
Proceeds from issue of shares net of transaction costs	-	-
Net cash provided by financing activities	-	56,850
Net decrease in cash held	(3,633,574)	(755,919)
Cash and cash equivalents at beginning of period	15,353,774	8,510,931
Cash and cash equivalents at end of period	11,720,200	7,755,012

These financial statements should be read in conjunction with the accompanying notes.

#### NOTES TO THE FINANCIAL STATEMENTS FOR THE HALF YEAR ENDED 31 DECEMBER 2018

#### **Note 1: Nature of Operation**

The principal activity of the consolidated entity during the half year was the further development and commercialisation of novel technology for the manufacture of epitaxially grown gallium nitride at low temperature. BluGlass is also engaged in research activities in developing a high efficiency nitride solar cell prototype.

#### **Note 2: Basis of Preparation**

These general purpose financial statements for the half-year reporting period ended 31 December 2018 have been prepared in accordance with requirements of the *Corporations Act 2001* and AASB 134: *Interim Financial Reporting*. Compliance with AASB 134 ensures compliance with International Financial reporting standard IAS34 Interim Financial Reporting. The group is a for profit entity for financial reporting purposes under Australian Accounting standards.

This interim financial report is intended to provide users with an update on the latest annual financial statements of BluGlass Limited and its controlled entities (the Group). As such, it does not contain information that represents relatively insignificant changes occurring during the half year within the Group. It is therefore recommended that this financial report be read in conjunction with the annual financial report of the Group for the year ended 30 June 2018, together with any public announcements made during the half-year.

The same accounting policies and methods of computation have been followed in this interim financial report as were applied in the most recent annual financial statements, except in relation to the matters discussed below.

## **Significant Accounting Policies**

The interim financial statements have been prepared in accordance with the accounting policies adopted in the Group's last annual financial statements for the year ended 30 June 2018.

The financial statements of BluGlass Limited for the half year ended 31 December 2018 were authorised for issue in accordance with a resolution of the directors on 14 February 2019.

#### Going Concern

Notwithstanding the net loss for the year and the accumulated losses for the Consolidated Group, the directors have performed a review of the cash flow forecasts and consider the Company to be a going concern.

The directors have approved the company's forward business plans with an understanding that sufficient cash resources are available to meet the company's commitments over the next twelve months.

The directors have prepared the financial statements on a going concern basis as the company also has a number of options for raising future capital requirements. Additionally, as a fall-back equity-based funding options are available to the company to continue its technology commercialisation efforts.

#### New standard, interpretations of amendments adopted by the Group

The accounting policies adopted in the preparation of the interim consolidated financial statements are consistent with those followed in the preparation of the group's annual consolidated financial statements for the year ended 30 June 2018, except for the adoption of new standards effective 1 July 2018. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

The Group has adopted AASB 15 *Revenue from Contracts with Customers* and AASB 9 *Financial Instruments* which become mandatorily effective on 1 July 2018. Accordingly these standards apply for the first time to this set of financial statements. The nature and effect of changes arising from these standards are summarised below:

#### AASB 15: Revenue from Contracts with Customers

AASB 15 replaces AASB 118 *Revenue*, AASB 111 *Construction Contracts* and several revenue related interpretations. The new standard has been applied as at 1 July 2018 using the modified approach. Under this method, the cumulative effect of initial application is recoginised as an adjustment to the opening balance of retained earnings at 1 July 2018 and comparatives are not restated. The adoption of AASB 15 has not had a material impact on revenue recognition.

#### NOTES TO THE FINANCIAL STATEMENTS FOR THE HALF YEAR ENDED 31 DECEMBER 2018

#### **AASB 9: Financial Instruments**

AASB 9: Financial Instruments replaces AASB 139 Financial Instruments: Recognition and Measurement requirements. It makes major changes to the previous guidance on the classification and measurement of financial assets and introduces an 'expected credit loss' model for impairment of financial assets.

The adoption of AASB 9 has not materially impacted the Group, as:

- Receivables and liabilities will still continue to be measured at amortised cost; and
- Investments at fair value, will still continue to be measured at fair value through the profit or loss.

#### Note 3: Loss for the Period

	Consolidated Group	
	31.12.2018	31.12.2017
The following revenue items are relevant in explaining the financial performance for the interim period:		
Foundry Revenue	202,456	268,149
R&D Tax rebate	987,142	940,096
Interest Income	137,162	83,665
	1,326,760	1,291,910

#### Note 4: Dividends

There were no dividends paid or declared during the period.

#### **Note 5: Operating Segments**

The consolidated group operates and reports in one business and geographic segment.

#### Note 6: Losses Per Share

Both the basic and diluted losses per share have been calculated using the losses attributable to shareholders of the Parent Company (BluGlass Limited) as the numerator, i.e. no adjustments to losses were necessary during the six (6) month period to 31 December 2018 and 2017.

The weighted average number of shares for the purposes of the calculation of diluted losses per share can be reconciled to the weighted average number of ordinary shares used in the calculation of basic losses per share as follows:

	6 months to 31 December 2018	6 months to 31 December 2017
Weighted average number of shares used in basic earnings per share	418,307,072	384,054,162
Weighted average number of shares used in diluted earnings per share	418,307,072	384,054,162

# NOTES TO THE FINANCIAL STATEMENTS FOR THE HALF YEAR ENDED 31 DECEMBER 2018

# Note 7: Share Capital

	6 months to 31 December 2018	Year to 30 June 2018
Shares issued and fully paid		
Beginning of the period	418,307,072	382,461,266
Issued under share-based payment plans	-	5,500,000
Shares issued	-	30,345,806
Shares issued and fully paid	418,307,072	418,307,072
Shares authorised for share based payments	22,760,112	4,100,000
Total shares authorised at the end of the period	441,067,184	422,407,072

# Note 8: Commitments and contingencies

As at 31 December 2018, the company had purchase orders for capital equipment of \$965,085 (30 June 2018: \$nil).

# Note 9: Events subsequent to reporting date

There were no events subsequent to reporting date.

#### **DIRECTORS' DECLARATION**

The directors of the company declare that:

- 1. the financial statements and notes as set out on pages 11 to 17 are in accordance with the Corporations Act 2001 and:
  - (a) comply with Accounting Standards AASB 134 Interim Financial Reporting; and
  - (b) give a true and fair view of the financial position as at 31 December 2018 and of the performance for the half year ended on that date.
- 2. in the directors' opinion, there are reasonable grounds to believe that the group will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.

Director

William Johnson

Managing Director

Giles Bourne

Dated this 14th day of February 2019



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# **Independent Auditor's Review Report**

## To the Members of BluGlass Limited

Report on the review of the half year financial report

#### Conclusion

We have reviewed the accompanying half-year financial report of BluGlass Limited (the Company) and its subsidiaries (the Group), which comprises the consolidated statement of financial position as at 31 December 2018, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the half year ended on that date, a description of accounting policies, other selected explanatory notes, and the directors' declaration.

Based on our review, which is not an audit, nothing has come to our attention that causes us to believe that the half-year financial report of BluGlass Limited does not give a true and fair view of the financial position of the Group as at 31 December 2018, and of its financial performance and its cash flows for the half year ended on that date, in accordance with the *Corporations Act 2001*, including complying with Accounting Standard AASB 134 *Interim Financial Reporting*.

### Directors' responsibility for the half year financial report

The Directors of the Company are responsible for the preparation of the half year financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the Directors determine is necessary to enable the preparation of the half year financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

#### Auditor's responsibility

Our responsibility is to express a conclusion on the half year financial report based on our review. We conducted our review in accordance with Auditing Standard on Review Engagements ASRE 2410 *Review of a Financial Report Performed by the Independent Auditor of the Entity*, in order to state whether, on the basis of the procedures described, we have become aware of any matter that makes us believe that the half-year financial report is not in accordance with the *Corporations Act 2001* including giving a true and fair view of the Group's financial position as at 31 December 2018 and its performance for the half year ended on that date, and complying with Accounting Standard AASB 134 *Interim Financial Reporting* and the *Corporations Regulations 2001*. As the auditor of BluGlass Limited, ASRE 2410 requires that we comply with the ethical requirements relevant to the audit of the annual financial report.

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A review of a half-year financial report consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Australian Auditing Standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

## Independence

In conducting our review, we have complied with the independence requirements of the Corporations Act 2001.

Grant Thornton Audit Pty Ltd

Grant Thornton

Chartered Accountants

P J Woodley

Partner - Audit & Assurance

Sydney, 14 February 2019