

QUARTER 3 – 2018

31 March 2018

Quarterly Report & Appendix 4C



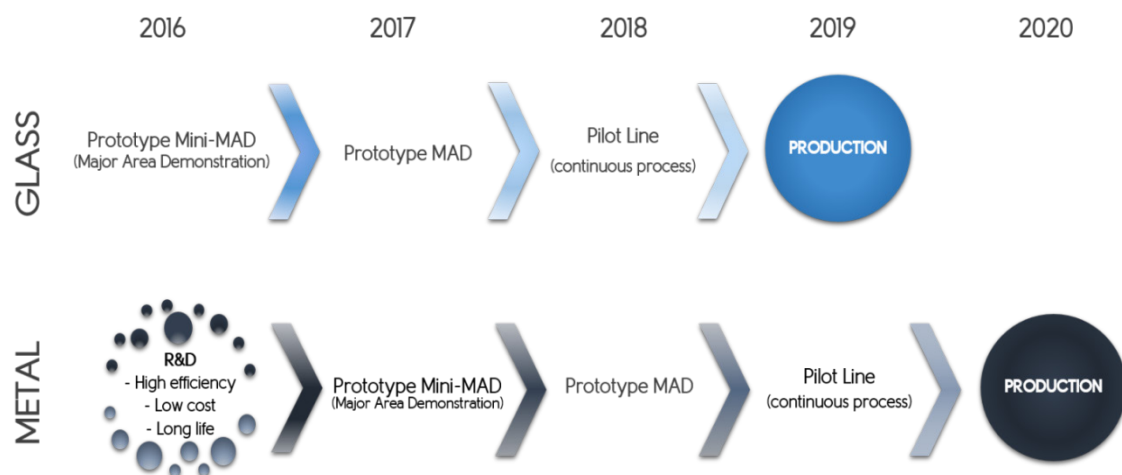
greatcellsolar
Global leaders in hi-tech solar

Third Quarter FY 2018 – Quarterly Report & Appendix 4C

HIGHLIGHTS

- **3QFY2018 TAB Milestone Achieved – 12% MPPT Performance for Au-free P-I-N Modules**
- **GSL Italia Awarded €500,000 Grant in EU Horizon 2020 Project (Spearhead)**
- **CBA - A\$4 Million Finance Facility**
- **Provisional Patent Lodged for Solution-Based Carbon Conductor**
- **Strategic International Investment Negotiations Near Completion**
- **Voluntary Suspension Expected to be Lifted When Investment Completed**

COMMERCIALISATION SCHEDULE



CORPORATE AND FINANCIAL

The board's decision to seek voluntary suspension was taken in order to secure the best refinancing terms on behalf of existing shareholders. This marked a shift from a typical operational expenditure based funding model to recognising the importance of having a fully funded MAD project – the difference being a substantial investment in facility fitout and capital equipment. Whilst suspension of the Company's securities from trading on ASX is never desirable, it does provide a protection for shareholders whilst uncertainty exists. Whilst we have broad outline of the terms of the investment, which includes the formation of an international commercial venture, the considerable detail has not been agreed and finalised, but is imminent. We believe the outcome will deliver a positive outcome for the Company's projects and its shareholders.

The new investment is intended to provide for the release of at least an additional A\$15 million through existing 'matched' grants and available R&D government rebates, meaning sufficient capital is expected to be available for key project capital expenditure and operational expenditure at least to the end of CY2019. This will facilitate the development of a world-class PSC PV prototype in collaboration with CSIRO at Clayton in Victoria. The prototyping phase is widely considered the most important de-risking step in our quest for scale-up and global commercialisation. This is expected to underpin long-term positive valuation for the Company's shares.

The Company has enjoyed the strong support of CBA during its refinancing process and its R&D rebate advance facility was renewed for FY2018 and is A\$4 million in size in accordance with its expected receipt from the ATO at the end of the tax year.

RESEARCH AND DEVELOPMENT

The Technology Advisory Board (TAB) convened on Friday, April 20. The TAB is comprised of Prof. Michael Grätzel, Dr Robert McIntyre, Dr Damion Milliken and Dr Hans Desilvestro. We are delighted to announce that, building on the milestone achievement at the cell level from the previous quarter, the technology milestone for the third quarter was achieved. The relevant milestone was a 12% conversion efficiency for a glass substrate 10 x 10 cm module, indicating very good performance translation in device scaling. At a similar scale and architecture, our partners at Solliance have recently achieved as high as 14.5% stabilised conversion efficiency during the month of April. This is particularly exciting and meaningful as it is now most likely that the Perovskite Solar Cell (PSC) P-I-N architecture is lead candidate for commercialisation of the technology on both glass and metals.

GSL has developed a number of key areas of expertise which distinguish it from academic groups. In particular, sealing and encapsulation, elimination of organic materials, and the substitution of cheaper materials for more expensive materials. A simple example is that (expensive) gold is typically used as a conductor in laboratory made cells, while cheaper materials such as copper will substitute in commercial devices. In this positive vein, GSL has very recently lodged a provisional patent application for a solution-based carbon back contact. This novel development achieves high efficiencies and, most importantly, is significantly cheaper than gold, silver or copper in the same conductor role.

The \$6 million ARENA project is also on track with GSL achieving and surpassing its agreed milestones to date, independently validated by CSIRO at Newcastle. These milestones related to efficiency, stability and active area.

Our very successful access to non-dilutionary funding has continued in Europe with the award of €500,000 to Greatcell Solar Italia in the EU Horizon 2020 grant programme known as Spearhead, which is part of the very substantial €150M Graphene Flagship. This was touched on in the previous quarter. In addition to the recently awarded GotSolar and APOLO H2020 grants, this assists in funding activities which have already been planned within the Company's Technology Development Plan (TDP). In particular, European funding for subsidiary activities is almost exclusively allocated to scale-up of PSC enabled flexibles and metals based devices, which has its core activities located in the UK, the Netherlands and Italy.

GSL is typically the lead industry partner in these multi-party collaborations for the development and commercialisation of PSC PV technology. We are very excited about the prospects of our metals substrate development plan at Solliance and the prospects of entering a BIPV market where there is little credible competition.

MANUFACTURING AND COLLABORATIONS

Details of the proposed new international commercialisation venture will be released to the market once the investment has been received and the terms and conditions agreed.


In Australia, the CSIRO Clayton Major Area Demonstration ("MAD") prototype facility is expected to take approximately 6 months to establish and commission. We remain confident that additional and supplementary funding will come from government and their agencies. The intention of this facility is to produce MAD panels for showcasing, demonstration, testing and accreditation. It will have an ongoing role for prototypes of next-generation solar PSC PV technology.

Elsewhere, incoming collaboration enquiries are strong, especially from the Asian market place and we remain well positioned to respond to opportunities once the international commercialisation venture is bedded down.

FINANCIALS

The net operating monthly cash burn (Sec. 1.9) for the third quarter averaged \$442k, assisted with grant receipts totalling \$417k during the quarter. Net cash usage from operating and investing activities for the period to 31 March 2018 totalled \$1,920k, including the R&D rebates.

At the end of the third quarter, cash balances totalled \$532k.



During the quarter, the Company drew down \$1.261M from its renewed FY2018 CBA finance facility (total limit \$4M) that allows an advanced payment of up to 90% of accrued R&D tax offset credits. The total amount drawn at the end of this quarter amounted to \$2.071M.

As elucidated in the earlier commentary, during the final quarter 2018 the Company is expecting to receive significant strategic cash investments, and, in addition, other cash receipts from various grant and project deliverables.

The Company is preparing its next CBA finance facility draw-down, estimated at \$450k, which is expected to be received in early May 2018.

About Greatcell Solar LIMITED

Greatcell Solar is a global leader in the development and commercialisation of Perovskite Solar Cell (PSC) technology – 3rd Generation photovoltaic technology that can be applied to glass, metal, polymers or cement. Greatcell Solar manufactures and supplies high performance materials and is focussed on the successful commercialisation of PSC photovoltaics. It is a publicly listed company: Australian Securities Exchange ASX ([GSL](#)) and German Open Market ([D5I](#)). Learn more at www.greatcellsolar.com and subscribe to our mailing list in English and German.

About PEROVSKITE SOLAR CELL TECHNOLOGY

Perovskite Solar Cell (PSC) technology is a photovoltaic (PV) technology based on applying low cost materials in a series of ultrathin layers encapsulated by protective sealants. Greatcell Solar's technology has lower embodied energy in manufacture, produces stable electrical current, and has a strong competitive advantage in low light conditions relative to incumbent PV technologies. This technology can be directly integrated into the building envelope to achieve highly competitive building integrated photovoltaics (BIPV).

The key material layers include a hybrid organic-inorganic halide-based perovskite light absorber and nano-porous metal oxide of titanium oxide. Light striking the absorber promotes an electron into the excited state, followed by a rapid electron transfer and collection by the titania layer. Meanwhile, the remaining positive charge is transferred to the opposite electrode, thereby generating an electrical current.

- Ends -

Media & Investor Relations Contacts:

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Appendix 4C

Quarterly report for entities subject to Listing Rule 4.7B

Name of entity

GREATCELL SOLAR LIMITED

ABN

92 111 723 883

Quarter ended ("current quarter")

31 MARCH 2018

Consolidated statement of cash flows

1.	Cash flows from operating activities	Jan 18 to Mar 18 Quarter \$A'000	Year to date (9 months) \$A'000
1.1	Receipts from customers	303	865
1.2	Payments for		
	(a) research and development	(653)	(1,737)
	(b) product manufacturing and operating costs	(57)	(288)
	(c) advertising and marketing	(73)	(247)
	(d) leased assets	(120)	(395)
	(e) staff costs	(1,001)	(4,140)
	(f) administration and corporate costs	(129)	(1,114)
1.3	Dividends received(see note 3)	-	-
1.4	Interest received	-	3
1.5	Interest and other costs of finance paid	(13)	(72)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	417	5,451
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(1,326)	(1,674)

Consolidated statement of cash flows

2.	Cash flows from investing activities	Jan 18 to Mar 18 Quarter \$A'000	Year to date (9 months) \$A'000
2.1	Payments to acquire:		
	(a) property, plant and equipment	(210)	(286)
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	-
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (loans to related parties-net)	-	40
2.6	Net cash from / (used in) investing activities	(210)	(246)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	2,678
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	1,261	3,371
3.6	Repayment of borrowings	(14)	(3,911)
3.7	Transaction costs related to loans and borrowings	(44)	(117)
3.8	Dividends paid	-	-
3.9	Other –Treasury shares purchase	(51)	(544)
3.10	Net cash from / (used in) financing activities	1,152	1,477

Consolidated statement of cash flows

4.	Net increase / (decrease) in cash and cash equivalents for the period	Jan 18 to Mar 18 Quarter \$A'000	Year to date (9 months) \$A'000
4.1	Cash and cash equivalents at beginning of quarter/year to date	929	995
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,326)	(1,674)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(210)	(246)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,152	1,477
4.5	Effect of movement in exchange rates on cash held	(13)	(20)
4.6	Cash and cash equivalents at end of quarter	532	532

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	532	929
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	532	929

6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	129
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3	Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	
	Directors and associates remuneration	129

7.	Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3	Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

8.	Financing facilities available <i>Add notes as necessary for an understanding of the position.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1	Loan facilities	4,000	2,071
8.2	Credit standby arrangements	NIL	NIL
8.3	Other (please specify)	NIL	NIL
8.4	In December 2017, the Company established a new \$4 million Financing Facility with the CBA that allows an advanced drawdown of up to 90% of accrued Research and Development Tax Offset credits. The eligible R&D tax offset cash rebate expected from the ATO for the financial year ending 30 June 2018 forms the primary security for the Facility. The financing facility incurs a line fee of 4.3% p.a. on the Facility Limit, and a Liquidity Fee of BBSY (Bank Bill Benchmark Rate for the Funding Period) plus 0.25% p.a. on amounts drawn down.		

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Research and development	1,110
9.2	Product manufacturing and operating costs	105
9.3	Advertising and marketing	90
9.4	Leased assets	125
9.5	Staff costs	1,190
9.6	Administration and corporate costs	650
9.7	Other (provide details if material)	-
9.8	Total estimated cash outflows	3,270

10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1	Name of entity	-	-
10.2	Place of incorporation or registration	-	-
10.3	Consideration for acquisition or disposal	-	-
10.4	Total net assets	-	-
10.5	Nature of business	-	-



COMPLIANCE STATEMENT

1. This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
2. This statement does give a true and fair view of the matters disclosed.

Sign here:



Date: 30 April 2018

Print name:

Richard Caldwell, *Managing Director*

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.