

QUARTER 4 – 2018

30 June 2018

Quarterly Report & Appendix 4C



greatcellsolar

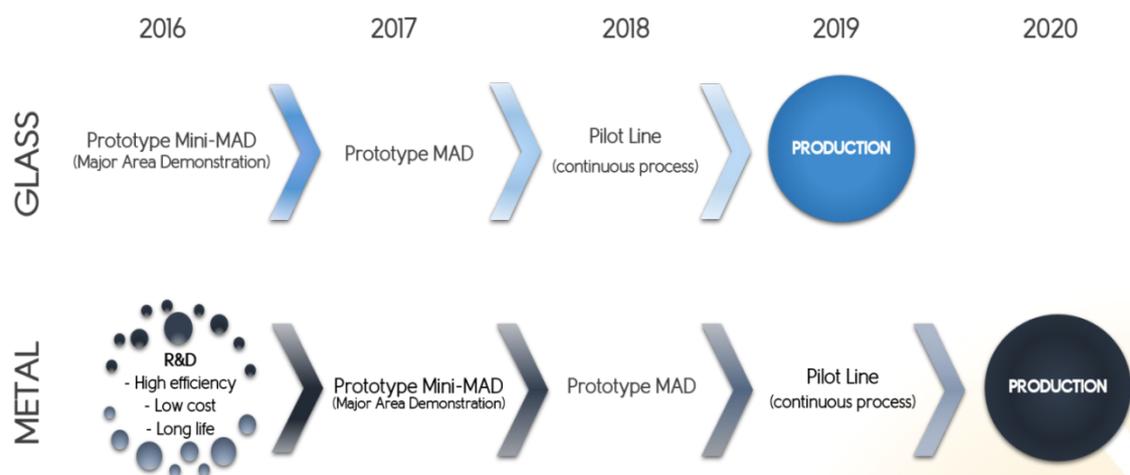
Global leaders in hi-tech solar

Fourth Quarter FY 2018 – Quarterly Report & Appendix 4C

HIGHLIGHTS

- **4QFY18 TAB Milestone Achieved – 10% PIN Steel Substrate Modules at GSUK/Solliance**
- **Department of Industry CRC-P grant payment received in June of A\$343,000 on completion of 3QFY18 milestones**
- **Department of Industry CRC-P grant payment due in August of A\$343,000 on completion of 4QFY18 milestones**
- **FY2018 ATO R&D Rebate of Circa \$3.4M expected in late August**
- **Refinancing Negotiations Remain Incomplete**
- **FY18 Material Sales up 20% Year-On-Year**
- **Diligence Program Commenced with Global Steel Manufacturer**

COMMERCIALISATION SCHEDULE



CORPORATE AND FINANCING UPDATE

Greatcell Solar is operating conservatively while it undertakes its well documented refinancing. Essentially, this means we are focusing on meeting the many internal and external technical milestones of our Technology Development Plan and complementary grant programs both here and in UK/Europe. The only practical constraint relates to fit-out and capital expenditure for our Major Area Demonstration

(MAD) prototype facility planned for CSIRO in Clayton, Victoria. Detailed plans are complete and some equipment has been pre-ordered, given the long lead times on bespoke items. The off-the-shelf equipment can be procured more easily and has a shorter lead time of only 2 to 3 months.

GSL is continuing with its funding leads into Turkey, despite a number of frustrating setbacks and a deadline has been set for negotiations. We will continue to keep the market informed on a fortnightly basis as meaningful information emerges. As we have said before, Turkey is an outstanding opportunity in which many stakeholders have invested considerable intellectual capital over an extended period. We also welcome news of the recent orderly conduct of the presidential election and the lifting of emergency rule.

Of course, we are also advancing alternative sources of funds, including New Moonie, which is close to finalising its A\$2.5B funding and surmounting the considerable regulatory approvals involved in establishing an international infrastructure fund in Australia. New Moonie has the potential to replace CER Grup as the principal source of new funding for the MAD prototype facility. All funding for New Moonie should be completed by end of August.

The A\$10,000,000 that we are seeking to raise in new equity finance will generate a minimum additional \$15,000,000 in pre-committed grants and rebates. The minimum of A\$25,000,000 expected to be available will satisfy all immediate prototyping cost estimates and take the Company forward at least 18 months without any further capital calls. This is the principal de-risking step for GSL and should significantly grow shareholder value.

Tasnee has very recently confirmed its commitment to its 30% strategic shareholding and remains open to discussion about funding support. We have discussed with it various potential roles including underwriting and it is reviewing where it can best provide support. The Deputy Chairman, Talal Bin Ali Al Shair has been a long term supporter of our technology and we value his confidence in our ground breaking technology.

Elsewhere, we have signed NDAs with major companies from China and India during this exhaustive process to ensure all funding possibilities are properly considered.

Sales of materials grew by approximately 20% during FY18 and now exceed A\$1million per annum. This is the result of growing academic interest in Perovskite Solar Cells (PSC), exacting quality assurance and control, and significant growth in market share. This business is increasingly profitable. We are confident of similar sales growth for FY19, especially with the introduction of new equipment offerings, including our new Hyperion LED Solar Simulator.

The Commercialisation Schedule above will require review once the outcome of the refinancing is known.

RESEARCH AND DEVELOPMENT

The 4th quarter achieved strong technical results and established a number of new relationships, both in Australia and in Europe.

Most importantly, the Technical Advisory Board milestone for 4QFY18 was approved. This was to achieve an MPPT conversion efficiency of 10% on a steel module. The GSUK team is forging ahead with delivering a unique solution for the integration of PSC PV on steel. This has a number of specific technical challenges, including a substrate specific 'stack' that is 'backlit' and we are excited about its prospects. Currently, there are several international steel companies reviewing its performance under non-disclosure agreement (NDA).

Our technical pre-eminence in the field of 3rd generation PV has also been recognised during the quarter by some of Australia's leading academic institutions. We are jointly collaborating with UNSW and Sydney University, a relative newcomer, on building integrated photovoltaics (BIPV). The focus is long-life windows as PV devices. Sydney University has the potential to enhance product performance with excellent progress on alternative, low-temperature compatible, scalable sealing technology already

proven at large areas. We have a staff member on part-time secondment to the project which is funded by a A\$365,000 ARC Linkage grant.

Similarly, we are partnering with Monash University on a PSC BIPV project. Other partners in that project include CSIRO and Viridian. The A\$2.3M project, supported by ARENA, seeks to advance semi-transparent and translucent PSC for use in window based BIPV product applications. Both the UNSW led ARC funded project and Monash led ARENA funded project nestle well within GSL's forward Technology Development Plan and high-value added product expansion objectives.

ARENA paid us A\$150,000 during the quarter for technical milestones achieved and a further payment of A\$673,000 is expected this quarter, with GSL successfully completing related project milestones.

Greatcell Solar Italia is running two key European Union funded H2020 projects out of our office in Rome, Apolo and Spearhead. These are, at worst, self-funding projects. A small number of additional staff have been relocated or hired to undertake the various related work packages that dovetail into our Technology Development Plan. In May the Company received its first payment of €370,000 or ~A\$580,000 under the Apolo payment schedule. The total value of the related grants is €1.2 million or approximately A\$1.9 million.

More generally, recent durability testing for the PIN architecture has successfully demonstrated both thermal (85°C 1,000 hours) and UV stability (3× the IEC 61215 requirement). The UV work is being done at Lausanne where we collocate with EPFL. This additional data provides encouraging support that PIN is the lead candidate for prototyping at the new, world-class facility planned for building at CSIRO in Clayton, Victoria once project financing is complete.

MANUFACTURING AND COLLABORATIONS

We have achieved excellent progress at Solliance in the past 3 months. The metals project goes from strength to strength, the key objectives being alternative solutions for materials architecture, sealing and continuous, mass manufacture of steel based PSC BIPV. We have also introduced a new potential manufacturing partner – a leading, global steel manufacturer - and we are currently undertaking diligence on the prospective input from each partner. Warranted performance is a less challenging hurdle in a category such as this, which is largely uncontested and with enormous scale.

There has been no material progress during the quarter at CSIRO in Clayton, Victoria where the MAD prototype facility is planned for construction. This very significant collaboration is deferred until a new project funding package is confirmed, which we believe to be imminent.

FINANCIALS

The net operating monthly cash burn (Sec. 1.9) for the final quarter averaged A\$210k, assisted with grant receipts totalling A\$995k during the quarter. Net cash usage from operating and investing activities for the year totalled A\$2,612k, including the R&D rebates.

At the end of the final quarter, cash balances totalled A\$487k.

During the quarter, the Company drew down A\$452k from its renewed FY18 CBA finance facility (total limit A\$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 A\$2.523m. A further A\$675k was drawn down from the facility during July 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 ([D51](#)). 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 -

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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")

30 JUNE 2018

Consolidated statement of cash flows

1.	Cash flows from operating activities	Apr 18 to June 18 Quarter \$A'000	Year to date (12 months) \$A'000
1.1	Receipts from customers	282	1,147
1.2	Payments for		
	(a) research and development	(503)	(1,898)
	(b) product manufacturing and operating costs	(43)	(331)
	(c) advertising and marketing	(91)	(338)
	(d) leased assets	(113)	(508)
	(e) staff costs	(1,029)	(5,169)
	(f) administration and corporate costs	(100)	(1,214)
1.3	Dividends received(see note 3)	-	-
1.4	Interest received	-	3
1.5	Interest and other costs of finance paid	(28)	(78)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	995	6,100
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(630)	(2,286)

Consolidated statement of cash flows

2.	Cash flows from investing activities	Apr 18 to June 18 Quarter \$A'000	Year to date (12 months) \$A'000
2.1	Payments to acquire:		
	(a) property, plant and equipment	(80)	(366)
	(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	(80)	(326)
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	799	4,170
3.6	Repayment of borrowings	(71)	(3,982)
3.7	Transaction costs related to loans and borrowings	(75)	(211)
3.8	Dividends paid	-	-
3.9	Other –Treasury shares purchase	-	(544)
3.10	Net cash from / (used in) financing activities	653	2,111

Consolidated statement of cash flows

4.	Net increase / (decrease) in cash and cash equivalents for the period	Apr 18 to June 18 Quarter \$A'000	Year to date (12 months) \$A'000
4.1	Cash and cash equivalents at beginning of quarter/year to date	532	995
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(630)	(2,286)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(80)	(326)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	653	2,112
4.5	Effect of movement in exchange rates on cash held	12	(8)
4.6	Cash and cash equivalents at end of quarter	487	487

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	487	532
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)	487	532

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	88
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	88

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	2,253
8.2	Credit standby arrangements	NIL	NIL
8.3	Other (overdraft Facility)	400	347
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	1,610
9.2	Product manufacturing and operating costs	326
9.3	Advertising and marketing	85
9.4	Leased assets	127
9.5	Staff costs	1,295
9.6	Administration and corporate costs	547
9.7	Other (provide details if material)	-
9.8	Total estimated cash outflows	3,990

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: 31 July 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.