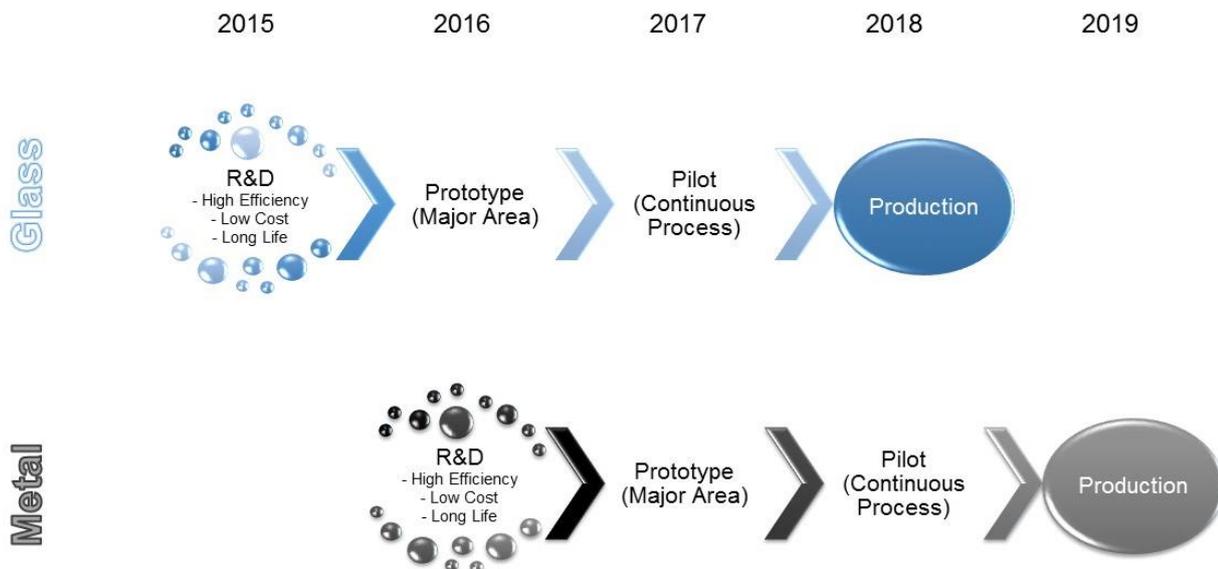


## Second Quarter FY 2016 – Quarterly Report & Appendix 4C

### Financial Quarter Highlights

- Quarterly Milestone of 1,000 Hours Thermal Stability for PSC Achieved
- ARENA LCOE Study indicates 10 - 13 Australian cents per kilo-watt hour
- EPFL Establishes New World Record PSC Conversion Efficiency of 21.02%
- Equity Capital Raising of \$8.1 million

### Commercialisation Schedule



### Corporate and Operational

The AGM was well attended with strong endorsement by the shareholders of the Company's strategy and successful implementation of its Business Plan and Technology Development Plan. All resolutions put to the meeting were passed.

During the quarter the share price enjoyed a strong move higher touching a high of 39 cents. While this was not sustained, the trading range for Dyesol shares is now higher than any time in the past 2 years and the trend positive. While positive share price performance and absolute returns are our key focus, we also note that DYE has outperformed the Small Ordinaries Index since the beginning of the financial year. Positive absolute and relative returns for Dyesol shareholders have been achieved in an Australian share market which has been volatile and for the most part negative. Drilling even further down, we also note that Dyesol has outperformed most global solar indices recently suggesting that Perovskites are gaining

increasing recognition by astute investors as a genuine threat to the incumbent technologies, notably silicon.

Part of the reality of Dyesol's aggressive plans for commercialisation are periodic, but modest, capital raisings. Dyesol is fortunate to have a supportive and growing shareholder base, with particularly strong interest from retail investors, both in Australia and internationally. In addition, the recent A\$8.1 million capital raising had support from institutional investors marking Dyesol's improved market capitalisation, its popularity with ethical investors and its keen focus and pleasing progress towards industrialisation.

Dyesol receives excellent leverage on equity funds raised with the Australian Federal Government R&D Rebate providing a 45c in the dollar recovery for expenditure on R&D activity. This typically translates into a \$3 million to \$4 million reimbursement from government in the 3<sup>rd</sup> quarter of the calendar year.

### **Research and Development**

The quarterly Technical Advisory Board milestone focused on thermal stability was achieved. Dyesol prepared PSC strip cells and subjected them to 85 °C for 1,000 hours with <10% efficiency loss. Dyesol has now separately satisfied both key tests necessary to achieve formal IEC 61646 accreditation. These current results, however, did demonstrate bimodal variability, with the quality of encapsulation explaining success or failure within a prescribed experimental batch. This is very encouraging, but further investigation is required to finalise thermal stability testing before subjecting cells and modules to full, external accreditation. Next, Dyesol intends to reproduce these results in larger modules.

Dyesol has considerable expertise and IP in encapsulation. This is an area of ongoing focus in producing improved stability and repeatable performance. Automation is also considered a critical step in repeatable and high quality results and, of course, is an important consideration for manufacturability. The technical collaboration with Efacec and the University of Uporto is our flagship encapsulation project.

Dyesol is also making excellent progress on developing new processes which it believes can further contribute to both higher efficiency and improved stability. Initial experiments using a new additive in the material stack is consistently delivering a higher efficiency of approximately 3% and materially lower hysteresis. Stability and hysteresis are inextricably related. We are tempering our initial excitement with further investigation and testing, however we have sufficient data now to have confidence in proceeding to the first stage of patent application. A conservative approach to scientific investigation underpins our approach and we will inform the market if a breakthrough in scientific research can be confirmed. Further, the uncertain nature of patent application success adds grounds for caution.

Eisewhere, Dyesol's close collaborator, the EPFL, set a new world record for conversion efficiency of 21.02% for perovskite solar cells. This front-line position, based on superior technology and IP priority, confirms our position as world leaders in the commercialisation of the revolutionary, third-generation PV technology.

### **Manufacturing and Technical Collaborations**

Pleasing progress has been achieved on both the Major Area Demonstration and Turkish projects during the quarter. As stated in the last quarterly update, announcements on both are imminent and only being delayed by the attendant rigour of valuable and high-tech projects, especially where government is involved.

In Turkey, one final technical checkpoint remains with a meeting scheduled in Ankara within the next 2 weeks. In the meantime, Nesli has satisfied all entry requirements for the establishment of a laboratory at

the technology precinct in Mersin. This is a pre-condition for government financial sponsorship. With the assistance of Dyesol, all relevant grant applications were also submitted by Nesli at the beginning of January. February and March are, thus, scheduled as key months for “go-ahead” decisions by government.

At a similar time, Dyesol expects to name its collaboration partner for the first phase of its Major Area Demonstration project. The first phase is expected to include a feasibility study and a complete functional specification. This will add considerable scale-up expertise as Dyesol drives its commercialisation schedule for the mass manufacture of PSC PV by 2018.

## Financials

The net operating monthly cash burn (Sec 1.8) for the second quarter averaged \$1m, excluding the \$3.3m of FY 2015 R&D Tax Rebates receipts. A net total of \$7.7m was raised from the Share Purchase Plan during the quarter resulting in the issue of 31,202,938 new shares. Another 2,717,279 Dyesol shares have been issued to the Commonwealth Scientific and Industrial Organisation (CSIRO) as the final repayment tranche of funds expended under joint research projects.

At the end of the quarter cash balances totalled \$10m.

### About DYESOL LIMITED

Dyesol is a global leader in the development and commercialisation of Perovskite Solar Cell (PSC) technology – 3<sup>rd</sup> Generation photovoltaic technology that can be applied to glass, metal, polymers or cement. Dyesol 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 ([DYE](#)) and German Open Market ([D5I](#)). Learn more at [www.dyesol.com](http://www.dyesol.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. Dyesol'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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Rule 4.7B

# Appendix 4C

## Quarterly report for entities admitted on the basis of commitments

Name of entity

**DYESOL LIMITED**

ABN

**92 111 723 883**

Quarter ended ("current quarter")

**31 DECEMBER 2015**

### Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (6 months) \$A'000
1.1	Receipts from customers	320	549
1.2	Payments for		
	(a) staff costs	(1,490)	(2,863)
	(b) advertising and marketing	(185)	(342)
	(c) research & development	(1,190)	(2,013)
	(d) leased assets	(166)	(329)
	(e) other working capital	(613)	(1,125)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	14	35
1.5	Interest and other costs of finance paid	(5)	(11)
1.6	Income taxes received/(paid) (R&D Tax rebate)	3,282	3,282
1.7	Other (R&D grant)	213	223
	<b>Net operating cash flows</b>	<b>180</b>	<b>(2,594)</b>

		Current quarter \$A'000	Year to date (6 months) \$A'000
1.8	Net operating cash flows (carried forward)	180	(2,594)
<b>Cash flows related to investing activities</b>			
1.9	Payment for acquisition of:		
	(a) businesses (item 5)	-	-
	(b) equity investments	-	-
	(c) intellectual property	-	-
	(d) physical non-current assets	(84)	(161)
	(e) other non-current assets	-	-
1.10	Proceeds from disposal of:		
	(a) businesses (item 5)	-	-
	(b) equity investments	-	-
	(c) intellectual property	-	-
	(d) physical non-current assets	-	3
	(e) other non-current assets	-	-
1.11	Loans to other entities (related parties)	-	-
1.12	Loans repaid by other entities (related parties)	7	13
1.13	Other- Investment in term deposits (proceeds on maturity)	-	-
	<b>Net investing cash flows</b>	<b>(77)</b>	<b>(145)</b>
1.14	<b>Total operating and investing cash flows</b>	<b>103</b>	<b>(2,739)</b>
<b>Cash flows related to financing activities</b>			
1.15	Proceeds from issues of shares, options, etc. (net)	7,699	7,699
1.16	Proceeds from sale of forfeited shares	-	-
1.17	Proceeds from borrowings	-	-
1.18	Repayment of borrowings	(30)	(60)
1.19	Dividends paid	-	-
1.20	Other - Treasury shares purchased	(114)	(422)
	<b>Net financing cash flows</b>	<b>7,555</b>	<b>7,217</b>
	<b>Net increase in cash held</b>	<b>7,658</b>	<b>4,478</b>
1.21	Cash at beginning of quarter/ year to date	2,236	5,403
1.22	Exchange rate adjustments	(13)	-
1.23	<b>Cash at end of quarter</b>	<b>9,881</b>	<b>9,881</b>

## Payments to directors of the entity and associates of the directors

### Payments to related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.24	Aggregate amount of payments to the parties included in item 1.2	170
1.25	Aggregate amount of loans to the parties included in item 1.11	-
1.26	Explanation necessary for an understanding of the transactions	
	<u>1.24</u>	
	Directors and associates remuneration	170

## Non-cash financing and investing activities

2.1	Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows
	2,717,279 ordinary fully paid shares at \$0.318 per share have been issued to the Commonwealth Scientific and Industrial Organisation as the final repayment tranche of funds expended under joint research projects.
2.2	Details of outlays made by other entities to establish or increase their share in businesses in which the reporting entity has an interest

## Financing facilities available

Add notes as necessary for an understanding of the position.

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities	NIL	NIL
3.2	Credit standby arrangements	NIL	NIL

## Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

		Current quarter \$A'000	Previous quarter \$A'000
4.1	Cash on hand and at bank	9,881	2,236
4.2	Deposits at call	-	-
4.3	Bank overdraft	-	-
4.4	Other (provide details)	-	-
	<b>Total: cash at end of quarter</b> (item 1.23)	<b>9,881</b>	<b>2,236</b>

## Acquisitions and disposals of business entities

		Acquisitions (Item 1.9(a))	Disposals (Item 1.10(a))
5.1	Name of entity		
5.2	Place of incorporation or registration		
5.3	Consideration for acquisition or disposal		
5.4	Total net assets		
5.5	Nature of business		

## Compliance statement

1. This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act (except to the extent that information is not required because of note 2) or other standards acceptable to ASX.
2. This statement does give a true and fair view of the matters disclosed.

Sign here:



Date: 29 January 2016

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 wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
2. The definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report except for any additional disclosure requirements requested by AASB 107 that are not already itemised in this report.
3. **Accounting Standards.** ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.