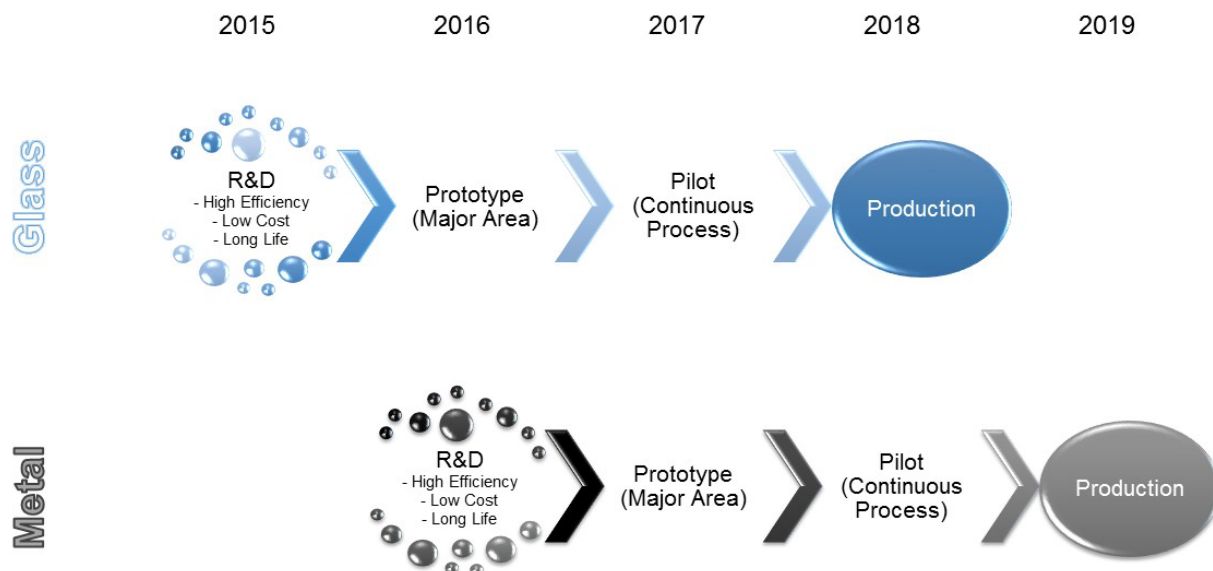


## Third Quarter FY 2016 – Quarterly Report & Appendix 4C

### Financial Quarter Highlights

- VDL Of The Netherlands and Dyesol Collaborate on Major Area Demonstration Prototype
- Quarterly TAB Milestone of 7% Perovskite Strip Cells on Metal Substrates Achieved
- Turkey Quietly Progressing
- Dyesol Joins ASX All Ordinaries Index

### Commercialisation Schedule



### Corporate and Operational

From behind the scenes, the corporate interest in 3<sup>rd</sup> Generation PV continues to grow and is at unprecedented levels. This presents opportunities and threats, which we manage accordingly. One observation is very clear – the incumbent 1<sup>st</sup> Generation manufacturers are feeling the heat and working hard to understand the nature of the disruptive, new energy source – Perovskite Solar Cells (PSC). In a circa \$50 billion solar PV market, manufacturers that lose their way risk oblivion, whilst the more adroit are exploring paths to transition. At best, we see tandem modules as intermediary and, at worst, a wasteful diversion. The long-term future is one where Perovskite Solar Cells make a significant impact as the next generation of PV. This is competition at its best and we are rising all the time to meet it.

The question of our progress in Turkey understandably continues to attract shareholder comments. We urge patience as we navigate our way through the processes involved in government-industry collaboration for a pioneer technology in a country with early-stage technology capability. Planning and approvals have

made good progress during the quarter, particularly as the government seeks to manage oversight of a large public investment in an unfamiliar technology. It is much the same the world over.

In the meantime, we have submitted an application for a large Australian Government grant (CRC-P) in collaboration with CSIRO and a large Australian building materials company. This is independent of ARENA and, thus, less subject to any of the travails that may occur pre and post federal election, although we assume a bipartisan support for our current activities. Surely, Dyesol is one of the lead companies the Government have in mind in its innovation statement that establishes the framework for better commercial exploitation of Australian hi-tech opportunities?

In parallel, joint manufacturing opportunities continue to improve in Korea, the U.K. and one or two individual European countries. Importantly, Dyesol remains at the visible world forefront of scale-up and commercialisation activity.

Operational efficiencies are running at historical highs. Recently, we upgraded our Aurora facility in Queanbeyan to improve clean room facilities and working conditions for our scientists and engineers. At low-cost, we have enhanced climate control and cleanliness. Implementation of ISO compliant clean room facilities for the preparation of high performance cells and modules is imperative. We have also added air conditioning, a staff breakout room and new offices for the Glass Group, which is well deserved given the old age of the building and the harsh weather conditions that sometimes are experienced there.

Management has also conducted a detailed cost analysis which has helped identify approximately \$250,000 of savings per annum out of working capital requirements. Major areas affected included travel, marketing promotions and bulk utility management et al. This has translated into the lowest ratio of Corporate to R&D expense in our near 11 years of listing and reflects a clear intention to (a) focus primarily on technology development and (b) maximise the funds recovery through R&D rebate.

Sales of materials are trending higher and profitable. We are, increasingly, the preferred materials supplier to academia and industry, including our major competitor.

## **Research and Development**

Dyesol has achieved its 3QFY2016 Technical Advisory Board milestone of producing a 7+% conversion efficiency on a steel substrate strip cell. This is (admittedly) a low-ball target and double digit efficiencies at scale are within our reach. Nevertheless, we consider this milestone an excellent substantiation of progress for the UK based Metals Group.

Metals are technically more challenging for a number of good (and confidential) reasons which, inter alia, relate to the opacity of metal. We have adopted a different material set and architecture from glass substrate strip cells, where we are currently generating strip cell efficiencies of 12% to 13%. The steel substrate architecture is seeking to eliminate any significant organic material content. Moreover, the current product development plans emerging from our activities at Solliance at Eindhoven, The Netherlands will allow for different substrates, including titanium and aluminium. This parallel metals focus is globally unique to Dyesol in PV development and, again, attracting strong leads and enquiry from global materials groups.

During the quarter we also staged an internal technology symposium or offsite. At the symposium we agreed technical focus, scale-up plans and technology milestones for the next 12 months and beyond. In particular, activities of the core R&D team are focused on the translation of technology from smaller modules to larger devices using common and affordable materials and processes.

## Manufacturing and Technical Collaborations

VDL Emerging Technology Group is having a measurable influence on our technical progress. The Major Area Demonstration (MAD) Prototype is currently nearing completion of the Feasibility and Functional Specification stage. This has been instructive in understanding all the considerations of scaling to prototype as the critical step prior to pilot line and mass manufacture. VDL is a world-class expert in sheet-to-sheet (S2S) and roll-to-roll (R2R) processing where precision engineering is an essential requirement. VDL ETG brings expertise from manufacturing development in the solar PV, auto and aerospace industries to the table.

During the quarter, there was also more general progress for spot-cell efficiencies where 22.1% conversion efficiency was accredited to KRICT at the Newport Laboratories. This is exciting because PSC is now achieving efficiencies comparable to CdTe and Silicon, yet at a much lower projected cost and with greater versatility and opportunity. Although these laboratory results are “unstabilised”, they demonstrate incredible potential.

Elsewhere, in Australia a Cooperative Research Centre Programme grant application has the possibility to launch Dyesol's technology locally as it proposes a wholly Australian commercialisation consortium where the government will financially assist prototype and pilot line development. Here, substrate and finished product manufacture have all local content and solutions. This is a diversification and risk mitigation strategy meant to run in parallel with other commercialisation proposals such as Turkey and have been in negotiation and planning for many months.

## Financials

The net operating monthly cash burn (Sec. 1.8) for the third quarter averaged \$790k. Net cash usage from operating and investing activities (Sec. 1.14) for the nine months period ending 31 March 2016, averaged \$572k per month with R&D tax rebates included.

At the end of the third quarter cash balances totalled \$7.5m.

### 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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# 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 MARCH 2016**

### Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (9 months) \$A'000
1.1	Receipts from customers	258	807
1.2	Payments for		
	(a) staff costs	(1,445)	(4,308)
	(b) advertising and marketing	(63)	(405)
	(c) research & development	(1,223)	(3,236)
	(d) leased assets	(159)	(488)
	(e) other working capital	(497)	(1,622)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	14	49
1.5	Interest and other costs of finance paid	(6)	(17)
1.6	Income taxes received/(paid) (R&D Tax rebate)	-	3,282
1.7	Other (R&D grant)	750	973
	<b>Net operating cash flows</b>	<b>(2,371)</b>	<b>(4,965)</b>

		Current quarter \$A'000	Year to date (9 months) \$A'000
1.8	Net operating cash flows (carried forward)	(2,371)	(4,965)
<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	(46)	(207)
	(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)	6	19
1.13	Other- Investment in term deposits (proceeds on maturity)	-	-
	<b>Net investing cash flows</b>	<b>(40)</b>	<b>(185)</b>
1.14	<b>Total operating and investing cash flows</b>	<b>(2,411)</b>	<b>(5,150)</b>
<b>Cash flows related to financing activities</b>			
1.15	Proceeds from issues of shares, options, etc. (net)	-	-
1.16	Proceeds from sale of forfeited shares	-	-
1.17	Proceeds from the issue of shares	-	7,699
1.18	Repayment of borrowings	(30)	(90)
1.19	Dividends paid	-	-
1.20	Other - Treasury shares purchased	-	(422)
	<b>Net financing cash flows</b>	<b>(30)</b>	<b>7,187</b>
	<b>Net increase in cash held</b>	<b>(2,441)</b>	<b>2,037</b>
1.21	Cash at beginning of quarter/ year to date	9,881	5,403
1.22	Exchange rate adjustments	20	20
1.23	<b>Cash at end of quarter</b>	<b>7,460</b>	<b>7,460</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	206
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	206

## 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
2.2	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	7,460	9,881
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>7,460</b>	<b>9,881</b>

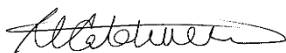
## Acquisitions and disposals of business entities

		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 April 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.