

# **Management Discussion and Analysis** For The Three Months Ended March 31, 2016

The following discussion and analysis as of May 30, 2016 should be read in conjunction with the Consolidated Financial Statements of Eguana Technologies Ltd. ("Eguana", or the "Company") and notes for the six months ended March 31, 2016.

Additional information relating to the Company including our Consolidated Financial Statements, Management Discussion and Analysis, news releases, and other required filing documents is available on SEDAR at <u>www.sedar.com</u> and on our website at <u>www.eguanatech.com</u>. The aforementioned documents are issued and made available in accordance with legal requirements but are not incorporated by reference into this MD&A.

# FORWARD LOOKING INFORMATION

This Management Discussion and Analysis ("MD&A,") especially but not limited to this section, contains certain forward-looking statements within the meaning of National Instruments and other relevant securities legislation relating but not limited to our operations, anticipated financial performance, business prospects and strategies. Forward-looking information includes statements that are not statements of historical fact and address activities, events or developments that the Company expects or anticipates will or may occur in the future, including such things as investment objectives and strategy, the development plans, the Company's intentions, results of operations, levels of activity, future capital and other expenditures (including the amount, nature and sources of funding thereof), business prospects and opportunities, construction timetable, extent of solar resources and future growth and performance. When used in this MD&A, statements to the effect that the Company or its management "believes", "expects", "expected", "plans", "may", "will", "projects", "anticipates", "estimates", "would", "could", "should", "endeavours", "seeks", "predicts" or "intends" or similar statements, including "potential", "opportunity", "target" or other variations thereof that are not statements of historical fact should be construed as forward-looking information. These statements reflect management's current beliefs with respect to future events and are based on information currently available to management of the Company. The Company believes the expectations reflected in such forward-looking information are reasonable, but no assurance can be given that these expectations will prove to be correct and such forwardlooking information should not be unduly relied upon.

In particular we include: statements on the future dynamics and size of the solar PV and energy storage market and segments thereof; statements concerning our expectations of future relationships as well as the size of the market for power electronics; statements concerning our sales; and statements concerning factors which we believe may be relevant in assessing whether our plans are achievable.

Our conclusions concerning the size of the addressable solar PV and energy storage markets are based on certain critical assumptions and general conclusions concerning the future of these industries the market segmentation, and emerging market dynamics.

Our assumptions and the conclusions that we draw represent forward-looking information. While valuable in assessing our future prospects, forward-looking information is not a guarantee of future performance and involves a number of risks and uncertainties, only some of which are described herein. Many factors could cause the Company's actual results, performance or achievements, or future events or developments, to differ

materially from those expressed or implied by the forward-looking information.

Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward-looking statements prove incorrect, actual results, performance or achievement may vary materially from those expressed or implied by the forward-looking information contained in this MD&A. These factors should be carefully considered and readers are cautioned not to place undue reliance on forward-looking information, which speaks only as of the date of this MD&A. All subsequent forward-looking information attributable to the Company herein is expressly qualified in their entirety by the cautionary statements contained in or referred to herein. The Company does not undertake any obligation to release publicly any revisions to forward-looking information contained in this MD&A to reflect events or circumstances that occur after the date of this MD&A or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

# BUSINESS OVERVIEW: HISTORY, VISION AND STRATEGY, AND CORE BUSINESS

A detailed overview of Eguana's business, including a summary of our history, business strategy, industry outlook, and core business is provided in the MD&A for the financial year ended September 30, 2015 which may be found, together with all our public documents, at www.sedar.com.

# **EXECUTIVE SUMMARY**

Distributed Energy Storage continues to have explosive growth potential in the renewable energy sector. Eguana Technologies continues to be recognized as one of the market leaders in low voltage power conversion and control measured by system design flexibility, power conversion efficiency and installation simplicity. The Eguana AC Battery and Bi-Direx product lines are standardized, globally patented and commercially certified for distribution in major markets.

Technology development continues to be a critical focus area, and the Company has generated and filed five new distinct inventions with the United States Patent and Trademark Office. Intellectual Property is one of the Company's core assets, and it is embedded in our culture to continue to add to our portfolio, which now includes 16 patents and pending patents globally.

Strategically focused to deliver Eguana products in the United States, Europe, Japan, and Australia within calendar 2016 Eguana has achieved double digit design wins spread across each major market with applications including Utility Grid Services, Electric Vehicle charging, Solar + Storage, and Commercial Peak Shaving applications.

The Company is on track with business development activities to achieve its objective to take a 30% market share position in major markets. Outlined are the strategic levers and the key milestones executed to deliver the Company objective.

Reposition Bi-Direx as the leading power controls solution for the European market:

- Eguana executes development contract with battery manufacturing subsidiary of German automotive company. Global opportunity with the potential to deliver Bi-Direx sub-assembly system sales of \$20M cdn.
- Eguana executes early shipments to Spain, will be highlighted in ees (electrical energy storage) award nominated product with Spanish customer at InterSolar Munich.

Support AC Battery channel partners to increase residential solar + storage in US markets:

• Eguana becomes the first integrated storage system approved by Hawaiian Electric with partner E-Gear LLC leading to three consecutive increasing orders. Hawaiian markets are expected to be the US growth driver in 2017 with E-Gear's market indication over the next 18 months of \$18M cdn.

Demonstrate AC Battery grid management features with utilities:

 Maui Electric Utility selects Eguana/E-Gear AC Battery solution to enable additional solar systems to be connected to the power grid. Utility owned and operated systems also increase capacity and distribution efficiency. Become leading power control provider in the Australian and Japanese markets:

- Eguana executes sales and marketing agreement with the Itochu Corporation to focus on global distribution beginning in Australia and Japan. Initial shipments completed into Australia with early market indication of system sales reaching \$14M cdn) across 2017.
- Itochu continues advanced discussions with top Japanese electronics company for Commercial building application. Initial market indication is \$5.1M cdn across 2017.

The market indication numbers are provided to Eguana from our partners and are forward-looking in nature. Forward-looking information is not a guarantee of future performance and involves a number of risks and uncertainties. The Company believes the expectations reflected in this forward-looking information is reasonable, but no assurance can be given that these expectations will prove to be correct and such forwardlooking information should not be unduly relied upon.

#### MANAGEMENT DISCUSSION OF SECOND QUARTER RESULTS

#### Operations

Second quarter orders increased from \$228,376 in the first quarter to \$821,592 in the second quarter however we exited the quarter with \$645,320 in back log as our supply chain activities ramp to meet the increasing orders. The increase was driven through integrated AC system sales in Hawaii and California. Product Sales revenue for the quarter was \$176,272 with a positive gross margin 9.1% and an adjusted gross margin of 3.4%. Margins were adjusted for \$10,159 in inventory that was consumed in the quarter after being impaired at yearend. The positive margin was also achieved on low volume AC Battery prototype and demonstration sales as we continue to build our customer base and channels in the US market.

Operating costs for six months ending March 31, 2016 were \$1,858,215 which is flat to the same time period prior year of \$1,885,019 notwithstanding significant changes in our quarterly volumes along with completing the initial products for the US market and additional legal cost related to the customer/supplier disputes. A significant contribution to the operating costs in the quarter went to supporting sales and marketing which resulted in an order backlog of \$645,320.

- Operating costs were \$104,602 down \$45,103 (30.1%) from \$149,705 in Q2 2015. Included in this amount are salaries and benefits of employees directly allocated to this function, direct costs incurred to support manufacturing and supply chain activities and reallocation of the COO salary to G&A in the current fiscal year. Product development costs remained consistent at \$230,127 in Q2 2016 from \$232,277 in Q2 2015. Included in product development costs are the costs associated with the product development process, market analysis in support of new product definition, salaries and benefits of our entire engineering group, and a portion of our CTO's compensation.
- Our investment in selling and marketing has remained consistent to prior quarter at \$208,090; however, this represents an increase of \$116,990 or 128.4% over the same quarter in prior year. In FY 2016 the company started business development activities in the United States and Japan along with Europe and have increased resources for execution. Included in these costs are salaries and benefits of personnel employed in marketing and customer account relationships, travel, costs of trade shows and a portion of our CTO's salary.
- Second quarter G&A decreased 6.7% to \$363,030 from \$389,225 in Q2 2015. Decreases were driven mainly by a reduction in accounting fees, lower employee compensation and a one-time cost for OTC filings in FY 2015. This was offset by legal costs associated with settlements noted in our annual financial report. G&A expense consists primarily of salaries, (including the value of stock options for all employees) employee benefits and overhead expenses that are not otherwise allocated to the earlier categories, including those related to corporate maintenance charges, occupancy, all professional fees, investor relations fees and travel costs.

#### **Outlook and Priorities**

Bi-Direx has been established across the industry as a leader in the residential power ratings and one of the only power control systems standardized and certified for major markets. The technology meets all grid connection regulations for these markets, is commercialized, certified, and field tested and proven with thousands of installations in Europe and the United States.

We remain on track with our 2016 activities to be a top 3 provider of power control systems in our targeted channels. The Company measures this objective by achieving a 30% market share in system installations in each market. We are continuing to focus our resources on US market expansion, European volume recovery, and business development activities in Asia and Australia.

#### United States

Over the next 18 months, we will execute our three-part strategy in the United States:

Support our residential AC Battery channel partners to deliver increasing sales to PV installers beginning in Hawaii and California.

Establish our commercial AC Battery product line for fleets in the small commercial demand charge and EV charging segments.

Promote and demonstrate our AC Batteries grid management features with utilities nationwide that show an interest in distributed energy storage.

Our first priority is to take a significant share of the Hawaiian market in 2016, primarily through our partnership with E-Gear LLC. E-Gear is a Hawaii based integrator who has developed an advanced Energy Management Controller that completes the energy storage solution alongside LG Chem's lithium ion battery modules and Eguana's AC Battery.

Hawaii has both primary solar storage market drivers: (i) high electricity costs driving customer selfconsumption, which requires energy storage similar to Germany; and (ii) grid instability due to high residential solar penetration. Two ownership models – customer owned and utility owned – are also emerging and our solution is currently being deployed under both models.

In January, our AC Battery became the first storage system approved for grid interconnection in Hawaii by the local utility Hawaiian Electric Company. This enabled the system to be deployed under Hawaii's new 'customer grid-supply' and 'customer self-supply' tariffs. Following initial market growing pains with new application processes, and a permitted installation backlog from the prior net metered applications, new program sales began showing traction in March primarily through Hawaii's #1 rooftop PV installer, Hawaii Energy Connection who is now achieving a greater than 30% storage attachment rate with solar. Product training and sales processes are now established and E-Gear, who has expanded its efforts to offer the solution to all leading rooftop PV installers in the State, is poised to be the market leader.

In March, Hawaiian Electric's subsidiary Maui Electric selected the Eguana/E-Gear solution to enable additional net metering customers to be connected to the power grid. Maui Electric will own and operate the energy storage systems installed on customer homes however connection will be completed on the utility side of the meter. In this way, the utility increases the carrying capacity and efficiency of the grid while maintaining the ability to honor net metering obligations to the home or system owner. Once deployed, operation of the storage systems will be optimized to provide services that increase grid stability on the island grid and to provide a template for further utility deployments as the island moves toward its goal of 100% renewable energy by 2030.

Beyond Hawaii, Eguana now has installed systems in six different communities in southern California undergoing customer evaluation. California is expected to be the next market to show significant growth and recent proposed changes to the state's SGIP program carve out funds specifically targeted at residential installations. Motivations in California range from backup power, to time of use optimization, to homebuilders and utilities preparing for the state's net zero energy home mandate that takes effect starting in 2020. To our knowledge the AC Battery is the only integrated solution that covers the full range of value to the home owners, operators, and utilities with the same standardized product.

The Company also had design wins with intermediate storage solutions for electric vehicle charging and delivered its first evaluation units post quarter-end. Electric vehicle charging networks are ideal platforms through which to aggregate distributed energy resources as the electrical infrastructure is already committed, and energy storage helps reduce demand peaks from electric vehicle charging. Eguana's productized AC Battery is the ideal format for the network integrators with its outdoor rated, open controls interface, and certified plug and play platform.

# Europe

Our expectation during 2016 to re-establish Bi-Direx as the leading power controls solution for the European market is on track with volume orders expected in the fall of 2016. We continue to follow our OEM strategy based on our Bi-Direx sub-assembly model and integration into partner products as part of the development cycle. During the quarter the company entered into a development contract with the battery manufacturing subsidiary of a global German automotive company. Development has remained ahead of schedule throughout the quarter and acceptance testing has been confirmed for the week of May 30<sup>th</sup>. The Company expects volume sales to commence post acceptance with general availability in September of this year and significant global growth across calendar year 2017. European opportunities have also expanded beyond Germany, the Company has been developing customers with a regional focus – particularly in Spain and the UK – and the Bi-Direx platform will be on display at the European InterSolar show in June The complexity of energy storage products as compared to solar and the varying economic drivers and regulatory requirements from market to market provide a competitive advantage to local integrators. Eguana's configurable Bi-Direx platform provides these integrators with the stable platform and easy integration on which they can build cost competitive solutions that are optimized for local requirements.

# Japan and Australia

In 2015, the Company executed a non-exclusive sales and marketing contract with the Itochu Corporation, one of Japan's largest trading houses with investments across the battery production chain, to globally promote and sell the AC Battery and Bi-Direx platforms. Priorities have been focused on the two emerging markets Australia and Japan where Itochu has been developing opportunities both commercially and in the residential markets. The commercial building market in Japan will see significant growth in 2017 where competition in the newly deregulated electricity market is driving the need for differentiated energy service offerings from electricity retailers starting in April 2016. Itochu is currently in advanced negotiations with a leading Japanese electronics company with the expectation of volume sales by calendar year end.

The Australian residential energy storage market is poised to become the fastest growing global segment based on the high penetration of rooftop PV combined with high electricity prices and rising demand charges due to an overbuild of transmission and distribution infrastructure over the past several years. Utilities are expected to play a significant role in residential energy storage deployments, more so than elsewhere, this is coupled with strong end customer demand for energy storage products. Eguana began delivering residential product into Australia post-quarter end, and expects to close on additional design wins through the remainder of the fiscal year, primarily through the Itochu partnership.

### MANAGEMENT DISCUSSION OF FINANCIAL RESULTS

#### Summary of Significant Accounting Policy Choices

Our significant accounting policies are disclosed in note 4 of the annual audited consolidated financial statements.

#### Net Loss and Comprehensive Loss

Our net loss for the quarter ended March 31, 2016 was \$1,321,482 a decrease of \$6,804 over a loss of \$1,328,286 in the same quarter ended March 31, 2015. Excluding the non-cash items, the net loss for the quarter ended March 31, 2016 was \$859,393 and the Company is maintaining a flat cash flow from our operating model in FY 2016.

Non-cash items affecting the Net Loss were:

	March 31,	December 31,	March 31,
	2016	2015	2014
		\$	\$
Operating activities			
Net loss	(1,321,482)	(1,198,652)	(1,328,286)
Amortization of capital assets and			
development costs	24,412	23,456	14,095
Amortization of deferred lease inducement	(3,900)	(3,900)	(3,900)
Inventory (write up) write down	(10,159)	64,321	-
Share-based payments	-	35,512	6,400
Warranty provision	2,348	4,035	22,000
Finance costs	432,001	154,944	174,341
(Gain) loss on debentures and embedded de	-	18,433	(78,132)
Investor relation expense	25,657	18,192	-
Unrealized foreign exchange loss (gain)	(8,270)	4,826	4,638
	(859,393)	(878,833)	(1,188,844)

#### Sales and Gross Margin

Total revenue from product sales and services decreased from \$1,545,575 in Q2 fiscal 2015 to \$176,272 in Q2 fiscal 2016. This was due to the loss of the Company's major customer in Q4 2015. Gross margins at Q2 fiscal 2016 were \$16,118 due to a net write-up of inventory of \$10,159. This represents a significant improvement from the gross loss of \$371,979 in the same quarter last year, which was hindered by a non-reoccurring retrofit cost of \$321,068 related to products shipped in FY 2014.

Summary of Quarterly Results

	20	16	2015				2014	
	Qtr 2	Qtr 1	Qtr 4	Qtr 3	Qtr 2	Qtr 1	Qtr 4	Qtr 3
Sales	176,272	228,376	1,367,075	1,552,853	1,545,575	1,541,505	921,639	477,419
Net (loss) Per share	(1,321,482)	(1,198,652)	(4,587,408)	(1,376,971)	(1,328,286)	(1,496,142)	(3,070,391)	(1,536,377)
– basic and diluted	(0.01)	(0.01)	(0.05)	(0.02)	(0.02)	(0.03)	(0.06)	(0.05)

# Liquidity and Capital Resources

Liquidity, as measured by working capital, at the end of the quarter was deficient by \$3,817,053. The company recognized a cash flow deficiency from operations for the six-month period ended March 31, 2016 of \$1,921,066.

The Company is currently in a dispute with our prior customer Sonnenbatterie as a result of the cancellation of a supply contract. A claim has been prepared to recover 1,479,332 Euros (\$2,178,139 CAD) for unpaid invoices and interest along with the option to claim an additional 903,584 Euros (\$1,366,568 CAD) for European inventories purchased on Sonnenbatterie's direction. Litigation is inherently uncertain and while our legal counsel advises that we have a strong case, we are carrying the receivable on our books at near zero.

Sonnenbatterie in return has made warranty claims against the company related to first generation 3-phase Comfort series product. We believe that this claim is without merit and that the failures are tied directly to a fundamental system failure in the Sonnenbatterie Comfort design for which Sonnenbatterie was solely responsible. These failures were documented and pointed out to Sonnenbatterie at that time and the Company advised not to ship systems without rectification of the system design flaws. The system issues noted were corrected in the new generation Eco product line that utilizes the identical Bi-Direx product as Comfort. There are no outstanding power controls claims with respect to the second-generation product. Legal counsel advises the Company that the Sonnenbatterie decision to ship 3-phase Comfort in spite of warnings voids any warranty claim.

The Company's former contract manufacturer submitted a claim against Eguana related to the cancellation of the Sonnenbatterie supply contract for 1,534,000 Euros (\$2,320,000 CAD) in an Alberta court. The Company is disputing 799,000 Euros (\$1,174,530 CAD) of the amount the contract manufacturer is seeking for recovery of a prior deposit paid and contested invoices for units produced without purchase orders. The Company has filed a counter claim against the contract manufacturer. The Company has recorded the undisputed amount and has filed a counter claim against the contract manufacturer. The expectation of the Company is to resolve the liability from the Sonnenbatterie receivable.

Financial liabilities	< 1 Year	1-3 Years	Thereafter	Total
Accounts payable and accrued liabilities	3,791,450	-	-	3,791,450
Energy Northwest obligation	145,600	-	-	145,600
Government grant obligation	30,296	-	-	30,296
Debentures	872,494	840,531	-	1,713,025
Other liabilities	52,530	131,948	487,604	672,082
Total	4,892,370	972,479	487,604	6,352,453

# Off Balance Sheet Items

The Company has no off-balance sheet financial commitments other than the commitments for operating leases for premises, a purchase order with its former supplier in Europe and consulting, service agreements.

# Related Party Transactions

The Company had the following related party transaction:

	Three months ended		Six months ended	
	2016	2015	2016	2015
	\$	\$	\$	\$
General and administrative	54,000	97,085	108,000	204,372
Product research and development	11,591	38,624	23,182	71,648
Marketing	27,046	-	54,091	-
Operations	12,000	49,500	24,000	99,000
Total	104,637	185,209	209,273	375,020

Financing costs of \$2,209 and \$7,792 for the three month and six month periods ended March 31, 2016 (2015 - \$3,534 and \$28,071) related to the debentures held by key personnel and directors are included in the statement of loss. Interest payments amounted to \$408 and \$899 (2015 - \$1,426 and \$6,764) for the three month and six month periods ended March 31, 2016.

Included in accounts payable and accrued liabilities is \$257,412 (September 30, 2015 - \$235,998) due to directors and members of key management personnel.

During the quarter, the Company paid \$36,319 to its former CEO as part of a settlement agreement and incurred \$27,484 of accretion as the obligation matures.

# Disclosure of Outstanding Share Data

As at May 30, 2016 167,856,952 common shares are outstanding. In addition, common share purchase warrants, representing the right to acquire 16,375,152 common shares at an average exercise price of \$0.29 per share. The Company has employee stock options outstanding entitling the holders thereof to acquire up to 5,128,813 common shares of which options to acquire common shares, up to 2,021,730 had vested. The weighted average exercise price of the vested options is \$0.28 per share.

# Financing Costs

Amortization of the financing costs associated with the standby equity agreement with DHTV was \$275,566 as compared to \$29,525 for the same quarter the previous year. The increase was due to the cancelation of the line of credit resulting in the acceleration of the amortization of the deferred financing asset. Accretion of the obligation to repay government contributions to research and development was \$1,602 compared to \$(5,980) for the quarter ended March 31, 2015. In Q2 2015 a change in FV assumptions resulted in a favorable accretion expense. Interest on the Energy Northwest obligation was \$2,522 for the quarter ending March 31, 2016, compared to \$4,133 for the same quarter in the prior year. The decrease is the result of the contract expiring and the Company being potentially liable for eight minimum payments of \$7,000 US plus interest of 20%.

The debentures are adjusted on a quarterly basis to reflect the Company's current forecast and the result that has on the amounts payable under the agreements. The forecast has not changed from yearend. Interest on bank debt was \$0 for the quarter ending March 31, 2016 as compared to \$4,667 for the same period in 2015. This decrease is due to of the Company repaying the line of credit.

Accretion on other liabilities was \$52,432 for the period ended March 31, 2016. The liabilities did not exist at March 31, 2015.

# Foreign Exchange

Our contract manufacturing is priced in U.S. dollars and in Euros, as is the custom in the electronics industry and our sales are priced in Euros and US dollars. The Company is exposed to fluctuations in the Canadian dollar value relative to the U.S. dollar and the Euro when margins from the sales are negative and the Company is required to finance the losses through use of Canadian funds. We do not hedge these exchange risks and have no plans to do so until our volumes are more stable.

# Risks and Uncertainties

Our risks and uncertainties are detailed in the annual MD&A filed on SEDAR on January 29, 2016 and have not materially changed since that time.