EDISON

Scale research report - Update

2G Energy

Advanced materials technology

24 May 2018

Participating in the green energy revolution

2G Energy continues to diversify its activities, expanding export markets and developing service revenues, so that it is less exposed to changes in the regulatory environment for renewables and CHP in Germany. This supported a 9% y-o-y increase in FY17 sales to a record €189.4m, and EBIT margin rise from 3.2% to 3.9%, both ahead of management expectations.

Export growth drives record sales in FY17

Group sales increased by 9% y-o-y to a record €189.4m, beating management guidance of €180m. This was driven by exports and services revenues and improved project management, which led to faster throughput and a high level of CHP completions at the year-end. Exports rose by 34% y-o-y to represent 42% of all CHP sales. Services grew by 13% y-o-y to 34% of total sales. Personnel costs rose in line with sales, reflecting an increase in service staff in Germany. Other operating expenses increased by 11%, reflecting higher logistics costs associated with exports and higher sales commissions. The improvement in EBIT margin also beat management's guidance of 3.0-3.5%. Management proposes raising the dividend by 5% to €0.42/share. Net cash increased by €5.8m to €9.8m, despite the €3.7m investment in CHP plant for use by the in-house leasing operation and c €1.0m in the vehicle fleet and purchase of tools and IT equipment.

Strong start to FY18

New order intake during Q118 rose by more than 90% to €54.7m, resulting in a €130.5m order book at end Q118 (€106.0m at end Q117). This includes sales for natural gas systems for France, Japan and Italy. Management noted it is "very confident" of achieving €180-210m sales during FY18 at an EBIT margin of 3.5-5.5%. This margin uplift is attributable to rising proportions of Service revenues and process improvements arising from the "Lead-to-Lean" initiative.

Valuation: Fairly priced following recovery

The share price dropped to a low of €17.30 at the end of December due to investor concerns about the impact of having to pay the full EEG levy in Germany from January 2018. The size of the order book, supported by exports, has helped to allay those concerns and the share price has returned to its June 2017 peak. A comparison against established boiler manufacturers shows 2G Energy trading at a small discount to the mean for the sample with respect to EV/EBITDA multiples (6.1x vs 7.5x year 1 mean) and a small premium with respect to P/E ratios (14.7x vs 14.5x year 1 mean) suggesting that the shares are fairly priced at current levels.

Consensus estimates

Year end	Revenue (€m)	PBT (€m)	EPS (€)	DPS (€)	P/E (x)	Yield (%)
12/16	174.3	5.4	0.40	0.40	54.0	1.9
12/17	189.4	7.2	1.11	0.42	19.5	1.9
12/18e	196.7	9.6	1.47	0.41	14.7	1.9
12/19e	207.3	11.6	1.78	0.43	12.1	2.0

Source: Company data, Bloomberg

Price	€21.6
Market cap	€96m

Share price graph

Share details

Code	2GB
Listing	Deutsche Börse Scale
Shares in issue	4.4m
Last reported net cash as at end December 2017	€9.8m

Business description

2G Energy is a leading international manufacturer of highly efficient combined heat and power plants (CHP). These are deployed in the housing industry, agriculture, commercial and industrial companies, public energy utilities and municipal and local government authorities.

Bull

- Decentralised CHP solutions reduce CO2 emissions by improving conversion efficiency.
- Remote control capability improves service margins and supports flexibilisation.
- Remote control capability aids integration into virtual power plants.

Bear

- Uptake affected by green regulation eg termination of waiver of EEG levy.
- Economics depends on spark spread.
- Low free-float (46.7%).

Analyst

Anne Margaret Crow +44 203 077 5700

industrials@edisongroup.com

Edison profile page

Edison Investment Research provides qualitative research coverage on companies in the Deutsche Börse Scale segment in accordance with section 36 subsection 3 of the General Terms and Conditions of Deutsche Börse AG for the Regulated Unofficial Market (Freiverkehr) on Frankfurter Wertpapierbörse (as of 1 March 2017). Two to three research reports will be produced per year. Research reports do not contain Edison analyst financial forecasts.

FY17 financials demonstrate benefit of strategy

Internationalisation delivers FY17 revenue growth

Group sales increased by 9% y-o-y to €189.4m. Exports rose by 34% y-o-y to represent 42% of all CHP sales and 35% of total sales, putting the company on track to be a global supplier of CHP systems and solutions. This substantial increase is the consequence of expanding the direct sales network, for example opening an office in France during FY16, supporting distribution partners through the my.2-g.com portal and investment ensuring that 2G's CHP plants are compliant with the environmental and operating standards in place in its target geographies. The strongest performers were the US at €17.0m sales and the UK at €12.7m, although here sales declined year-on-year because of the reduction in feed-in tariffs in March 2017.

The importance of developing international sales was highlighted by the 7% y-o-y reduction in German CHP sales. Demand for natural gas systems was severely affected, first by the uncertainty regarding the tendering process for 1-50MW systems, which was not resolved until the second half of the year, and then by uncertainty regarding the waiver of the EEG (Renewable Sources Energy Act) levy. Until the end of 2017, operators of CHP plants only had to pay 40% of the EEG levy (ie 6.9c/kWh) on self-generated electricity. This exemption terminated at end-2017. Discussions are currently taking place between the Federal Ministry of Economics and the EU, with the German government aiming to bring most of the old regulation back into force. Meanwhile, although CHP plants are viable without the subsidy, the economics are less favourable. There was a pick-up in sales of biogas plants related to "flexibilisation" projects facilities, but this was insufficient to make up the shortfall. "Flexibilisation" is the term for replacing older biogas plants which operate at a fairly constant output with higher output plants that can produce a variable output to balance any shortfall in electric power generated from wind or solar sources, which are inherently variable. While the replacement plants have a larger nameplate capacity, they are not always running at this level, so the total amount of power they output over an extended period will be the same as the plant they replace. The German Biogas Association notes that 248MW of capacity related to flexibilisation was installed during 2017, a 35% uplift on the previous year. 2G significantly expanded its share of this market segment (from 17% to 26%) because it already has a large installed base of older plants that need upgrading, plus the control systems embedded in its CHP generators are highly suitable for flexible operation as part of a network of generation options.

Revenues from the services and spare parts business were 34% of the total (33% in FY16). These revenues are linked to the size of the installed base, giving additional protection from potential downturns in demand for CHP equipment in Germany. They also provide a mechanism for removing some of the seasonality in sales.

Favourable outlook supported by order book

New order intake during Q118 rose by more than 90% to €54.7m, taking the Q118 order book total to €130.5m vs €106.0m in Q117. Most of the orders in Germany relate to biogas-fired CHP plants. Elsewhere, 2G is beginning to receive orders for natural gas installations as the markets, where initially demand was only for biogas plants, mature. For example, during FY17 2G received its first major order for natural gas project in France worth c €3.5m, for completion in H218; its first order for a natural gas system in Japan, €2.0m for a 4MW output installation and its single largest CHP order to date from Italy, which is for a 1.2MW natural gas-fired CHP plant.

Progress against strategic objectives

Product development

2G continues to develop differentiated product. For example in August it introduced ultra-low emission variants of systems ranging from 20kWe to 240kWe which emit 90% less nitrogen oxide (NOx) than the standard accepted limit of 500mg/Nm3 @ 5% O2. This is important, as although diesel-powered vehicles are generally the focus of media attention, emissions from power generation equipment also contribute to the air pollution problem and operators of CHP plants are obliged to turn off generation equipment if it is not compliant with local emissions legislation. The new variants meet the stringent requirement of the TA Luft air pollution control regulations in Germany and the limits set by both the Building Research Establishment Environmental Assessment Method (BREEAM) and the new Greater London Authority (GLA) Sustainable Design and Construction guidelines. They are also in accordance with the UK Code for Sustainable Homes and the Clean Air Act.

In FY17 2G started work on the QUIRINUS virtual power plant project in the state of North Rhine-Westphalia. The transition to a decarbonised economy is also a transition to a decentralised generation model, where large centralised power plants are replaced by multiple biogas plants, wind turbines and solar installations, some of which may only be roof-sized. QUIRINUS connects the multiple generation sources to a central location which analyses the data provided by each individual generation source, calculates the total electricity supply and matches it to electricity demand by bringing additional generation sources onstream as required. The project runs for three years and has a budget of c €6m. Half of the budget is being provided by the participating companies including utility companies Infrawest, regionetz and RWE Power, network operator New Netz and energy storage provider Stornetic and half from the EU and North Rhine-Westphalia.

Digitalisation

2G launched an online replacement parts shop ‘shop.2-g.com’ earlier this year marking a further stage in management’s Digitalisation project. This portal offers customers a large selection of original and manufacturer-tested replacement parts. The 2G shop is freely accessible in Germany and Austria, including to customers that have not operated 2G CHPs to date. Another aspect of the digitalisation strategy is the power plant interface associated with each CHP system. This sends real-time data on operating parameters to the company’s central service centre in Germany. The information enables engineers to deal with around 70% of all error messages generated by the equipment without having to send a field engineer to the site. This helps get CHP equipment back in operation more quickly and saves costs. The ability to provide service remotely is particularly important as 2G expands its international footprint.

Lean philosophy

As part of its ‘Lead to Lean’ lead project, 2G has worked with an external consulting firm on a "Terminleitstufen" (deadline guide steps) concept over the past months with the objective of improving all purchasing and production processes and reduce seasonal peaks and troughs in production. The new processes will be gradually implemented during 2018. Further lean philosophy measures have also been initiated to improve production processes, enabling shorter delivery times, cost reductions and quality enhancements.

Peer valuation

A comparison of prospective peer multiples for companies providing equipment for generating renewable energy yields limited information because few of the companies have reached commercial revenues and even fewer are generating meaningful profits. 2G Energy is trading on multiples that are lower than our sample mean, which is to be expected given that it has been generating substantial revenues and profits for several years.

The share price dropped from a peak of €22.96 in June 2017 to a low of €17.30 at the end of December 2017 because of investor concerns about the effect of the EEG levy. The size of the order book has helped to allay those concerns and the shares are trading at levels close to their previous peak. At this level, a comparison against established boiler manufacturers shows 2G Energy trading at a small discount to the sample mean for year 1 and year 2 EV/EBITDA multiples, a slight premium with respect to the year1 P/E sample mean and a small discount to the year 2 P/E sample mean. This suggests that the shares are fairly priced at current levels although we note potential for an uplift if management is able to raise EBIT margins above the levels shown in the consensus estimates so they are closer to those for Generac Holdings. We note that management raised the dividend by 5% to €0.42, representing a 1.9% yield at current levels.

Exhibit 1: Peer multiples

Name	Market cap (€m)	EV/Sales FY1 (x)	EV/Sales FY2 (x)	EV/EBITDA FY1 (x)	EV/EBITDA FY2 (x)	P/E FY1 (x)	P/E FY2 (x)	EBIT margin FY1
AFC ENERGY	45	7.9	2.6	-	-!	(10.0)	(12.5)	-
BALLARD POWER SYSTEMS	478	4.4	3.5	(96.1)	83.0	(41.6)	(225.7)	-
CERES POWER HOLDINGS	168	26.7	19.1	(13.6)	(16.4)	(16.1)	(18.1)	-
ELECTRO POWER SYSTEMS	107	4.5	2.8	27.1	11.7	92.2	21.5	8.0%
ENERTIME	7	1.3	0.7	(23.5)	-	(13.8)	(29.6)	-
FUELCELL ENERGY	131	2.4	1.7	(10.9)	(18.1)	(2.8)	(4.2)	-
HYDROGENICS CORP	108	1.8	1.3	(110.6)	19.1	(34.6)	63.1	-
ITM POWER	137	33.5	9.0	(12.8)	(20.8)	(21.8)	(41.1)	-
NORDEX	1,037	0.5	0.4	10.0	7.1	(49.4)	83.4	-
PLUG POWER	386	3.3	2.5	(36.9)	71.0	(9.4)	(15.4)	-
REDT ENERGY	58	4.1	0.9	(6.7)	9.5	(6.2)	(26.9)	-
SENVION	762	0.5	0.4	9.1	5.4	(1,300.0)	14.3	2.0%
SFC ENERGY AG-BR	83	1.3	1.1	23.8	11.7	51.4	20.2	3.5%
VESTAS WIND SYSTEMS A/S	12,454	0.9	0.9	6.8	6.6	15.8	15.0	10.3%
Renewable energy equipment mean		**2.7**	**3.4**	**15.4**	**10.2**	**53.1**	**36.2**	
DEUTZ AG	951	0.5	0.5	5.3	4.8	17.8	13.0	3.9%
GENERAC HOLDINGS	2,598	2.2	2.1	11.3	11.0	13.2	13.0	16.2%
RAFAKO	110	0.3	0.2	6.0	4.5	12.4	8.4	3.6%
Conventional boilers mean		**1.0**	**1.0**	**7.5**	**6.8**	**14.5**	**13.0**	
2G ENERGY	97	0.4	0.4	6.1	5.2	14.9	12.3	5.1%

Source: Bloomberg. Note: Prices at 18 May 2018. Grey shading indicates exclusion from mean.

Edison is an investment research and advisory company, with offices in North America, Europe, the Middle East and AsiaPac. The heart of Edison is our world-renowned equity research platform and deep multi-sector expertise. At Edison Investment Research, our research is widely read by international investors, advisers and stakeholders. Edison Advisors leverages our core research platform to provide differentiated services including investor relations and strategic consulting. Edison is authorised and regulated by the Financial Conduct Authority. Edison Investment Research (NZ) Limited (Edison NZ) is the New Zealand subsidiary of Edison. Edison NZ is registered on the New Zealand Financial Service Providers Register (FSP number 247505) and is registered to provide wholesale and/or generic financial adviser services only. Edison Investment Research Inc (Edison US) is the US subsidiary of Edison and is regulated by the Securities and Exchange Commission. Edison Investment Research Pty Limited (Edison Aus) [46085869] is the Australian subsidiary of Edison. Edison Germany is a branch entity of Edison Investment Research Limited [4794244]. www.edisongroup.com

DISCLAIMER
Any Information, data, analysis and opinions contained in this report do not constitute investment advice by Deutsche Börse AG or the Frankfurter Wertpapierbörse. Any investment decision should be solely based on a securities offering document or another document containing all information required to make such an investment decision, including risk factors.

Copyright 2018 Edison Investment Research Limited. All rights reserved. This report has been commissioned by Deutsche Börse AG and prepared and issued by Edison for publication globally. All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report. Opinions contained in this report represent those of the research department of Edison at the time of publication. The securities described in the Investment Research may not be eligible for sale in all jurisdictions or to certain categories of investors. This research is issued in Australia by Edison Investment Research Pty Ltd (Corporate Authorised Representative (1252501) of Myonlineadvisers Pty Ltd (AFSL: 427484)) and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. The Investment Research is distributed in the United States by Edison US to major US institutional investors only. Edison US is registered as an investment adviser with the Securities and Exchange Commission. Edison US relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. As such, Edison does not offer or provide personalised advice. We publish information about companies in which we believe our readers may be interested and this information reflects our sincere opinions. The information that we provide or that is derived from our website is not intended to be, and should not be construed in any manner whatsoever as, personalised advice. Also, our website and the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. This document is provided for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. Edison has a restrictive policy relating to personal dealing. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report. Edison or its affiliates may perform services or solicit business from any of the companies mentioned in this report. The value of securities mentioned in this report can fall as well as rise and are subject to large and sudden swings. In addition it may be difficult or not possible to buy, sell or obtain accurate information about the value of securities mentioned in this report. Past performance is not necessarily a guide to future performance. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (ie without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision. To the maximum extent permitted by law, Edison, its affiliates and contractors, and their respective directors, officers and employees will not be liable for any loss or damage arising as a result of reliance being placed on any of the information contained in this report and do not guarantee the returns on investments in the products discussed in this publication. FTSE International Limited ("FTSE") © FTSE 2018. "FTSE®" is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited under license. All rights in the FTSE indices and/or FTSE ratings vest in FTSE and/or its licensors. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and/or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
295 Madison Avenue, 18th Floor
10017, New York
US

Sydney +61 (0)2 8249 8342
Level 4, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia