Guinness Alternative Energy Fund

A high conviction pureplay equity fund managed by Edward Guinness investing in quoted companies in the alternative energy sector.

INVESTMENT COMMENTARY – review of the third quarter 2018

Manager	**Edward Guinness** (from launch in December 2007)
Fund size	**$13.5m**
AUM under strategy	**$23.0m**

Aim

Guinness Alternative Energy Fund gives investors pureplay exposure to global alternative energy markets.

The Fund is managed for capital growth and invests in companies in the solar, wind, hydro, geothermal, biofuels, biomass and energy efficiency sectors.

Investment case

We believe that over the next twenty years the alternative energy sector will benefit from the combined effects of:

- Higher energy prices driven by population growth, developing world industrialisation and diminishing fossil fuel supplies
- Falling costs of alternative energy assets as the technology improves
- Energy security concerns
- Climate change and environmental issues

The Guinness Alternative Energy team has been managing alternative energy portfolios since 2007.

The Fund is a long-only equity portfolio of around 30 equally-weighted positions.

Normally the Fund is invested in companies with a market capitalisation over $100 million.

Quarterly commentary

The Guinness Alternative Energy Fund was down 1.82% in the third quarter of 2018. This compared to a fall in the Wilderhill Clean Energy Index of 0.22%, a rise in the Wilderhill New Energy Global Innovation Index of 1.26% and an increase in the MSCI World Index of 5.10%. Year to date the fund is down 6.29% which is ahead of the Wilderhill New Energy Index (down 8.46%) and behind the Wilderhill Clean Energy Index (down 1.51%). The fund's performance was driven by weakness in the fund's grid, independent power producer and renewables equipment manufacturer holdings, while the fund's battery related holdings performed well.

The following factors supported alternative energy stocks over the quarter:

- Robust growth in global electric vehicle demand, particularly in China and Norway
- Increasing demand for batteries with lower Lithium prices
- Higher oil prices

The following factors weighed down on alternative energy stocks:

- China's change in solar support mechanism
- Concerns about global trade
- Weak Chinese stock markets
- Concerns about low pricing for renewable electricity generated from the increased prevalence of auctions

Performance contribution

Top 5 performing stocks	Q3 2018
Acuity Brands Inc	35.67%
Canadian Solar Inc	18.46%
China Singyes Solar Technologies Holdings Ltd	13.21%
Nibe Industrier AB	11.43%
LG Chem Ltd	10.11%

Bottom 5 performing stocks	Q3 2018
Boer Power Holdings Ltd	-44.59%
Daqo New Energy Corp	-26.53%
Good Energy Group PLC	-24.89%
JinkoSolar Holding Co Ltd	-21.79%
China Datang Corp Renewable Power Co Ltd	-15.45%

Source: Bloomberg

Solar

Equipment manufacturers (27.25% of the portfolio)

The wind equipment manufacturers were marginally positive for the portfolio while the solar manufacturers detracted from fund performance. Vestas continues to execute well and is steadily improving its margins. TPI Composites the blade manufacturer was slightly down over the quarter but is we think well positioned for future continued growth as companies move to more outsourcing of blades. Jinko Solar and Daqo were among the weakest stocks in the portfolio as concerns over solar module and polysilicon pricing levels increased. Both are well positioned to emerge stronger from this period as lowest cost manufacturers with balance sheets that benefit from equity raises earlier in 2018. Canadian Solar was a strong contributor as they executed well and have support from a possible management buyout. Sunpower and First Solar were slightly weak in the quarter, despite both being well placed to profit from Trump's tariff regime notwithstanding a lower module price environment.

Independent Power Producers (24.88%)

The IPPs were relatively flat for the quarter, with the Chinese IPPs slightly weaker on the back of slowing Chinese markets in general rather than anything stock specific. Recent policy changes have improved their cash recovery outlook despite making near term project growth more challenging. Ormat recovered somewhat after its volcano eruption related issues in the first half of 2018 and Iniziative Bresciane slid slightly amid weaker third quarter hydrology and thin trading volumes. Despite a good set of first half earnings numbers, Good Energy suffered from low expectations for the second half as a result of higher wholesale electricity prices in the UK that will squeeze margins.

Building Efficiency (13.40%)

Building Efficiency was a bright sub sector for the fund this quarter. Acuity Brands had a strong quarter as earnings exceeded expectations and LED installation momentum improved. Nibe has been one of the strongest long term holdings in the portfolio and has gained a dominant position in the global heatpump market from which it continued to benefit. Johnson Controls and Kingspan were slightly up and down respectively with both posting strong earnings results.

Grid (10.96%)

All of the fund's grid related investments were weak in the third quarter. Boer Power continues to weaken as it takes longer than expected to turn around. Wasion suffered from weak China markets, while Schneider Electric and Prysmian were relatively flat over the quarter.

Electric Vehicles (6.84%)

Electric vehicle numbers continued their relentless rise. The fund has two EV related holdings in Sensata and Ricardo. Sensata continues to execute well, with analysts' earnings expectations rising and was up slightly over the quarter. Ricardo disappointed in their trading update on the back of weak UK sales, but overall the business remains within the range of their guidance.

Battery (3.73%)

The fund's battery holding is in LG Chem, which performed well over the quarter on the back of good earnings numbers.

Other (7.14%)

The fund's only holding in the biofuels sector, Cosan, is a Brazilian biofuel distributor. Their business was held back by weak sugar prices, which they are addressing by switching more business into the distribution and production of ethanol.

China Singyes had a good quarter as a result of high levels on solar installations in China in the first half of 2018. We note that the company is now suspended despite a balance sheet that appeared to be sound as it found refinancing of debt to be challenging in the third quarter.

Outlook

Equipment manufacturers (27.25% of the portfolio)

The fund is now about one quarter invested in equipment manufacturers, which divide into two wind turbine manufacturing related stocks and six solar manufacturing related stocks. The market for renewable equipment has opportunities for companies that are differentiated in product or that have market leading cost structures and a reputation for quality.

The two wind turbine holdings are Vestas and TPI Composites. Vestas is the leading global wind turbine manufacturer and has a strong balance sheet. TPI Composites manufacture composite blades for the large turbine manufacturers and work under multi year framework contracts that give good visibility on earnings.

The global wind market is driven by China installations. These installations are dominated by Chinese domiciled manufacturers and are highly price competitive. The non China wind market has grown from 34GW in 2015 to a forecast 45GW in 2019 and 43GW in 2020. This growth is balanced between North America, Europe and the rest of Asia which gives it a broad base and also reflects higher installations for offshore turbines. Turbine pricing remains competitive but the market remains rational.

Global Annual Wind Additions (GW)	2015	2016	2017	2018e	2019e	2020e
World	66	51	49	56	69	67
Asia Pacific	36	26	22	26	33	32
North America & Caribbean	10	10	8	11	14	14
Europe	14	11	12	10	10	11
Central & South America	3	4	3	4	4	2
Middle East & North Africa	1	0	0	1	1	1
Rest of the world	1	0	1	0	0	1
Offshore	36	1	5	4	6	7

Source: Bloomberg core countries included regionally. Note: Sorted by 2018 forecast installations.

The fund holds 6 solar positions. First Solar is the world's leading thin film manufacturer and as such has a cheaper and technologically differentiated product.

Global Annual Solar Additions (GW)	2015	2016	2017	2018e	2019e	2020e
World	56	75	98	94	115	130
Asia Pacific	35	47	74	59	60	65
North America & Caribbean	8	14	11	11	16	17
Europe	9	6	6	7	14	12
Central & South America	1	1	2	3	2	1
Middle East & North Africa	1	1	3	5	8	9
Rest of the world	3	6	2	8	14	25

Electricity Generation (24.88%)

The funds independent power producers can be broadly split between three technology specific investments in a biomass, a geothermal and a hydro electricity generator and five Chinese independent power producers.

Albioma, the predominantly biomass electricity generator benefits from monopoly generation assets in predominantly francophone locations. These allow is to generate steady cashflows and it trades at a reasonable multiple. Ormat Technologies has a claim to being the only major independent geothermal company. As well as owning generation assets, it provides development and installations services to other geothermal generators. Management have a strong track record and have a long track record in growing revenues and profitability in a sustainable fashion. Iniziative Bresciane operates a number of small hydro schemes in Northern Italy and benefits from regulated return levels and attractive concession agreements. It is subject to high annual variance in rainfall year to year. The thematic idea behind these investments is that they are attractive cash generating companies today with specific growth and rerating potential.

The five Chinese independent power producers are all strong cash generators, with government backed revenue streams. They trade on low financial multiples, reflecting slow payment by government and curtailment of energy generation and have relatively high debt levels as befits utility generation assets. Both payment timing and curtailment are improving by government decree, and the rate or return of the underlying assets provides good potential for both an earnings and a rating uplift.

The fund holds a small position in Good Energy which is a UK green utility, who own a portfolio of renewable generation assets and are building a strong UK customer base. The company has a differentiated proposition that should allow it to grow its customer base and leverage the independent renewable generation assets being constructed across the UK.

Grid (10.96%)

The Funds Grid holdings comprise one cable company (Prysmian), a metering company (Wasion) and two providers of grid equipment (Schneider and Boer Power). The reason for holding the cable and grid equipment companies is to benefit from the ongoing investment requirement in the transmission and distribution grid that increasing levels of renewable generation require. Prysmian is struggling to digest its General Cable acquisition but ultimately has a dominant market position, cashflow generation potential and a low valuation. Schneider is a diversified business that scores well in our screening process and is selling into a growing market. Boer as a Chinese distributor should be well placed for Chinese commercial and industrial growth, but has struggled with a restructuring and low visibility on earnings. Wasion is well placed to benefit from the growth in mandated Chinese metering upgrade programmes.

Electric Vehicles (6.84%)

The Fund is positioned to benefit from the transition to electric vehicles that we believe will be faster than is widely anticipated. However, we are also conscious of the potential for value traps in this area where bringing pricing down to the point where it is lower than that of internal combustion engine vehicles is critical. Sensata is a major potential beneficiary of the switch to electric vehicles as it is a supplier of many of the much increased number of sensors that are required in electric vehicles. Ricardo provides consultancy to the major car OEMs. Our thesis behind owning the stock is that it is a relatively capital light levered way to play the growth in electric vehicles. In times of transition, large companies have a higher tendency to use consultancies both to facilitate meaningful change and to leverage the experience that the consultancy may have gained from their peers.

Battery (3.73%)

As a corollary to the interest in electric vehicles, there is a large opportunity in the battery sector. LG Chem as one of the leading battery material providers and cell manufacturers is well placed to grow and its battery division is expected to move to profitability over the next two years.

Other (7.24%)

The fund's holding in Cosan, a Brazilian ethanol company is positioned as an investment in the growth of the Brazilian economy and continued growth in ethanol consumption behind that. Brazil has for a long time had ethanol as a material source of energy for transportation and the production of tit from sugarcane is lower cost and provides for more stable margins as the sugarcane is not cost efficient to transport long distances.

China Singyes is a Chinese installer of solar assets, with a portfolio of operating assets on its balance sheet. We expect Chinese demand to return to strong growth and China Singyes is positioned to benefit from lower solar module prices.

Portfolio changes

There were no active changes to the portfolio. One holding, Mytrah Energy, was bought out by its chairman in Q2 2018. The offered price was at a 64% premium to the closing price at the time of announcement. We have yet to replace the holding.

Edward Guinness
Guinness Alternative Energy Fund

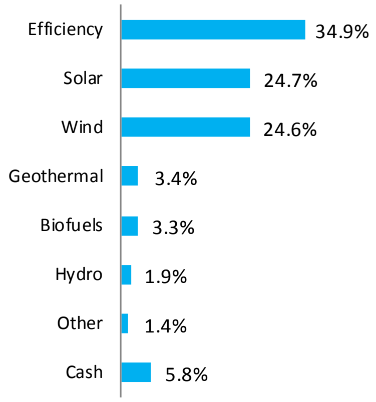
PORTFOLIO

30/09/2018

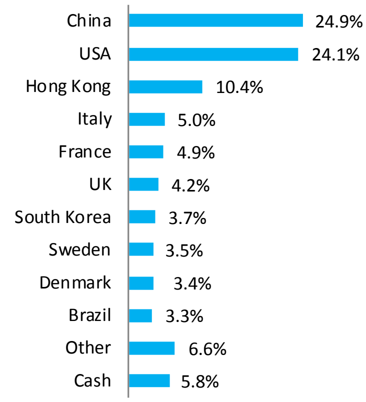
Fund top 10 holdings

Sunpower	3.9%
China Singyes Solar Tech	3.8%
Xinyi Solar	3.8%
LG Chem	3.7%
China Datang Renewable Power	3.7%
China Suntien Green Energy	3.7%
China Longyuan Power	3.6%
TPI Composites	3.5%
Ricardo	3.5%
Schneider Electric	3.5%
% of Fund in top 10	36.8%
Total number of stocks in Fund	30

Sector analysis



Geographic allocation



PERFORMANCE

30/09/2018

Annualised % total return from launch* (USD)

Fund	-12.66%
WilderHill Clean Energy Index	-13.70%
WilderHill New Energy Global Innovation Index	-6.26%

Discrete years % total return (USD)

	Sep '14	Sep '15	Sep '16	Sep '17	Sep '18
Fund	2.6	-30.1	1.1	9.1	-4.2
WilderHill Clean Energy Index	0.7	-35.3	-5.1	22.2	7.3
WilderHill New Energy Global Innovation Index	14.9	-16.0	7.3	17.8	-4.5

Cumulative % total return (USD)

	3 months	Year-to-date	1 year	3 years	5 years	From launch*
Fund	-1.8	-6.1	-4.2	5.7	-24.2	-77.0
WilderHill Clean Energy Index	-0.2	-1.5	7.3	24.4	-18.9	-79.6
WilderHill New Energy Global Innovation Index	1.3	-8.5	-4.5	20.7	16.5	-50.2

RISK ANALYSIS

30/09/2018

Annualised, three years, in USD	Wilderhill Clean Energy Index	Fund
Alpha	0	-0.57
Beta	1	0.69
Correlation	1	0.79
R squared	1	0.63
Volatility	14.82	16.07

*Fund launch date: 19/12/2007.

Performance data based on the Fund's 'E' share class (OCF: 1.24%), except periods starting prior to 02/09/2008, which are based on a composite of the Fund's 'A' share class (OCF: 1.49%) from Fund launch (19/12/2007) until the launch of the Fund's E class (02/09/2008).

Source: Bloomberg and Financial Express, bid to bid, (inclusive of all annual management fees but excluding any initial charge or redemption fee), gross income reinvested. Performance would be lower if initial charge and/or redemption fee were included.

Past performance should not be taken as an indicator of future performance. The value of this investment and any income arising from it can fall as well as rise as a result of market and currency fluctuations.

All returns stated here are in US dollars; which is the Fund's base currency. Returns in different currencies may be higher or lower as a result of currency fluctuations.

Important information and risk factors

Issued by Guinness Asset Management Limited, authorised and regulated by the Financial Conduct Authority.

This report is primarily designed to inform you about Guinness Alternative Energy Fund. It may provide information about the Fund's portfolio, including recent activity and performance. It contains facts relating to the equity markets and our own interpretation. Any investment decision should take account of the subjectivity of the comments contained in the report.

This document is provided for information only and all the information contained in it is believed to be reliable but may be inaccurate or incomplete; any opinions stated are honestly held at the time of writing, but are not guaranteed. The contents of the document should not therefore be relied upon. It should not be taken as a recommendation to make an investment in the Fund or to buy or sell individual securities, nor does it constitute an offer for sale.

Risk
The Guinness Alternative Energy Fund is an equity fund. Investors should be willing and able to assume the risks of equity investing. The value of an investment and the income from it can fall as well as rise as a result of market and currency movement, and you may not get back the amount originally invested. Details on the risk factors are included in the Fund's documentation, available on our website. Shareholders should note that all or part of the fees and expenses will be charged to the capital of the Fund. This will have the effect of lowering the capital value of your investment.

Documentation
The documentation needed to make an investment, including the Prospectus, the Key Investor Information Document (KIID) and the Application Form, is available from the website www.guinnessfunds.com , or free of charge from:-

- the Manager Link Fund Manager Solutions (Ireland) Ltd, 2 Grand Canal Square, Grand Canal Harbour, Dublin 2, Ireland; or,
- the Promoter and Investment Manager: Guinness Asset Management Ltd, 14 Queen Anne's Gate, London SW1H 9AA.

Residency
In countries where the Fund is not registered for sale or in any other circumstances where its distribution is not authorised or is unlawful, the Fund should not be distributed to resident Retail Clients.
NOTE: THIS INVESTMENT IS NOT FOR SALE TO U.S. PERSONS.

Structure & regulation
The Fund is a sub-fund of Guinness Asset Management Funds PLC (the "Company"), an open-ended umbrella-type investment company, incorporated in Ireland and authorised and supervised by the Central Bank of Ireland, which operates under EU legislation. If you are in any doubt about the suitability of investing in this Fund, please consult your investment or other professional adviser.

Switzerland
The prospectus and KIID for Switzerland, the articles of association, and the annual and semi-annual reports can be obtained free of charge from the representative in Switzerland, Carnegie Fund Services S.A., 11, rue du Général-Dufour, 1204 Geneva, Switzerland, Tel. +41 22 705 11 77, www.carnegie-fund-services.ch. The paying agent is Banque Cantonale de Genève, 17 Quai de l'Ile, 1204 Geneva, Switzerland.

Singapore

The Fund is not authorised or recognised by the Monetary Authority of Singapore ("MAS") and shares are not allowed to be offered to the retail public. The Fund is registered with the MAS as a Restricted Foreign Scheme. Shares of the Fund may only be offered to institutional and accredited investors (as defined in the Securities and Futures Act (Cap.289)) ('SFA') and this material is limited to the investors in those categories

Telephone calls will be recorded and monitored.