Guinness Atkinson
Alternative Energy Fund Update
August 2016

We provide comment on the second quarter of 2016 for Alternative Energy

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Quarterly commentary

The second quarter of 2016 showed signs of improving fundamentals that have not yet been matched by a recovery in stock prices. Fears about China's economy have not subsided. Brexit concerns were shrugged off by the equity markets.Brexit does not materially affect the fundamentals of the alternative energy sector since the UK forms only a small percentage of global renewable energy demand. We now believe that interest rates will be held lower for longer – with the US media speculating over a rate cut from the Federal Reserve – which would make project finance cheaper by lowering the levelized cost of electricity of alternative energy sources. The increase in the oil price from $41.46/bbl at the end of March to $48.33/bbl at the end of the quarter boosted confidence in the energy sector as a whole, although we would argue that its direct impact on alternative energy stock economic fundamentals is limited.

Performance contribution

Brazilian ethanol investment Cosan continued its rally through the second quarter, returning 18.71%.Cosan continues to outperform Brazil's Ibovespa index.

Canadian wind power developer, owner and operator Boralex performed strongly, rising 21.57% in the second quarter due to strong performance from existing plant, new plant beginning to contribute and greater visibility over its pipeline of planned projects.

Solar sector weakness was reflected in the performance ofSunpower, First Solar and Trina Solar that were down 30.66%, 29.20% and 22.13% over the quarter respectively.

Boer Power was down 43.92% over the quarter. The company missed its sales estimates in the first quarter by 18% and added debt to its balance sheet. Since then, analysts have continually expressed doubts on Boer Power reaching previous growth estimates. We continue to see Boer Power as poised to capture value from increased demand for energy management and energy efficiency systems in China and believe the current price reflects analysts' concerns.

CarmanahTechnology was down -26.00%. The company is undergoing some restructuring to focus its business more on light emitting diodes (LED) and the internet of things (IoT) through its signalling and solar-LED lighting divisions.

Outlook

Solar

We continue to believe that equities in the photovolataic (PV) sector are undervalued while the PV sector itself looks stronger than ever before.

The solar sector was a Chinese success story in the first half of 2016. China is estimated to have installed 22GW in the first six months of the year – more than triple that installed in the same period in 2015. The Chinese government cut its feed-in tariff by approximately 10% for solar installations on June 30, 2016, creating a surge of installations prior to that date. Analysts' expectations were significantly lower than the 22GW reported. Further installations of 6-8GW are expected in the second half of 2016 (Bloomberg). The global solar market is typically stronger in the second half of the year, which we expect to be reflected by stronger sales outside China for the solar module manufacturers

The United States remains a long-term growth driver in the solar sector with the extension of the Investment Tax Credit (ITC). Utility-scale system costs are coming down more in-line with those in Europe. There is significant potential for falls in rooftop solar installation prices as US installations have much higher non-module costs than European installations. The US is expected to become the second largest market after China in 2016.

US election

If Hillary Clinton wins the presidential elections in the United States and follows through with her campaign promise to have 140GW of PV installed in the United States at the end of her potential term, global demand will meaningfully increase over the next 5 years. Achieving 140GW of PV installed in the United States would require around 50GW more than is currently forecast to be installed globally, leading to a 13% increase in total global PV demand. This would further strengthen the fundamentals of the solar PV sector while potentially turning sentiment positive.

We expect Japan to be the third-largest solar market in 2016. To date, according to Bloomberg only 25% of the projects approved have been constructed, which provides a strong backlog for future installations despite reductions in the feed-in tariffs and grid constraints.

India set a 100GW solar target by 2022. Although the country is unlikely to achieve the target in full, 2015 already saw a doubling in annual installed capacity from the previous three years, according to Bloomberg. It is likely that India will continue to increase its installed base of solar PV capacity at the current rate until 2022.

On the manufacturing front, solar PV equipment manufacturing capacity is slowly increasing, with Chinese government pressure on companies not to expand too rapidly. New manufacturing lines are replacing obsolete lines. Solar companies continue to lower the cost of production and expect to be able to maintain margins despite falling prices.

Wind

We perceive good opportunities in wind farm operators and developers who can benefit from the steady growth of the sector, while having concerns about the valuation levels of a number of the wind turbine manufacturers, notwithstanding their strong current positioning.

In 2015, 63GW of wind was installed globally. Of this, 30.5 GW was installed in China, which is ahead of the 24GW that China needs to install annually to meet its target of 250GW of cumulative installed capacity by 2020, according to the Global Wind Energy Council (GWEC). China provided unexpected support for renewable energy projects in China by mandating minimum percentages of power produced that must be accepted by the grid. Project operators now sell a higher percentage of the electricity generated, which is a positive for Chinese wind farm owners. While the outlook for growth in annual installations in

China is relatively flat, the returns available for installers with falling turbine prices, improving turbine performance and lower financing costs make China an attractive country for wind assets.

The United States wind sector has the potential to witness an unprecedented period of steady growth following the extension of the Production Tax Credit which has historically lapsed roughly every other year, leading to major variation in annual wind installation. The next four years have the potential to allow wind developers to make proper long-term plans and to optimise the installations that they make.

Europe continues to see steady growth in annual installations, which have increased from 9GW in 2008 to 14GW in 2015, according to Bloomberg. Growth is expected to slow over the next five years, as a number of countries, notably the UK, have made it harder to build new onshore wind installations.

Energy Efficiency

The first half of 2016 saw significant mergers and acquisitions activity in the energy efficiency sector, continuing the trend of larger companies wanting to benefit from the opportunities presented by energy efficiency and energy management systems. The technology giant Oracle acquired Opower while NibeIndustrier (held) acquired the HVAC solutions manufacturing division LSB Industries. We expect the investment opportunity in energy efficiency and energy management companies to gain further recognition in the future.

Biofuels

The recovery in the oil price has been a positive for ethanol and biodiesel manufacturers. The outlook for regulatory support for increased ethanol in the US remains unlikely. Use of biofuels in Latin America remains strongest, and the economics of refining from sugar beet remain attractive.

Geothermal

The long-term prospects for geothermal are that it is likely to remain a relatively niche source of energy generation, limited to areas with good geothermal resource potential. The returns from projects that are completed are attractive as there is good visibility on output expectations and the plant can be operated as baseload or to provide flexibility. The “game changer” for geothermal would be the maturing of hot rock technology, that would facilitate geothermal facilities in a much broader range of locations, but this technology still has to be developed before it is economically competitive.

Hydro

The opportunities for large-scale hydro development are limited, but hydroelectric generating companies with operating large-scale assets are well placed to offer both baseload and flexible power generation. This creates specific company investment opportunities. There is a growth opportunity in small-scale hydro installations, where the long life of the assets and predictable output drive investor returns.

Storage

Storage has always been a potentially attractive investment area, and it is now beginning to become investible. The cost of batteries is falling dramatically, 35% in 2015 alone according to Bloomberg, as investment is made in larger-scale facilities and innovative battery materials. Batteries have multiple potential roles, with grid-scale storage to provide ancillary services and electric vehicles (EVs) the two applications that are both imminent and provide a significant growth story. The investment opportunities are in battery manufacturers and within the other portfolio companies, a number of whom are developing battery applications as an enhancement to their alternative energy technology.

The investment potential is being recognised by many energy incumbents. Total announced its acquisition of Saft – a pure-play battery manufacturer – in May 2016. Only days later Engie acquired a majority stake in Green Charge Networks, an energy storage company that optimises energy consumption for its customers using battery storage.

Norway released figures* showing that EVs made up over 20% of new car sales in H1 2016 and 18% in all of 2015, demonstrating how quickly uptake can increase with the right support. Most car manufacturers are developing electric vehicles to satisfy emissions requirements. The high number of battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) expected to be launched over the next five years, combined with increased government support through grants and infrastructure investments, gives a high probability that a number will find favour with consumers and lead to increased uptake.

*Source: EVObession, ZSW-BW (Centre for Solar and Hydrogen Research Baden-Würtemberg

Energy Storage in the Portfolio

In the second quarter we increased our exposure to the electricity storage market. We added a position in Saft, a French battery manufacturer, which has subsequently been taken over by Total SA at a 40% premium. We have also taken a position in Tianneng Power, a Chinese battery manufacturer whose products predominantly power electric bicycles and small, low-speed electric vehicles. Tianneng's small lithium battery division has grown rapidly in recent years and is likely to supply batteries for electric vehicle manufacturers in the future, supported by a strong existing battery business.

Energy storage is becoming increasingly important for companies across the portfolio. Enphase and SolarEdge have partnered with battery companies to install batteries alongside solar power systems. Enphase is using a lithium ion battery with lithium iron phosphate chemistry for its home storage system to be rolled out in late 2016. SolarEdge has made its storage software system compatible with Tesla's Powerwall and other commercially available batteries. Johnson Controls manufactures li-ion batteries for electric vehicles. Sunpower has won projects which include solar with storage solutions, while FirstSolar invested in Younicos – a Berlin-based battery energy management system provider - as part of a $50m funding round. We estimate that one-third of our holdings are exposed to storage as part of their business.

Portfolio changes

We bought a position in Tianneng Power International (HK: 819) to gain exposure to the increased energy storage market in China. We also purchased SaftGroupe (FP: SAFT) to gain exposure to the energy storage market globally and will replace the position once Total finalises the acquisition of SaftGroupe. We also acquired positions in Schneider Electric (FP: SU) and Johnson Controls (NYSE: JCI) to expand our energy efficiency holdings and increase liquidity. Schneider Electric is a France-based energy management systems and power automations specialist. Johnson Controls is a US-based energy efficiency solutions provider and lithium-ion battery manufacturer.

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We sold the fund's position in Renesola (NYSE: SOL) due to high debt levels and the prospect of oversupply in the solar market squeezing margins. We also sold positions in Greentech (DC: GES) and Futuren (FP: FTRN) due to underperformance and liquidity concerns.

Fund Performance (Q2 2016)

The Guinness Atkinson Alternative Energy Fund was down 5.71% for the second quarter of 2016. This compared to a fall in the Wilderhill Clean Energy Index of 4.93%, a fall in the Wilderhill New Energy Global Innovation Index of 2.39% and an increase in the MSCI World Index of 1.20%.

Total Returns as of 6/30/16

Total returns	**Q2 2016**	**YTD 2016**	**CY 2015**	**1 year**	**5 year**	**From launch (3/31/06)**
Guinness Atkinson Alternative Energy Fund	-5.71%	-12.87%	-11.40%	-25.00%	-11.71%	-12.94%
Wilderhill New Energy Index	-2.39%	-6.98%	1.51%	-14.79%	-2.82%	-3.50%
Wilderhill Clean Energy Index	-4.93%	-19.20%	-10.35%	-29.29%	-14.47%	-15.11%
MSCI World Index	1.20%	1.02%	-0.28%	-2.16%	7.59%	7.27%

Calendar year returns	**2011**	**2012**	**2013**	**2014**	**2015**
Guinness Atkinson Alternative Energy Fund	-42.53%	-15.20%	61.54%	-14.29%	-11.40%
Wilderhill New Energy Index	-38.91%	-4.14%	55.70%	-2.16%	1.51%
Wilderhill Clean Energy Index	-50.50%	-17.37%	58.54%	-16.93%	-10.36%
MSCI World Index	-4.99%	16.56%	27.43%	5.58%	-0.28%

CY = Calendar Year

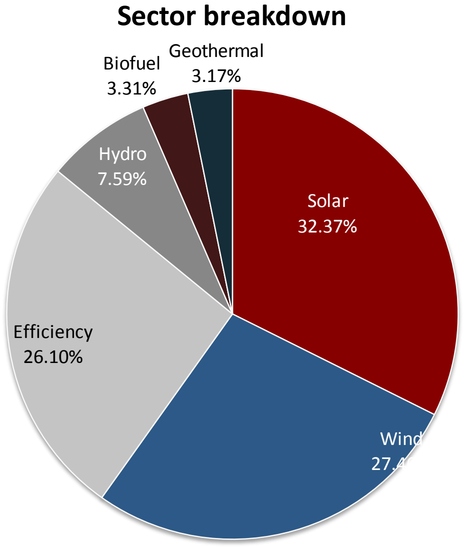
Expense Ratio: 1.98% (net); 2.31% (gross)

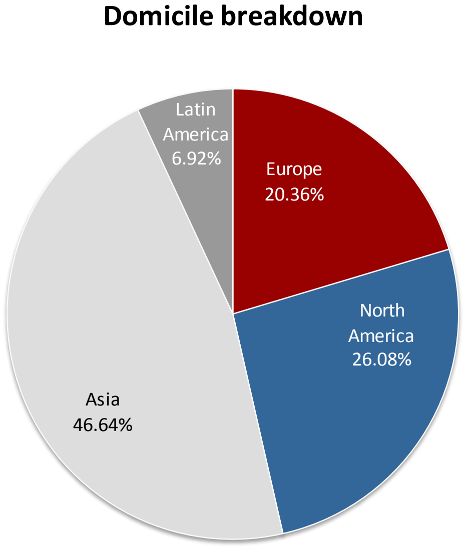
All return figures represent average annualized returns except for periods of one year or less, which are actual returns.

Performance data quoted represents past performance; past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.gafunds.com or calling 800-915-6566.

The Advisor has contractually agreed to reduce its fees and/or pay Fund expenses (excluding Acquired Fund Fees and Expenses, interest, taxes, dividends on short positions and extraordinary expenses) in order to limit the Fund's Total Annual Operating Expenses to 1.98% through June 30, 2017. To the extent that the Advisor waives its fees and/or absorbs expenses to satisfy this cap, it may seek repayment of a portion or all of such amounts at any time within three fiscal years after the fiscal year in which such amounts were waived or absorbed, subject to the 1.98% expense cap.

Fund Holdings





Top 10 holdings as of 30/06/16	% of assets
GOOD ENERGY GROUP PLC	4.53%
INIZIATIVE BRESCIANE-INBRE S	4.01%
JOHNSON CONTROLS INC	3.91%
HUANENG RENEWABLES CORP-H	3.67%
CIA ENERGETICA DE-SPON ADR	3.65%
SUNPOWER CORP	3.55%
ENPHASE ENERGY INC	3.43%
BORALEX INC -A	3.42%
JA SOLAR HOLDINGS CO LTD-ADR	3.41%
XINYI SOLAR HOLDINGS LTD	3.39%

Thank you,

Edward Guinness and Samira Rudig *August 2016*

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Commentary for our views on global energy and Asia markets is available on our website. Please click here to view.

Opinions expressed are subject to change, are not guaranteed and should not be considered investment advice.

This information is authorized for use when preceded or accompanied by a prospectus for the Guinness Atkinson Alternative Energy Fund. The prospectus contains more complete information, including investment objectives, risks, charges and expenses related to an ongoing investment in The Fund. Please read the prospectus carefully before investing.

The Fund invests in foreign securities which will involve greater volatility and political, economic and currency risks and difference in accounting methods. The risks are greater for investments in emerging markets. The Fund is non-diversified meaning its assets may be concentrated in fewer individual holdings than diversified funds. Therefore, the Fund is more exposed to individual stock volatility than diversified funds. The Fund also invests in smaller companies, which will involve additional risks such as limited liquidity and greater volatility. Current and future portfolio holdings are subject to risk. The Fund's focus on the energy sector to the exclusion of other sectors exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors.

Fund holdings and/or sector allocations are subject to change at any time and are not recommendations to buy or sell any security.

The Ibovespa Index is an index of about 50 stocks that are traded on the São Paulo Stock, Mercantile & Futures Exchange.

The WilderHill New Energy Global Innovation Index (NEX) is a modified dollar weighted index of publicly traded companies which are active in renewable and low-carbon energy, and which stand to benefit from responses to climate change and energy security concerns.

The WilderHill Clean Energy Index (ECO) is a modified equal dollar weighted index comprised of publicly traded companies whose businesses stand to benefit substantially from societal transition toward the use of cleaner energy and conservation.

The MSCI World Index (MXWO) is a capitalization weighted index that monitors the performance of stocks from around the world.

One cannot invest directly in an index.

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