



Alternative Energy Brief
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Welcome to the November 2008 Guinness Atkinson Alternative Energy Brief.

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Barack Obama Alternative Energy Policies

With Obama now elected the 44th President of the United States we think it makes sense to review his alternative energy policies. Exact detail is somewhat sparse, but the high profile which his energy plan has had in his campaign means the new administration will be quite motivated to prioritise legislation to demonstrate that they are delivering on their promises. Such new policies could represent a marked step forward in support for alternative energy in the US and may provide a long term framework within which an industry that can survive without subsidies can emerge.

The main headlines from his pre-election “New Energy for America” paper are as follows:

- 1. To invest \$150 billion over the next ten years to catalyze private efforts to build a clean energy future.**

The money is earmarked to “accelerate the commercialization of plug-in hybrids, promote development of commercial scale renewable energy, encourage energy efficiency, invest in low emissions coal plants, advance the next generation of biofuels and fuel infrastructure and begin transition to a new digital electricity grid.”

This would represent a \$15 billion a year commitment to the industry. To put this number in perspective the Bush Administration had invested \$10 billion into alternative fuels from 2001 to January 2006, and the recent Energy Extenders Bill which included an 8 year extension to the investment tax credit was calculated to cost \$17 billion.

The exact mechanism for this expenditure remains to be seen. We expect support for the wind, solar, hydro and geothermal sectors for electricity generation. Energy efficiency is likely to include improved insulation, support for ground and air source heatpumps, and incentives for lower fuel consumption. Carbon capture and sequestration is likely to be investigated further along with clean coal technologies. We expect support for biofuels mainly to manifest itself in enthusiasm for next generation biofuels which deliver much higher yields per acre and do not compete with global food production. We expect the development of infrastructure for natural gas vehicles, as promoted by T. Boone Pickens, to initially develop for vehicle fleets. Most importantly, Obama has recognized the need for huge investment in the electricity grid. This will enable increased use of intermittent electricity generation like wind and solar.

- 2. Within 10 years save more oil than we currently import from the Middle East and Venezuela combined.**

Today, 20% of the oil that the US consumes comes from the Middle East so this provides an easily measurable but challenging target.

Biofuels should play a part in this, but given the recent realization that biofuels have contributed to rising food prices, we expect biofuels support to be cautious. We note that at current commodity prices ethanol refining from corn is not economical. However, encouraging low cost imports from Brazil by removing the import tariff would help the US achieve this target. As mentioned above, we expect that next generation biofuels such as cellulosic ethanol will provide a better platform to move away from imports and we expect support for conversion of vehicles to natural gas to help further here.

The US is blessed with enough natural gas to meet its own needs for some years, but even that would only provide a short term solution and probably for only part of the vehicle fleet.

It seems most likely that the method by which Obama will seek to achieve a long term reduction in oil demand is by incentives to encourage the adoption of plug-in hybrid cars and electric vehicles and by increasing fuel efficiency standards for conventional vehicles.

3. Put 1 million Plug-In Hybrid cars on the road by 2015.

Obama plans to offer \$7,000 tax credits for the purchase of advanced technology vehicles and to offer tax credits for those wishing to convert their vehicles. Most auto manufacturers are planning to bring either a hybrid or electric vehicle to market in the next 2-3 years and this will certainly help to stimulate demand.

An increase in the numbers of hybrid and electric vehicles on the road has interesting implications for the future electricity demand in the US. It could increase the demand placed on the US grid far beyond current expectations and also help smooth demand – vehicles are likely to be charged over night when prices are lower.

4. Ensure 10 % of US electricity comes from renewable sources by 2012, and 25 percent by 2025.

Currently 6% of US electricity comes from Hydro and around 2% for all the other renewable technologies combined. So to get to 10% by 2012 seems quite achievable given the \$15 billion government investment planned as well as the myriad of wind farms under development.

However, it is the 25% target by 2025 that creates the bigger opportunity and it will be important to keep track of what policies are implemented in the first term to enable the US to reach this target.

While there are some opportunities for run of river hydro schemes, most of the hydro resource in the US have been developed. Therefore most of this additional generation will have to come from wind, solar, biomass and geothermal. The American Wind Energy Association estimates that just over 1% of US electricity production will have come from wind in 2008. Wind electricity generation would

need to grow at 25% per year until 2025 to reach 10% of US electricity production. The US has historically seen feast or famine in the wind industry as tax credits are allowed to expire and then reinstated. The latest legislation extended the key wind tax credit for one year to the end of 2009. However, for a serious US wind manufacturing base to develop and deliver US jobs, a longer term framework is vital. We hope that some such legislation will be enacted before the middle of 2009, to enable continuity of the supply chain development for the wind industry.

Similarly, we estimate that solar currently represents roughly 0.1% of electricity production. Solar installations would need to grow at 35% per year for solar to contribute 5% of US electricity production in 2025. These are roughly the current growth rates of the wind and solar industries, so it is possible that the 25% target can be met. Biomass and Geothermal are also expected to provide marginal incremental generating capacity over the period, although not with the same high growth rates.

5. Implement an economy-wide cap-and-trade program to reduce greenhouse gas emissions 80% by 2050.

A mechanism that puts a price on carbon will make traditional electricity generation from coal and gas more expensive. We wait to see in what form this will be implemented, but however it is done, it cannot fail to make alternative energy sources more competitive.

Overall, we believe the election of Barack Obama as US President is beneficial for the renewable energy industry. Implementation of the promised policies should be quite positive for companies in the alternative energy sector and in the long run for the US energy consumer.

Sector and geographic breakdown

Sector	% of Assets	Region	% of Assets
Solar	40.78%	Europe	50.40%
Wind	28.14%	North America	33.80%
Efficiency	10.24%	Asia	7.62%
Hydro	9.36%	Australasia	3.58%
Geothermal	7.15%	Latin America	3.85%
Biomass Energy	3.21%		
Biofuel	0.38%		

We maintained our overweight position in solar stocks with a 40.78% holding. We think that the next 5 years should carry the solar industry to a position where the holy grail of grid parity is achievable. Investments in solar cover all elements of the value chain from silicon producers to cell and module manufacturers and installers and distributors. Concerns about the US and Spanish subsidy regimes, combined with worries about oversupply have been weighing on the stocks, but the recent bill passed in the US and the introduction of a 500MW cap into Spanish law have put that behind us as we had expected. The main concerns now relate to demand destruction and availability of financing for future projects.

We hold 28.14% in wind and our positions in wind are split evenly between turbine manufacturers and wind farm developers. Turbine manufacturers are benefiting from tight market conditions, and wind farm developers are well placed because of faster approval cycles and increasing asset values.

Efficiency includes stocks in a number of areas from hybrid vehicles and ground source heat pumps to building efficiency and LED lighting where companies will profit from reducing energy use for industry and consumers. We currently hold 10.24% of the portfolio in efficiency stocks.

Hydro forms a lower risk strand of the portfolio, with a current weight of 9.36%. The overarching idea behind holding these is because of their low operating cost which means that increases in electricity prices and payments for carbon credits go straight to the bottom line. Geothermal power, at 7.15% of the fund, has similar dynamics, and is similarly location constrained, but is at a much more developed stage of implementation.

We remain circumspect about Biofuels which account for 0.38% of the fund now, although we are monitoring valuations carefully. We prefer biofuels stocks that have some form of vertical integration (ie they manage their own feedstock production). Biofuel refining stocks have most potential as shorter term trading ideas.

Biomass Energy accounts for 3.21% of the fund. There are a number of opportunities in this space, but the growth potential and returns are less attractive than elsewhere.

Fuel cells remain some way from mass commercialization and we currently hold no investments. Similarly we hold no wave/tidal investments today.

Europe accounts for 50.40% of the assets in the fund versus 33.80% in North America. This reflects the earlier development of the European wind and solar industries. We have 21.78% in Asia, Australia and Latin America and are continually looking for international opportunities that are under the US investor's radar screen.

Top Ten Holdings as of 10/31/08	% of Assets
Wacker Chemie AG	4.11%
Cia Energetica de Minas Gerais	3.85%
Echelon Corporation	3.76%
WFI Industries Ltd.	3.45%
Iberdrola Renovables	3.40%
Ormat Technologies, Inc.	3.39%
Solarworld AG	3.39%
PNOC Energy Development Corporation	3.39%
EDP Renovaveis SA	3.25%
Novera Energy PLC	3.21%

Liquidity analysis as at 10/31/08

Mkt Cap \$m	Positions	% of Assets	Position size	Positions	% of Assets
>1000	18	50.24%	Full	22	63.47%
500-1000	3	8.59%	Half	16	32.10%
250-500	7	15.72%	Research	10	4.42%
100-250	10	17.27%			
50-100	3	4.12%			
<50	7	4.06%			

The liquidity of the portfolio remains good. The percentage of the portfolio that is in stocks with a market capitalization of over \$1 billion has however fallen to 50.24% from a high of 66.08%. Only 8.18% of the portfolio is invested in stocks with a market capitalization below \$100 million. While the universe has grown steadily, recent market moves have reduced the size of some of the companies in the sector. We are endeavouring to maintain a balance between holding larger capitalization more liquid stocks and positions in smaller capitalization less liquid stocks where the value and growth opportunity might be greater.

We have segmented the portfolio into three types of holding: full, half and research. We currently hold 22 full units and 16 half units, with a further 10 research positions. This enables us to benefit from a strict rebalancing discipline.

Valuation as at 10/31/2008

Valuation metrics	07	08	09
P/E	14.92	12.62	9.73
P/Sales	1.14	0.93	0.72
EV/Sales	1.35	1.09	0.85
EPS growth		18.17%	29.71%
Sales growth		23.16%	28.93%
% NAV +ve eps	80.24%	80.82%	87.53%

Source: GA estimates, Bloomberg. P/E based on total portfolio value but include negative earnings at zero.

We include valuation metrics for the portfolio to demonstrate why we perceive there to be an investment opportunity in the sector. The fund is trading on a 12.62x P/E multiple in 2008 which falls to a 9.73x P/E multiple in 2009. This is a function of the strong growth in earnings, notwithstanding downgrades as analysts pare their forecasts. By comparison the S&P500 at the end of October at 968.75 was on a higher P/E of 10.34X based on the current (Zacks 31 Oct) estimate of S&P500 EPS of 93.73 for 2009.

The percentage of holdings with positive eps increases from 80.82% in 2008 to 87.53% in 2009. On an Expected Value (EV)/Sales basis, the fund is trading on 0.93x 2008 sales, falling to 0.72x 2009 sales. These are not multiples that reflect the long term growth potential of the sector, notwithstanding that there may be delays in some projects in the sector while the financing market recovers.

We think that the table above emphasises how the alternative energy companies in which we are invested are companies that are achieving real sales and earnings today and can be analysed using conventional financial metrics – they do not require a “new paradigm” to justify valuations. We believe future sales and earnings growth over the long run should provide a straightforward path to high returns.

Fund performance (October 2008)

The Guinness Atkinson Alternative Energy Fund was down 38.58% in October 2008. We are down 64.25% year to date, which is behind the WilderHill New Energy Global Innovation Index, but just ahead of the WilderHill Clean Energy Index. We are broadly in line with our benchmarks. While we anticipated that the alternative energy sector would be volatile, we have been surprised by how low valuations have gone as a result of the condition of the global economy and financial markets. This is particularly marked given the good operating performance of many of the companies in the sector.

The alternative energy sector is down considerably compared to the broader market – the S&P 500 Index was down just 16.97% in October. The selling down has been fairly indiscriminate and we expect the higher quality names to begin to outperform as the investment climate calms.

Total Returns as of 09/30/08

				QTD 08	YTD 08	1 Year	From inception
Guinness Atkinson Alternative Energy Fund (inception 03/31/06)				-31.20%	-41.78%	-38.81%	-10.28%
WilderHill New Energy Global Innovation Index				-30.08%	-38.68%	-31.56%	0.91%
WilderHill Clean Energy Index				-25.98%	-47.64%	-37.06%	-15.17%

Gross Expense Ratio 1.58%

Net Expense Ratio* 1.64%

Total Returns as of 10/31/08

	Oct 08	QTD 08	YTD 08	1 Year	From inception
Guinness Atkinson Alternative Energy Fund (inception 03/31/06)	-38.58%	-38.58%	-64.25%	-65.58%	-25.41%
WilderHill New Energy Global Innovation Index	-35.00%	-35.00%	-60.15%	-59.81%	-14.59%
WilderHill Clean Energy Index	-32.06%	-32.06%	-64.43%	-61.31%	-26.16%

Gross Expense Ratio 1.58%

Net Expense Ratio* 1.64%

* The expense ratio shown is from the most recent prospectus (April 30, 2008). The Fund has an expense cap in place and the advisor is contractually obligated to cap the total expenses at least through June 30, 2009. The Advisor has guaranteed total fund operating expenses (as a percentage of net assets) will not exceed 1.98% through June 30, 2009 or until such a later date as the Advisor determines.

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 funds impose a redemption fee of 2% on shares held less than 30 days. Performance data does not reflect the redemption fee. If reflected, total returns would be reduced. Stock performance

Top 5	Size	Oct	Bottom 5	Size	Oct
Futurefuel Corp	Research	-10.00%	Applied Intellectual	Research	-84.38%
Innergex	Half	-12.20%	Solar Integrated	Half	-68.25%
Solar Fabrik	Half	-14.09%	Composite Tech	Half	-60.27%
Echelon Corp	Half	-17.71%	Sunpower	Full	-57.12%
Waterfurnace	Half	-21.44%	JA Solar	Full	-54.46%

Futurefuel is a small biofuels holding (our only one) which has held onto its cash position and value. Innergex is a Canadian hydro and wind power developer. Solar Fabrik is a German solar module producer and installer. Echelon is a US company which provides systems for improving building efficiency. Waterfurnace International is a company operating in the niche area of ground source heat pumps, which with their short payback periods and energy cost reductions for purchasers have held up despite the weak property market.

Applied Intellectual Capital is a small research holding in a technology business, where a large holder was required to liquidate their holding at the end of the month and did so at a huge discount to where the stock was trading. Solar Integrated is suffering as investors have concerns about the commercial roofing market for solar given the economic slowdown. Composite Technologies is a smaller cap holding which is both a wind turbine manufacturer and a provider of higher capacity transmission wires, both of which are highly promising businesses but are at the vulnerable early stage of development. Sunpower and JA Solar have fallen as the entire solar sector was hit hard in October amid concerns about availability of capital for projects in 2009.

Trading

We sold out of our holding in Maple Energy, the Peruvian ethanol developer as a result of outperformance and no impending newsflow until the end of the year. We also sold our two Taiwanese Solar manufacturers, E-Ton and Motech as they were no longer cheap versus the rest of the solar sector as a result of outperformance.

We took advantage of the recent moves down in prices to take holdings in First Solar and Hansen Transmissions, the leading thin film solar and wind turbine gearbox manufacturers respectively. The relative and absolute valuation of these stocks, which both have strong differentiation of product and secure economics and business pipelines, presented an opportunity in these turbulent markets.

For technical reasons we have switched our Sunpower Holding from the A shares to the B shares, as the B shares have been trading at a wide discount to the A shares, while having good liquidity and 8 times the voting rights of the A shares.

Thank you for your continuing support.

Tim Guinness
Edward Guinness
Matthew Page
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Commentary for our views on global energy and Asia markets is available on our website. Please [click here](#) to view.

Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower.

This information is authorized for use when preceded or accompanied by a prospectus for the Guinness Atkinson Global 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 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.

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

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 business's stand to benefit substantially from societal transition toward the use of cleaner energy and conservation.

The S&P 500 Index is a broad based unmanaged index of 500 stocks, which is widely recognized as representative of the equity market in general.

One cannot invest directly in an index.

Price to earning ratio (P/E) is equal to a stock's market capitalization divided by its after-tax earnings over the previous 12 months.

Earnings per share measures total earnings divided by the number of shares outstanding.

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