WilderShares, LLC

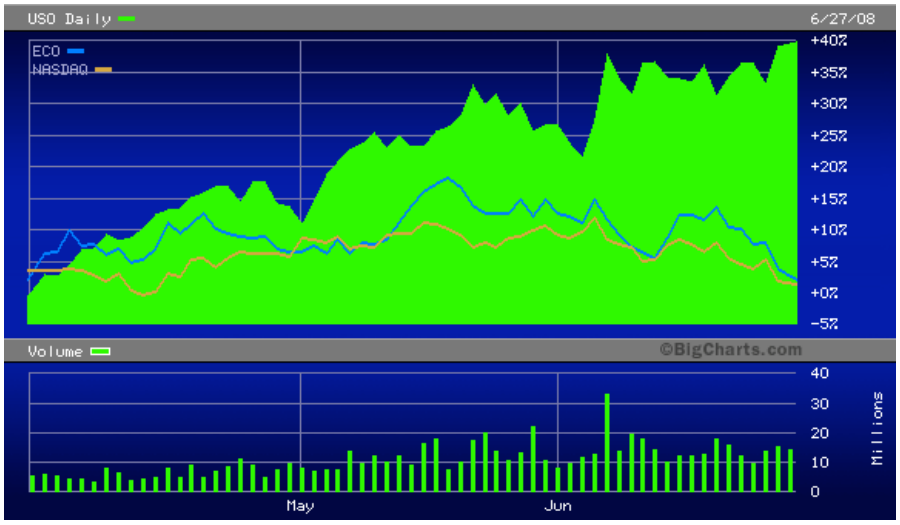
Q2 2008 Quarterly Report: WilderHill Clean Energy Index®, June 30, 2008

Second Quarter of 2008 opened with the Clean Energy Index® (ECO) at 203.56 and closed at 203.55, for a flat-ending Q2 return of -0.00%. Arguably the biggest clean energy story in Q2 wasn't even seen within renewables, but rather was the very sharp rise in cost of oil.

Historically sized moves for oil with a great volatility upside doubtless was the interesting news of Q2. Of course oil will sometimes *drop* sharply too, and so we're sometimes asked if there's a close, Daily correlation between the changing price of Oil — and daily changes in the Index (ECO). Our response is that there's no short-term, daily correlation found. In short daily or monthly periods ECO has instead shown some nexus to the broader markets and even sometimes an inverse relationship to the price of oil — but over longer periods, it may then be then that an Oil/ECO tie is more evident. Prolonged costly oil *might* then have a closer link to ECO. (Data are sparse the past five years for declining oil prices).

Hence it may be that over longer periods the correlation grows for oil & ECO stocks. A single day or a quarter alone however hasn't so far shown strong movement that links oil & ECO. Of course it's also possible should a new psychology begin setting in, saying long-term that we must now expect oil & gas will remain at high levels, then increasingly it may be clean energy becomes a topic of interest and gains focus as an investment option. As a result, clean energy stocks could then even act as something of a lagging indicator to the price of oil, with a rise of the former perhaps seen to follow after prolonged increases in the latter. That tie is not robust near term, but ultimately oil gyrating at dear levels >$100 may carry some potential impacts for clean energy and so ECO given time.

So over a single quarter, ECO can much more correlate to the broader markets than to oil. Below is a chart for Oil (USO, **in bright green**) contrasting its sharp increase over Q2 both as to the far less volatile moves of the WilderHill Clean Energy Index® (ECO, **in blue**) and to the NASDAQ (in **golden brown**) these past 3 months from start of April to end of June:



To imagine what oil (the big story today) might yet do in future, we'll look back here in this Quarterly Report to 3 previous Reports from 2006 and in edited form paraphrase from our past views on oil & ECO … some early thoughts having come to pass. Looking at views of 2 years ago while editing/adding for new twists, this Q2 Report focuses on 'King Oil'.

Reprising our Thoughts from the Past: <u>From Q1 2006 Report</u>
<u>Noteworthy Events During Q1 2006</u>
….
Of interest in a recently volatile First Quarter 2006 is whether there were any similarity, or any strong non-correlation as between 1) the WilderHill Clean Energy Index® — versus 2) Oil prices over that time. Despite there being zero overlap between 'green' stocks in our clean Index (ECO) — and 'black' oil stocks for carbon-laden fuels, both kinds of valuations increased strongly the first few weeks of that year. But soon that similarity ended. By late January of 2006, ECO essentially 'de-coupled' from the far larger fossil energy complex by going higher and sharply so. ECO showed a further variance in Feb. 2006 by declining relatively little, when the oil-and fossil fuels indexes dropped back more considerably.

In February of 2006 with news of ample fuel inventories compounded by the warmest January on record dampening natural gas/oil demand, the oil & gas Indexes showed noticeable declines. Meanwhile a kind of sector rotation within ECO (favoring e.g. first solar, then biofuels, then geothermal, efficiency etc) allowed the Index to close February 2006 at a lofty 219 — while oil & gas Indexes were mainly dropping over that month. ….

For those seeking to create a Model Energy Portfolio these data seem to indicate that fossil fuels, oil, gas, & coal alone--will no longer fully cover a broadening energy field. *We thus hypothesize that clean energy & conservation has become more than 'niche': it's arguably now an arena standing on its own and helps to diversify a Model Portfolio.*
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As we do repeat so very often, this Index (ECO) sees much inherent volatility: it can and does 'drop like a rock' and so it will at times turn very sharply negative. Unlike the active-managed Funds, we don't seek defensive positions if the Index 'appears over-valued', nor generally change Index composition between rebalancings. We find some use in viewing 'return as a function of risk' and so are mindful that Indexing may lend some value simply by assembling a basket of stocks that can help moderate for singularly risky stocks here. ECO is volatile in its own right; perhaps helpfully, it does not correlate closely with oil.

Unlike Sept. 2005 when the Index (ECO) rose sharply, but mainly on negative news of Hurricane Katrina and consequent spikes in *oil prices*, January 2006 moves up in ECO were arguably partly borne of native positive news. These included product orders, growing interest in solar/wind becoming more affordable in its own right, and government steps creating new demand for renewables, that's all unrelated to oil. Stimuli apart from oil usefully bolster non-correlation; of course many variables on the other hand (and there's always 'the other hand') likewise favor sharp downturns in ECO, apart from declines in oil. They include rich stock valuations, serious difficulties ramping solar PV, corn-ethanol etc.
….
In sum while pricey-oil often may be presumed as a 'bullish signal' for clean energy stocks ahead, since the alternatives like solar, wind, geothermal, & energy efficiency might be expected to grow relatively more attractive, we find that there's no direct or daily strong correlation with oil prices. In fact the two often seem to move in different directions.

Paraphrasing from our Q3 2006 Report

Looking Back: Lessons from Over the Past Two Years, 2004 to 2006

Look back to changes in oil -- and WilderHill Clean Energy Index® the past two years 2004-2006, since lessons from the past may be relevant to the future. First in terms of strong '*negative'* or *downward* movements in ECO as are seen at times, there are some periods when ECO then perhaps overlaps (weakly) with oil — when oil's *declines* interestingly coincide with ECO dropping robustly too (the data are still sparse on recent oil declines).

Yet change in oil prices might have clearer nexus (or at least be more closely watched, given human nature) when prices spike instead sharply upside. Consider then the context of some past *upwards* movements in ECO. Historically there are some temporary yet perhaps related (albeit only weakly-so) periods of gains in ECO that overlap with pronounced upwards-moves in oil. They may stem from *natural* events sharply hiking oil (and gas) such as after Hurricane Katrina; or following an unusually cold winter or hot summer. There are also *human error* events interrupting supply, unforeseeable disasters such as terrorist attack, or the fear of the same impacting upwards fossil fuels pricing.

Those can catalyze *expensive oil,* perhaps making alternative energy options more desired in their own right, or more probable. While paid less attention, costs of natural gas are important too for a 'spark-spread', while coal is generally less volatile yet it too can move with volatility. When oil costs climb, superior attributes of clean energy might be possibly regarded favorably including better energy security, domestic abundance, distributed generation, fixed fuel costs (free), resiliency, and zero-carbon that prevents harm in the first place. But we have seen No strong direct or daily correlation in oil vs. ECO.

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It's impossible to know what oil will do ahead; it may drop to below $50/barrel again (making clean energy relatively costly) or increase above $100/barrel with little/no or even inverse daily correlation to ECO. Correlation between clean energy & oil is weak at most… but importantly newly costly oil that remains at a new much higher plateau is another matter. Essentially a fixed-scarcity of *cheap* oil creates new scenarios.

We're rather skeptical of a hypothesis the world is presently past Peak Oil. Yes, peak oil is visible only in retrospect, so it's impossible to know for certain today if we're there right now. Yet in part this skepticism stems from oil going over 'expensive' $50/barrel; more sophisticated exploration might in time grow some new production ahead as well as unconventional oil substitutes. It's been said 'there's no cure for cheap oil like cheap oil' since oil fetching low prices dries up forces of exploration, leading to decreasing supply. Conversely at high prices, new finds or nonconventional tar sands @>$50+ barrel may come on line (despite subsequent massive pollution, huge use of water & natural gas, and troubles in ramping!). Oil may be sourced too from places not in control of National Oil Companies (NOCs) like deep Gulf of Mexico, Arctic, South Atlantic off Brazil, as well as from coal, tar, shale, gas to liquids etc – although again all these sources are *very dirty*.

So perhaps we're not running out of oil, but rather 'only' running out of *cheap oil*. And yet, and yet … what if serious genuine peak oil incontrovertibly is seen just a few years from now to have passed as some argue; with even nonconventional sources unable to overcome high rates of oil depletion. That would surely be a new calculus. Or, oil may drop alternatively, yet again… either way, clean energy increasingly can make sense in its own right regardless of oil's cost: *it may naturally begin to win out as a better idea.*

From Q4 2006

Taken from December 2006 thoughts regarding the Then-Aproaching Year 2007

We believe that some renewed volatility may return ahead to the Index (ECO) in the coming 2007 and imagine at least three catalysts could play some part here. **One stems from 1) the U.S. energy portrait having become perhaps more fragile and so more reliant on 'everything going right' than ever before.** ***Consider that when energy/oil prices jumped previously in 1973 & 1979, those were both supply-driven spikes due to OPEC cutting its own exports****. Although total supply declined only modestly, and purposefully, it led to sizable global swings in oil prices due to mainly anxiety.*

Fast-forward to a recent spike [to $60 oil]; this time importantly it's demand-driven — not supply-driven as in the past*. This is notable because now with producers pumping at close to their full capability, there's very little extra slack to keep up with demand.* ***A past key role for some nations (Saudi Arabia) as vital swing-producer is largely taken away with past large excess production capacity now more marginal than ever****.*

Growing energy demand from China, India must be factored in too, forcing producers to scramble as never before to find major discoveries and increase reserves in the face of unrelenting demand — plus growing depletion among existing wells which makes it hard enough to even keep up. Compounding this is a hypothesis of '*peak oil'* ahead. Yes, it's expected major discoveries will be made the next few years as pricey oil makes extreme new deep-water production and more remote or Arctic drilling feasible. But, there are geophysical limits; depletion rates might simply swamp an ability to make up for declines by even both new discoveries and ramping nonconventional sources combined. We'd note too fast-emerging National Oil Companies (NOCs) are increasingly placing most potential oil & gas discovery areas off limits to Western firms, making scope for finding accessible future reserves of cheap oil increasingly narrowed. Moreover the NOC calculus (like a Venezuela, Iran, or Libya) may no longer be to keep world oil prices as low as possible!

We're nowhere near the end of oil — but perhaps we're very near, or even past 'the era of *cheap* oil'. Nothing quite pushes clean energy's prospects around like sharp changes in the cost of Oil; a resulting cost of clean energy in relation to oil is key. We're rather skeptical of a thesis that Peak Oil is here today or already passed. But many nations like the U.S. are clearly long past — or nearing in other key cases — expected production peaks and some like strategically vital Mexico are seeing sharp drops such as at Canterell field. An unavoidable result may be *less oil* able to be produced worldwide any new year, than the year before; this is Peak Oil, and it may in fact get here much *sooner than presently recognized*. Yes there will be years of discovery anomalies ahead as big new finds happen but inferring from closely held data indicates some super-fields may draw down rather quickly. Just new concern about this depletion may add significantly to oil pricing.

Some experts argue that Peak Oil (visible only in retrospect) where annual production globally no longer surpasses the year before regardless of price and confounding classic economic theory, may already be behind us. We take a more moderate view and believe it's perhaps this coming decade, but even that moderate timeframe importantly is only (less than) 10 years away. Such juncture once apparent may act as a real shock, especially from a psychological view and press prices into gyrations unlike those witnessed so far. Peak oil could become more notable to both costs, and energy security planning in 2007.

Entirely apart from uncertainty over peak oil is the clearer matter of our fragile U.S. energy portrait and growing reliance on hostile oil exporting nations that may not wish us well. Consider just a potential reduction of say, 4% in the global supply and how that can readily push oil past $100/barrel. Some producing nations like Iran, Russia, Venezuela have made noises about using oil to achieve strategic ends and that's a possibility that ought not be ignored in 2007 given vulnerabilities. There is some brief utility in the U.S. strategic petroleum reserve, but supply alternatives like tar sands and shale all carry significant downsides, costs, & anyway cannot ramp to overcome fast depletion rates: simply put it's not commonly understood how brittle is U.S. & global energy security.

This has given rise to 'Green Hawks' including sage military leaders, conservatives, industry heads and traditionally level-headed 'non-environmentalists' concerned over the extent America is vulnerable to oil shocks. Whether the inflection point is a threat of oil not pumped or sold (like a Nigeria), refineries down for natural or human acts, pipelines unable to move oil or strategic shipping lanes (like Hormuz) threatened or a litany of possibilities, there's reasonable concern energy security may become an issue of attention for America, and others in 2007. It is something most every nation faces, not just the U.S.

Energy vulnerabilities pose not certainty of harm but rather simply raise the probability of oil troubles ahead. So while 2007 may end up being rather like 2006 as another safe year where oil's plentiful and energy security is a non-issue for clean energy, there is a non-negligible risk to the contrary and that risk appears to be only growing, not subsiding.
….
No fossil fuel escapes attention in a changing Agenda. Start with still-relatively cheap and plentiful coal that affords the U.S. better energy security to boot; here climate risk may lead to new calls for carbon regulations perhaps raising costs of coal rather noticeably. This is especially the case for presently unregulated CO2 from coal. 2007 ahead is a year before Presidential elections coming in late 2008, and some candidates from both parties are already talking about possibly addressing carbon seriously in 2009. It might become a case where the U.S becomes more like the rest of the world and regulates CO2 as from coal — than the rest of the world becoming like us and moving away from regulating CO2 at all. For Congress in 2009, coal's pollution may then be more closely viewed than ever.

Moreover coal's cost while less apparent to consumers than that of oil, may increase significantly too. Like natural gas (which is growing more costly overall to boot) these are key fuels for America's base of large, centralized and thermal, electric power generating plants. There's likely to be small blips along the way and some spikes upwards to be followed after by sharp declines; but a longer-term trend may be mainly one upwards.

The result may be robust price increases in our current (and virtually only) transportation fuel, and in a present 2 fuels for electricity-generation (mainly coal, natural gas) without refuge. In that case, and especially should Peak Oil alter psychology in how we look at oil, the result might even paint non-fossil clean renewable alternatives in a new light. Nothing is certain, but the course of oil ahead is perhaps less conducive to long-term decreasing prices and to a continuing true product expansion than ever before in history.

Back to the Present, end of Q2 2008
Next and in a nice coincidence of timing an article appeared in Seeking Alpha in late June 2008 that closely addressed this very question of what may be the Oil/ECO correlation, and it came to similar conclusion. We post (with permission) a brief excerpt:

Brief excerpt reposted with permission from Seeking Alpha.
The much longer online article is here:
http://seekingalpha.com/article/82350-too-late-to-the-oil-party-consider-the-alternative?source=yahoo

Too Late to the Oil Party? Consider the Alternative

June 23, 2008 Timothy D. Kailing

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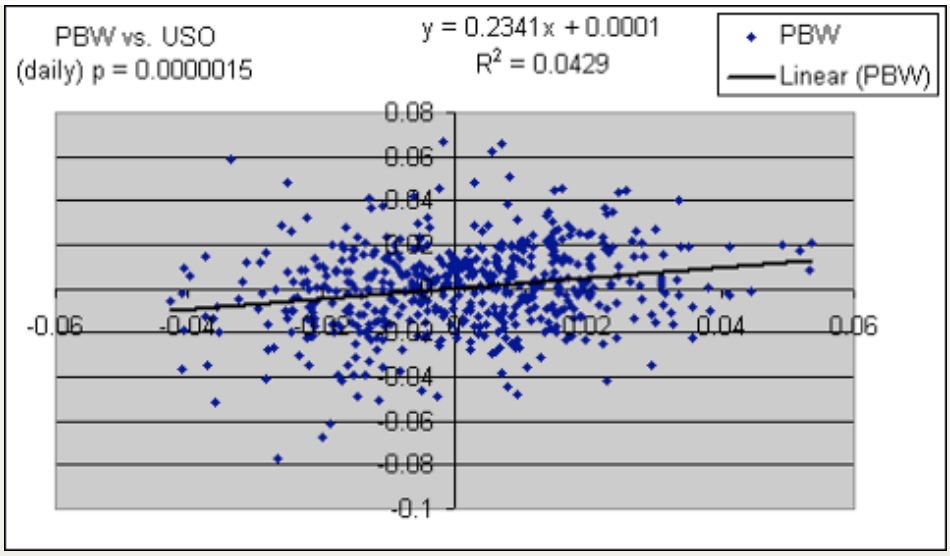
The Short Term

Take for example, the market action on the 21st of May, 2008, when oil first charged solidly into the 130 dollar range. Comparing a plot of an alternative energy ETF (PBW) with the SP500 and with the USO oil ETF is quite curious:

The "wisdom" of the market crowd on that day concluded that the price of oil and the price of alternative energy stocks should be negatively correlated. ....

Was this day a statistical fluke? I analyzed the correlation of one-day moves of alternative energy (PBW) with both oil prices (USO) and the broader market (SPY) over the last two years and found a strong pattern. Here is the graph of the daily moves of alternative energy vs. oil:



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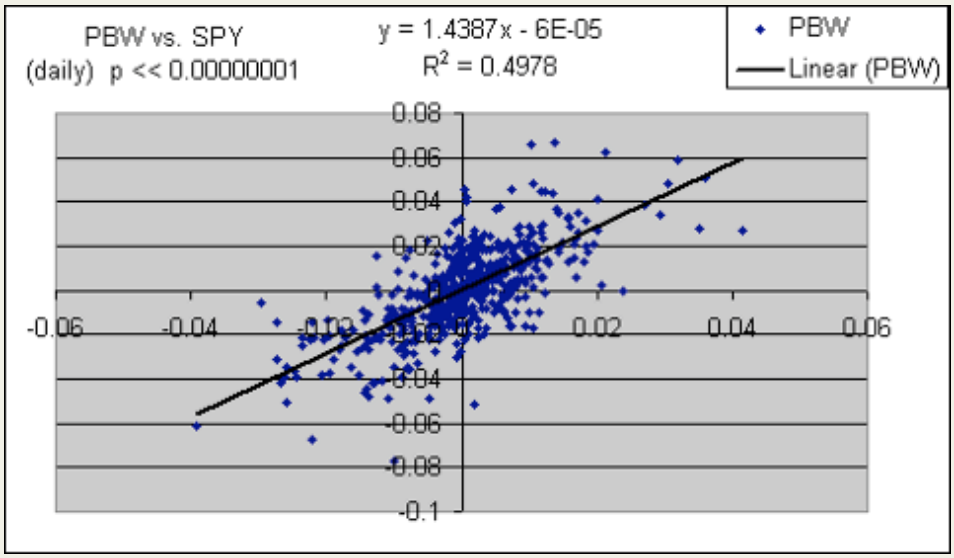
Generally alternative energy equities are very weakly correlated with oil, but to such a small degree that for most short-term trading interests, they are effectively uncorrelated. ....

Contrast this with the daily relationship of alternative energy vs. the broad market:

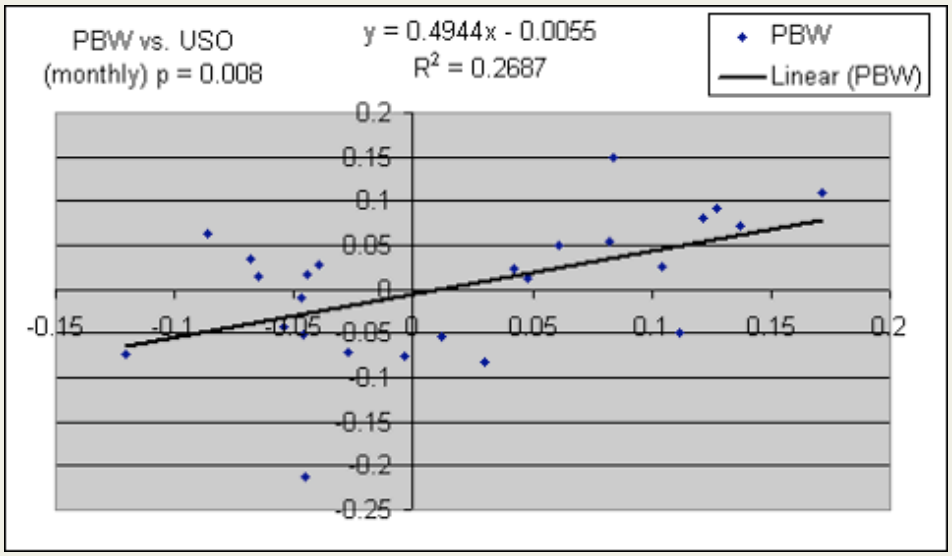


Here the correlation is very strong. ....

The Longer Term

But things get interesting when we look past the emotional, short-term

"voting" behavior of the market and look at the longer-term relationships. …. when we look at the relationship of alternative energy and oil in the last two years we find something much more rational:



Now the correlation of oil and alternative energy on this scale is now quite a strong positive one. …. So as reason would suggest, high oil prices do help alternative energy stocks over the longer term.

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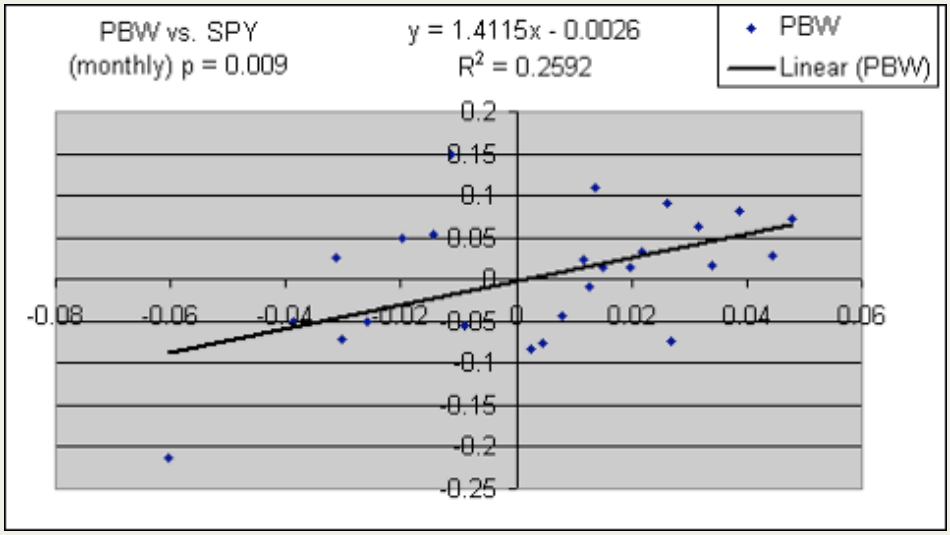

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ECO in the Present, and Looking towards Q3 2008

Now look ahead on ECO towards 2009-, and consider that we may also be near peak too in *Exports* of oil. Ponder that if the total global ability to export oil falls, yet oil remains a needed commodity, then the few nations still able to export may amass greater leverage. Those producing more oil than needed by their own growing internal populations and new industries could choose to export much oil — or choose not to, and their *exporting* choices can place even the militarily-powerful (importing) nations in the role of supplicants.

Back to a present day and latter half of 2008; the latest impacts may be nicely reflected for instance in a curt headline of the Wall Street Journal: 'Pricier Gasoline Makes Hybrids a Better Deal' (June 12, 2008). Just a few years ago many 'experts' were disdainful to see any advantage at all in fuel efficiency, yet the large SUVs so popular until quite recently are now much thornier to resell, while fuel-efficient cars command a premium. It might be that emerging renewables like solar, geothermal, wind, and energy, efficiency as well as other smart new solutions *could, possibly be* seen in an increasingly new light.

Very importantly this does *not* mean clean energy stocks will rise. No matter what happens with oil, there's always the terrific difficulties the companies face with ramping, competition, supply constraints, subsidies curtailment, and execution that can all push down stocks and for some time. So too can China or India growth faltering mean huge energy demand destruction. Stocks in this space can significantly decline, dramatically so. That said if there's dwindling oil exports later and vexing oil depletion begins to outstrip both big finds (like offshore Brazil, Arctic) and nonconventional sources to boot, one *might* reasonably see some possible positive impacts on clean energy over a longer term.

Some change is clearly afoot. Whether it's the declining costs for solar thermal or wind power that may make clean energy even cheaper than dirtiest-yet-once-cheap King Coal — or new plug in or electric cars that grow faster, more lovely and better than 'gassers' (the gasoline-only cars of the 20th century) while not needing gas in the first place and so help free us from King Oil — or the better energy efficiency technologies that simply save us money during a tough economy, the fact that cost trends in alternatives are moving the right direction (down) is happening regardless of oil's own story.

Yet there's certainly too that many of the companies in clean energy that will not make it; some will go out of business or their technologies may end up in cul de sac dead-ends. It's oft impossible to tell at an early stage which companies will perhaps do very well, and which will drop to zero. As we emphasize its a long-term story and we're certain the clean energy sector will see many sharp sell-offs and declines along the way as its history unfolds: we aim to remain the leader here in capturing and tracking this dynamic sector.

In sum the data are sparse but sharp *declines* in oil should also usefully be non-correlative to ECO. Either way, the direction or action in oil doesn't have a strong near-term impact on ECO and this non-correlation arguably improves attractiveness of clean energy as a separate asset class for its return as a function of risk. Lastly the results of political contests in a coming second half 2008 will also have some impact, negative or positive on clean energy and we'll continue to monitor that as well. 2008 promises to go on unfolding as an interesting year for clean energy from spiking price of oil, to national elections, to Spain etc possibly reducing subsidies, to solar and other clean energy moving towards grid parity: it's a fascinating, exciting time to be tracking the never-dull clean energy space.

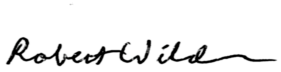
Additions and Deletions to the Index (ECO) for Q3 2008

An unusually large slate of eight Additions were added to ECO for Q3 2008: most Quarters will see less activity. These 8 were Advanced Battery Technologies (ABAT) for polymer lithium-ion batteries and is based in China; Beacon Power (BCON) that is commercializing large flywheel nonchemical energy storage systems; CPFL Energia (CPL) grows hydropower in Brazil for ECOs greener utilities sector; ENER1 (HEV) in new Li-ion batteries, fuel cells, and nantechnology; U.S. Geothermal (HTM) in site acquisition, development & use of geothermal power; Quantum (QTWW) is an integrator in advanced propulsion, alternative fuel vehicles; Sociedad Quimica y Minera de Chile (SQM) is a leading global producer of lithium for Li-ion batteries in PHEVs & battery EVs and also involved in concentrating solar thermal storage; and Valence (VLNC) makes Li-ion batteries that use phosphate to address thermal events. There was one Deletion for Q3 of Active Power (ACPW). This leaves a more-than-usual 7 net more stocks for Q3 2008 (8 additions minus 1 deletion): hence the Clean Energy Index® (ECO) has a total of 54 stocks for the start of the Third Quarter.

Summary

Second Quarter of 2008 opened with the Clean Energy Index® (ECO) at 203.56 and closed at 203.55, for a flat-ending Q2 return of -0.00%. Arguably the biggest clean energy story in Q2 wasn't even seen within renewables, but rather was the very sharp rise in cost of oil. There were 8 Additions to the Index and 1 Deletion from ECO for the start of Q3 2008.

Sincerely,



Dr. Rob Wilder
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Appendix I: Index (ECO), Past Q2 2008 Components and Weights:

Following were Q2 weightings about 2 weeks before rebalance to start Q3 2008; after each rebalance every stock floats according to its share price over the coming Quarter.

Index Components as of: 06/16/08

Company Name	Symbol	% Weighting
Energy Conversion Devices Inc	ENER	5.54%
SOLA International Inc.	SOL	4.45%
American Superconductor Corp	AMSC	3.92%
Trina Solar Ltd	TSL	3.26%
Emcore Corp	EMKR	3.25%
Ormat Technologies Inc	ORA	3.25%
First Solar Inc.	FSLR	3.14%
JA Solar Holdings Co Ltd	JASO	2.96%
Zoltek Cos Inc	ZOLT	2.95%
Evergreen Solar Inc	ESLR	2.95%
Sunpower Corp	SPWR	2.90%
Raser Technologies Inc.	RZ	2.88%
Yingli Green Energy Holding Co Ltd	YGE	2.88%
Suntech Power Holdings Co Ltd	STP	2.85%
China BAK Battery Inc	CBAK	2.63%
Calpine Corp	CPN	2.57%
Comverge Inc	COMV	2.50%
International Rectifier Corp	IRF	2.42%
Gushan Environmental Energy Ltd	GU	2.28%
Echelon Corp	ELON	2.26%
Applied Materials	AMAT	2.26%
Maxwell Technologies Inc	MXWL	2.25%
Itron Inc	ITRI	2.24%
Portland General Electric Co	POR	2.15%
Air Products & Chem	APD	2.13%
Universal Display Corp	PANL	2.13%
Ultralife Batteries Inc	ULBI	2.04%
Idacorp Inc	IDA	2.01%
MEMC Electronic Materials Inc	WFR	2.01%
FuelCell Energy Inc	FCEL	1.97%
Cree Inc	CREE	1.84%
Cosan Ltd	CZZ	1.81%
Rubicon Technology Inc	RBCN	1.55%
Ballard Power Systems	BLDP	1.48%
Om Group	OMG	1.40%
Verenium Corp	VRNM	1.26%

Fuel Systems Solutions Inc	FSYS	1.26%
Plug Power Inc	PLUG	1.24%
VeraSun Energy Corp	VSE	1.15%
Amerigon Inc	ARGN	0.96%
Medis Technologies Ltd	MDTL	0.84%
Ascent Solar Technologies Inc	ASTI	0.48%
Spire Corp	SPIR	0.42%
Active Power Inc	ACPW	0.40%
Ocean Power Technologies Inc	OPTT	0.35%
Nova Biosource Fuels Inc	NBF	0.29%
Pacific Ethanol Inc	PEIX	0.24%

Appendix II: Index (ECO) Components & Weights at the latest Rebalance:

INDEX (ECO) SECTOR & STOCK WEIGHTS FOR THE START OF Q3 2008. 54 STOCKS.

Each stock freely floats according to its share price after rebalance.
*Stocks below $200 million in size at rebalance are banded with a 0.5% weight.

Renewable Energy Harvesting - 29% sector weight (11 stocks @2.50% each; + 3 banded stocks)
**Ascent Solar,* ASTI. Solar, in early-development stages for thin film CIGS flexible PV.
Emcore, EMKR. Solar, Concentrating PV, CPV in terrestrial uses, also for satellites.
Energy Conversion, ENER. Thin film, amorphous flexible PV panels; also battery work.
Evergreen ESLR. Solar, builds string-ribbon PV with reduced silicon-demand.
First Solar, FSLR. Thin film, CdTe solar panels reduce silicon need, and costs.
JA Solar, JASO. Solar, China-based sells PV modules in Asia, Europe, U.S. etc.
**Ocean Power Technologies,* OPTT. Wave power, speculative very early-stage.
Ormat, ORA. Geothermal power, works as well in areas of recovered energy.
SunPower, SPWR. Solar, Efficient PV panels with all-rear-contact cells.
SunTech Power, STP. Solar, fast-growing major producer of PV is based in China.
Trina Solar, TSL. Solar, produces ingots, wafers, solar PV modules; China-based.
**U.S. Geothermal,* HTM. Geothermal, site acquisition, PPAs, development-stage.
Yingli Green Energy, YGE. Vertically-integrated solar PV manufacturer, China.
Zoltek, ZOLT. Wind, makes carbon fiber for wind blades, product 'lightening'.

Power Delivery and Conservation - 27% sector weight (12 stocks @2.20% each + 1 banded stock)
Applied Materials, AMAT. Upstream PV fabrication, manufacturing thin film & crystalline.
American Superconductor, AMSC. Wind power management; also superconducting 2G HTS.
Comverge, COMV. Demand-side energy management for bullding smarter grids.
Cree, CREE. LEDs for efficient lighting, manufacturer for power-saving electronics.
Echelon, ELON. Networking, better management of whole energy systems.
International Rectifier, IRF. Efficiency-enabling electronics producer.
Itron, ITRI. Energy monitoring, new measurement and management systems.
MEMC, WFR. Producer of polysilicon needed in many crystalline solar PV cells.
Raser, RZ. Speculative small licensing firm, electric motors, geothermal power.
ReneSola, SOL. Wafers, for silicon PV, mono and multicrystalline, China-based.
Rubicon, RBCN. Maker of substrates used in production of LEDs and lighting.
**Spire,* SPIR. Upstream PV fabrication equipment, also nanotech, semiconductors.
Universal Display, PANL. Organic light emitting diodes, OLED panel displays.

Energy Storage - 16% sector weight (7 stocks @2.14% each; +2 banded stocks)
Advanced Battery, ABAT. Batteries, China based makes Li-ion for diverse applications.
**Beacon,* BCON. Flywheels, as non-chemical firm power alternative; also inverters.
China BAK, CBAK. Batteries, a large China based OEM manufacturer of Li-ion cells.
Ener1, HEV. Batteries, diverse in Li-ion power storage, nanotechnology; fuel cells.
Maxwell, MXWL. Ultracapacitors, alternative supplement to batteries, in hybrids, UPS.
OM Group, OMG. Cobalt and other precursors, producer for Li-Ion batteries, FCs.
Sociedad de Chile SC, SQM. Lithium, major producer for batteries; also STEG storage.
**Ultralife,* ULBI. Batteries, lithium cells for a variety of mobile and stationary uses.
Valence, VLNC. Batteries, phosphate-based lithium cells address thermal runaway

Energy Conversion - 11% sector weight (4 stocks @2.37% each + 3 banded stocks)
**Amerigon*, ARGN. Thermoelectrics, subsidiary is in conversion waste heat to power.
Ballard Power, BLDP. Mid-sized fuel cells R&D, PEM FCs such as for transportation.
FuelCell Energy, FCEL. Large fuel cells as stationary high-temp. flex-fuel MCFCs.
Fuel Systems Solutions, FSYS. Gaseous fuels integrator for cleaner-fuel vehicles.
**Medis,* MDTL. Micro fuel cells, designed for liquid-fuels and a unique electrolyte.
Plug Power, PLUG. Mid-sized fuel cells for distributed generation, home power.
**Quantum,* QTWW. Alternative fuel vehicle & propulsion systems; also solar nexus.

Cleaner Fuels - 9% sector weight (4 stocks @1.87% each + 3 banded stocks)
Air Products & Chemicals, APD. Hydrogen, is a supplier of industrial gases.
Cosan, CZZ. Biofuels, Brazilian based has sugarcane feedstock, an ethanol exporter.
Gushan, GU. Biodiesel, vegetable oils, used-cooking oil etc as feedstock; China based.
**Nova Biosource*, NBF. Biodiesel, developing diverse feedstock processes, U.S. based.
**Pacific Ethanol,* PEIX. Biofuels, aims to be a core ethanol producer in Western U.S.
VeraSun Energy, VSE. Biofuels, one of largest corn-feedstock producers in U.S.
**Verenium*, VRNM. Enzymes, diverse cellulosic feedstock; speculative early stages.

Greener Utilities – 8% sector weight (4 stocks @2.0% each)
Calpine, CPN. Geothermal: a major North American producer; low-carbon assets.
CPFL Energia S.A, CPL. Brazilian Utility with both large and small hydroelectric.
Idacorp, IDA. Hydroelectric, Utility with significant hydroelectric, some small hydro.
Portland General Electric, POR. Utility with hydro & thermal, is growing renewables.