



## Q1 2014 Quarterly Report: WilderHill Clean Energy Index<sup>®</sup>, March 31, 2014

The 1<sup>st</sup> Quarter/year 2014 began with the Clean Energy Index<sup>®</sup> (ECO) near 66 and closed near 74 for a rise of some +12% in Q1. Volatility dominated the Quarter with sharp rise and then moderate fall in Q1, a bit like strong moves upwards & sheer drops in Q1-Q3 2013. Despite such action both ways, if counting from January 2013 when ECO Index<sup>®</sup> was at 42, it nearly doubled to March 2014. Or if viewed from its November 2012 noted low of just 36 (and \$3.5 for an independent tracker), the Index & tracker has more than doubled over the 6 Quarters to March 2014 - which included some notable drops along the way.

So on the one hand, this Index has grown roughly two-fold+ from late 2012 to early 2014. Note however that's only *after a 5-year plunge* to late in 2012. To have instead begun counting in late 2007 as ECO peaked near 300 - one would've seen a terrific 5-year plummet to just 36 by late 2012, as clean energy's broad theme and so ECO declined tremendously by some -6/7ths (and that could always resume). As we often state the clean energy theme and hence ECO, 'can and does at times drop like a rock'.

Before 2007 there'd been a year or more of Index gains - but not since then, until 2013. That said it's impossible to say if an upturn in 2013 - early 2014 may - or may *not* continue - especially since the broad clean energy story contains consolidating solar names.

As usual we'll note here too a much different Progressive Energy Index<sup>®</sup> (WHPRO) which mainly excludes solar, wind, & renewable pure plays - that WHPRO is instead a 'brown' theme for de-carbonizing the energy portrait & improving efficiency in dominant energy. That other theme was once again less volatile in Q1, with less movement upside.

Comparatively ECO was up strongly in Q1 and notably so February 9 - March 9 along with a WilderHill<sup>®</sup> New Energy Global Innovation Index (NEX) which is mainly for clean energy *outside* the U.S. By contrast, Progressive Energy Index WHPRO was far less changed during Q1 and so it was a laggard vis-à-vis both the ECO and global NEX themes.

In sum Q1 saw non-negligible volatility that was mostly upward for clean energy ECO/NEX. It was led at first by solar and then it broadened to include emerging pure-plays in energy storage, in wind power, a high-end electric carmaker, and even a few fuel cell names. Being broader than just a single sub-sector within clean energy, the ECO Index<sup>®</sup> mainly tracked all that. Below is a Chart for ECO Index over the recent Q1:



Source: bigcharts.com

To also view the bigger picture and spotlight those *huge* falls over 2008 - 2012 that we regularly highlight in Reports, let's step back too for the last ~7 years, 2007 to early 2014. It was interesting: perhaps most dramatic here was the *huge* fall in Natural Gas (**orange**) - it has fallen harder in the period than even a pure-Solar Index(!), more than an active alternative energy fund with some solar; Natural Gas in this period was down near 90%! (Of course as a practical matter that means that Natural Gas-fired power plants have become thorny competitors to all renewables even as against dirty coal & costly nuclear, by becoming so relatively low-cost a fuel. But that's a different story).

Hence at far bottom we see a tracker for **Natural Gas, orange**. Above it barely is a tracker for **solar, green** (like several trackers doesn't have history a full 7 years, and a long time-frame doesn't well capture a *big* solar jump from late Q4 2012 - to so far/Q1 2014).

Next stories are nearly tied over this period: an **active fund, brown** for alternative energy (showing as noted by academics it's hard for an active fund to consistently beat a passive Index by much especially after taxes, efficiency, transparency); and just above it is the **ECO Index, in bold** which has done quite 'better' long-term than **solar alone** - but still is well down - next is global **new energy NEX Index** in blue. Far above all as noted in prior Reports is **WilderHill Progressive Energy (WHPRO, via tracker PUW)** for improving dominant energy (but it would change *least of all* in Q1 2013- through Q1 2014):



Source: bigcharts.com

While those past roughly ~7 years above are useful to emphasize a plummet seen over five years from 2008 - to November 2012 in trackers/ and themes, and it includes late 2007 when a tracker for ECO Index closed near \$28, it also tends to obscure remarkable recent stories like the impressive upwards moves 2013 - Q1 2014. The latter just isn't visible in a time frame above so look instead next at say, 2013 to the end of February 2014.

While this next Chart will miss gains in March in a recent 'melt-up' with clean energy rising, it will show more clearly the significant gains here particularly in solar (up over +100%!!). Interestingly perhaps, it is an inverted story compared to last 7 years.

So now here are those same trackers for 2013 through end of February 2014:



Source: bigcharts.com

Looking above **natural gas** (where there'd been a recent 'glut') has come well off bottom, and it is here up near +35%. And **solar, in green at very top** has gone from being the near-bottom-performer to clearly being top leader (though from off a very low bottom) - by more than doubling this period! An **active fund (brown) & ECO** mostly trade back & forth - with the ECO Index (seen via a tracker, PBW) up here the most at about +65%. Global **NEX** is very close to being tied with ECO - though clearly that's not always the case since longer periods NEX is at times higher. Up 'just some +20%' is **WHPRO (tracker, PUW, red)**: its relative non-volatility while 'helpful' over plummeting 2008 - 2012, when seen here during an upturning 5 Quarters made it a comparative laggard.

Last seen for comparative purposes from Dec. 2012 are 3 independent trackers for **PBW**, in bold tracking WilderHill Clean Energy Index (ECO) with moves up near +100% in the period (and it goes a bit higher still in March); **PBD**, in blue for WilderHill New Energy Global Innovation (NEX) with gains nearly same as ECO; and **PUW** for WilderHill Progressive Energy (WHPRO) gaining near 'just' +30% in that intra-quarterly period.



Source: bigcharts.com

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The 1-month rise from mid-February to mid-March 2014 may warrant brief mention too. There was a ‘melt-up’ felt broadly across the clean energy sector as captured & tracked by the benchmark Index (ECO). It was robust enough that an independent tracker (PBW) for ECO moved from around \$6.5 - to \$8.0 over this relatively short amount of time.

What helped push the Index/tracker over that period? (note: a swift correction intraday ended it late on March 11<sup>th</sup>). Viewing the Top 10 components in ECO first on March 1<sup>st</sup>, and then comparing that to March 8<sup>th</sup>, reveals some of the changes then occurring:

**At Close on March 1: ECO Index (via tracker PBW); Top 10 Weights & Components:**

<b><u>Name</u></b>	<b><u>Symbol</u></b>	<b><u>Weight</u></b>
China Ming Yang Wind Power Group Ltd ADR	MY	3.757
GT Advanced Technologies Inc	GTAT	3.107
SolarCity Corp	SCTY	2.767
FuelCell Energy Inc	FCEL	2.735
Tesla Motors Inc	TSLA	2.734
Canadian Solar Inc	CSIQ	2.685
Enphase Energy Inc	ENPH	2.664
SunEdison Inc	SUNE	2.613
Yingli Green Energy Holding Co Ltd ADR	YGE	2.561
Rubicon Technology Inc	RBCN	2.533

And look one week later on March 8:

**At Close on March 8: ECO Index (via tracker PBW); Top 10 Weights & Components:**

<b><u>Name</u></b>	<b><u>Symbol</u></b>	<b><u>Weight</u></b>
FuelCell Energy Inc	FCEL	4.604
GT Advanced Technologies Inc	GTAT	3.528
China Ming Yang Wind Power Group Ltd ADR	MY	3.511
Maxwell Technologies Inc	MXWL	3.019
SunEdison Inc	SUNE	2.793
Rubicon Technology Inc	RBCN	2.616
Enphase Energy Inc	ENPH	2.615
Yingli Green Energy Holding Co Ltd ADR	YGE	2.605
Hanwha SolarOne Co Ltd ADR	HSOL	2.569
Tesla Motors Inc	TSLA	2.557

FCEL at top comprised 4.6% of the Index by March 8: it was ‘just’ 2.7% on March 1<sup>st</sup> and started Q1 at 2.2% so rose in short time (and corrected late on March 11; one other name in fuel cells rose too but it started Q1 <\$200 market cap so began this Quarter @ just 0.5% - rising to 1.3% by March 1<sup>st</sup> - before it too corrected with less impact). Ranked 2<sup>nd</sup> on March 8 and also initially weighted 2.2% of ECO to start Q1 was GTAT in polysilicon for PV and sapphire for LEDs: it rose here to 3.5%. 3<sup>rd</sup> rank was wind turbine maker MY benefiting from global wind commitments and it went from 2.3% to 3.5% of the Index. MXWL jumped to 4<sup>th</sup> rank and 3.0% weight after being 20<sup>th</sup> rank by weight 1 week before. And SUNE had recently announced some new solar project deals allowing it to move up although not very far to a 2.7% weighting and 5<sup>th</sup> rank in ECO Index, finishing the top 5 on March 8<sup>th</sup>.

The year 2014 that unfolds ahead will doubtless be of keen interest for clean energy.

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We often highlight how robust drops can & do happen in emerging, volatile clean energy. For a recent more granular example see the Chart below for independent tracker (PBW) over 5 days in mid-March going from March 5<sup>th</sup> to March 11<sup>th</sup>. This is able to capture the steep fall that concluded/capped as well a noted February 11<sup>th</sup> - March 11<sup>th</sup> rise.

In a somewhat upwards fashion it begins March 5 around \$7.7 - and near far right side has increased by +3% here reaching an intra-day/weekly high with the tracker touching \$8.0. Yet that very same day it plummets down by over -5% ending down by -3.13% for the day - thus down by -2% for the 5 day period (after being up over 3%). There were some gains and sharp declines, reflecting notable moves in various aspects of clean energy:



Source: yahoo.com

Lastly nearly 10 years can be seen in an independent Index tracker; this includes a high near \$30 late 2007 - and vivid bottom near \$3.5 more recently in late 2012:



Source: yahoo.com

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Conclusion:

The 1<sup>st</sup> Quarter/year 2014 began with the Clean Energy Index<sup>®</sup> (ECO) near 66 and closed near 74 for a rise of some +12% in Q1. Volatility dominated the Quarter with sharp rise and then moderate fall in Q1, a bit like strong moves upwards & sheer drops in Q1-Q3 2013. Despite such action both ways, if counting from January 2013 when ECO Index<sup>®</sup> was at 42, it nearly doubled to March 2014. Or if viewed from its November 2012 noted low of just 36 (and \$3.5 for an independent tracker), the Index & tracker has more than doubled over the 6 Quarters to March 2014 - which included some notable drops along the way.

Note however, that's only *after the huge 5 years' plunge* to late in 2012. To have instead begun counting late 2007 as ECO peaked near 300 - one would've seen a terrific 5-year plummet to the 36 by November 2012, as clean energy's broad theme and so ECO declined tremendously by some 6/7ths (and that could always resume). As we quite often state the clean energy theme and hence ECO, 'can and does at times drop like a rock'.

There were 5 Additions to Clean Energy Index<sup>®</sup> (ECO) to start Q2: Plug Power (PLUG) returned like Daqo New Energy (DQ), UQM UQM) while Orion Energy Systems (OESX), and RGS Energy (RGSE) were added too (and a predecessor, Real Goods Solar had installed PV here over a decade ago so they have some history in solar). 2 Deletions were CZZ, KIOR.

At much different WilderHill Progressive Energy Index<sup>®</sup> (WHPRO) for reducing pollution/ CO2 & improving efficiency in energy today, there were 4 Additions: Abengoa SA (ABGB), Cosan (CZZ), Energy Recovery (ERII), Green Plains Renewable (GPRE). No Deletions.

As always we welcome your thoughts and suggestions.  
Sincerely,



Dr. Rob Wilder  
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Disclaimer: The following is a reminder from the friendly folks at Clean Energy Index<sup>®</sup> who worry about liability. Performance figures quoted represent past performance only, and are no guarantee of future results. Views expressed are those of just one of the managers of this WilderHill<sup>®</sup> Index. Views are not meant as investment advice and should not be considered as predictive in nature. Any descriptions of a holding, applies only as of March 31, 2014. Positions in the ECO Index<sup>®</sup> can and do change thereafter. Discussions of historical performance do not guarantee and are not indicative of future performance. The Index covers a highly volatile sector & is highly volatile too, always subject to well above-average changes in its valuation. WilderHill Clean Energy Index<sup>®</sup> (ECO) is published and owned by WilderShares, LLC. No financial instruments or products based on this Index are sponsored or sold by WilderShares LLC, and Wildershires LLC makes no representation regarding advisability of investing in such product(s). Marks to WilderHill<sup>®</sup>, to Clean Energy Index<sup>®</sup>, to ECO Index<sup>®</sup>, to Progressive Energy Index<sup>®</sup>, to Energy Efficient Transport Index<sup>®</sup> and HAUL Index<sup>®</sup> are all registered and each is exclusive property; all rights reserved.

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**Appendix I:**

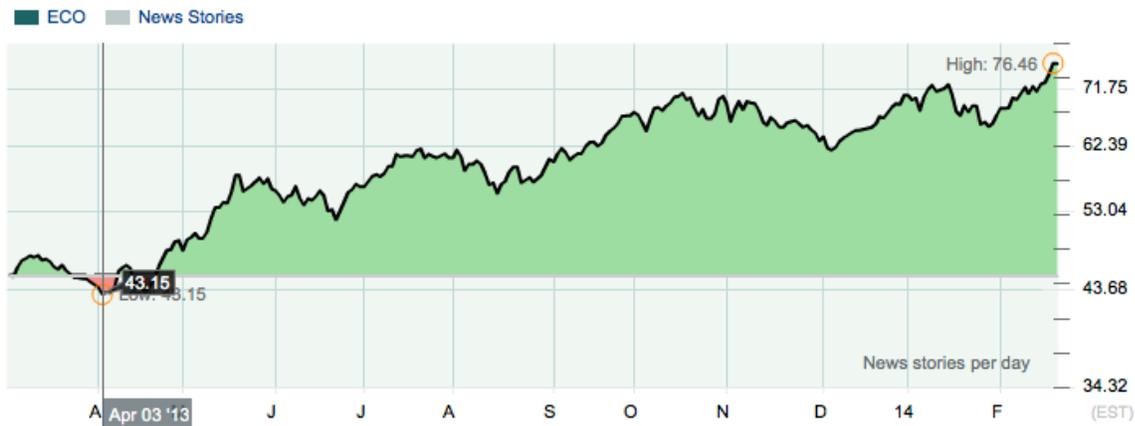
ECO Index (via tracker PBW) Descending Weights & Components in late Q1 on 3/2/2014, or about 4 weeks before the rebalance to start Q2 2014. 53 stocks:

<b><u>Name</u></b>	<b><u>Symbol</u></b>	<b><u>Weight</u></b>
China Ming Yang Wind Power Group Ltd ADR	MY	3.757
GT Advanced Technologies Inc	GTAT	3.107
SolarCity Corp	SCTY	2.767
FuelCell Energy Inc	FCEL	2.735
Tesla Motors Inc	TSLA	2.734
Canadian Solar Inc	CSIQ	2.685
Enphase Energy Inc	ENPH	2.664
SunEdison Inc	SUNE	2.613
Yingli Green Energy Holding Co Ltd ADR	YGE	2.561
Rubicon Technology Inc	RBCN	2.533
PowerSecure International Inc	POWR	2.42
Amyris Inc	AMRS	2.4
EnerNOC Inc	ENOC	2.37
Solazyme Inc	SZYM	2.368
Trina Solar Ltd ADR	TSL	2.355
Hanwha SolarOne Co Ltd ADR	HSOL	2.328
Advanced Energy Industries Inc	AEIS	2.275
JA Solar Holdings Co Ltd ADR	JASO	2.206
Maxwell Technologies Inc	MXWL	2.203
SunPower Corp	SPWR	2.189
Aixtron SE ADR	AIXG	2.175
ReneSola Ltd ADR	SOL	2.138
Quanta Services Inc	PWR	2.109
Gentherm Inc	THRM	2.078
Air Products & Chemicals Inc	APD	2.074
Ameresco Inc	AMRC	2.016
Cytec Industries Inc	CYT	2.004
First Solar Inc	FSLR	1.985
ITC Holdings Corp	ITC	1.983
Sociedad Quimica y Minera de Chile SA ADR	SQM	1.97
International Rectifier Corp	IRF	1.963
Renewable Energy Group Inc	REGI	1.96
Ormat Technologies Inc	ORA	1.957
Universal Display Corp	OLED	1.881
Cree Inc	CREE	1.867
Calpine Corp	CPN	1.836
Pattern Energy Group Inc	PEGI	1.779
Cosan Ltd	CZZ	1.672
Silver Spring Networks Inc	SSNI	1.637
Itron Inc	ITRI	1.598
Fuel Systems Solutions Inc	FSYS	1.595
Polypore International Inc	PPO	1.502

OM Group Inc	OMG	1.472
Ballard Power Systems Inc	BLDP	1.032
Hydrogenics Corp	HYGS	0.644
Echelon Corp	ELON	0.599
Rare Element Resources Ltd	REE	0.554
American Superconductor Corp	AMSC	0.529
Quantum Fuel Systems Tech Worldwide	QTWW	0.459
STR Holdings Inc	STRI	0.444
Gevo Inc	GEVO	0.436
Broadwind Energy Inc	BWEN	0.418
KiOR Inc	KIOR	0.365

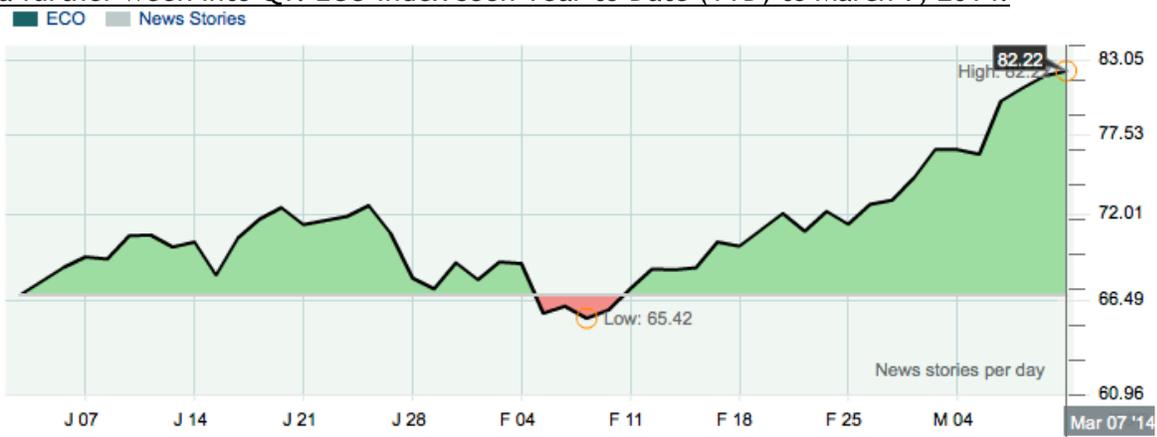
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ECO Index for 1 year from late Feb. 2013 - to late Feb. 2014: Clean Energy rose over most of that time (mainly green) - although whether it may soon fall (hard) of course is unknown:



Source: bigcharts.com

Or a further week into Q1: ECO Index seen Year to Date (YTD) to March 9, 2014:



Source: bigcharts.com

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## Appendix II:

### INDEX (ECO) SECTOR & STOCK WEIGHTS FOR START OF Q2 2014. 56 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** - 26% sector weight (12 stocks @2.12 each; +1 banded)

*\*Broadwind Energy, BWEN.* Wind power, producer of towers, gearing, services.

*Canadian Solar, CSIQ.* Solar, vertically integrated solar PV manufacturer, China.

*China Ming Yang Wind, MY.* Wind, large turbine manufacturer is a pure play.

*Cytec, CYT.* Carbon fiber, used in tidal energy & wind power; lighter vehicles.

*Daqo New Energy, DQ.* Solar, polysilicon/wafer manufacturer; China-based.

*First Solar, FSLR.* Thin film, CdTe solar panels low-cost alternate to polysilicon.

*Gentherm, THRM.* Thermoelectrics, waste heat to energy harvesting for power.

*Hanwha SolarOne, HSOL.* Solar PV, integrated from poly through modules.

*JA Solar, JASO.* Solar, China-based sells PV modules in Asia, Europe, U.S., etc.

*Ormat, ORA.* Geothermal, working too in areas of recovered heat energy.

*SunPower, SPWR.* Solar, efficient PV panels have all-rear-contact cells.

*Trina Solar, TSL.* Solar, produces ingots, wafers, solar modules; China-based.

*Yingli Green Energy, YGE.* Solar, a large vertically integrated PV manufacturer.

#### **Power Delivery & Conservation** - 20% sector weight (9 stocks @2.05%; +3 \*banded)

*Aixtron Aktiengesellschaft, AIXG.* Deposition tools, efficient (O)LEDs, displays.

*Ameresco, AMRC.* Energy saving performance contracts, also in renewables.

*\*Echelon, ELON.* Networking, better management of whole energy systems.

*EnerNoc, ENOC.* Demand response for better energy management, smart grid.

*GT Advanced, GTAT.* Solar, LEDs, production lines for poly & ingot; LED sapphire.

*Itron, ITRI.* Meters, utility energy monitoring, precise measurement/management.

*\*Orion Energy Systems, OESX.* Efficiency, LED light retrofits, energy services.

*PowerSecure, POWR.* Smart grid, demand response, distributed generation; LEDs.

*Quanta Services, PWR.* Infrastructure, modernizing grid and power transmission.

*ReneSola, SOL.* Wafers, for silicon PV, mono and multicrystalline, China-based.

*\*STR Holdings, STRI.* Encapsulants, broad technology for range of PV panels.

*SunEdison, SUNE.* Producer of polysilicon used in crystalline c-Si solar PV cells.

#### **Energy Conversion** - 18% sector weight (9 stocks @1.88% each; +2 \*banded stocks)

*Advanced Energy, AEIS.* Power conditioning: inverters, thin film deposition.

*\*American Superconductor, AMSC.* Wind power converters; superconducting HTS.

*Ballard Power, BLDP.* Mid-size fuel cells; R&D, PEM FCs such as in transportation.

*Cree, CREE.* LEDs, manufacturer in power-saving lumens, efficient lighting.

*Enphase, ENPH.* Microinverters, PV panel DC becomes grid compliant AC.

*FuelCell Energy, FCEL.* Large fuel cells, stationary high-temp flex-fueled MCFCs.

*International Rectifier, IRF.* Energy-saving, power conversion and conditioning.

*Plug Power, PLUG.* Small fuel cells, PEM for forklifts; drop in replacements.

*Rubicon, RBCN.* Substrates, are used in the production of LEDs for lighting.

*Universal Display, OLED.* Organic light emitting diodes, very efficient displays.

*\*UQM Technologies, UQM.* Motors, controller systems for EVs & hybrid vehicles.

#### **Energy Storage** - 13% sector weight (6 stocks @2.08% each; +1 \*banded stock)

*Fuel Systems Solutions, FSYS.* Gaseous fuels; systems for cleaner-burning vehicles.

Maxwell, MXWL. Ultracapacitors, alternative supplements batteries, in hybrids.  
 OM Group, OMG. Battery materials from cobalt etc; also magnetics, cell etching.  
 Polypore Intl., PPO. Separators, membranes used in Li-ion, other battery cells.  
 \*Rare Element Resources, REE. Rare Earths, holdings for strategic lanthanides.  
 Sociedad de Chile, SQM. Lithium, major Li supplier for batteries; and STEG storage.  
 Tesla Motors, TSLA. Electric vehicles, pure-play in EVs and ESS energy storage.

**Cleaner Fuels** - 12% sector weight (6 stocks @1.91% each; +1 \*banded stock)

Air Products & Chemicals, APD. Hydrogen, is a supplier of industrial gases.  
 Amyris, AMRS. Biotech, speculative R&D in renewable fuels for transportation.  
 \*Gevo, GEVO. Biotech, speculative R&D drop-in isobutanol, renewable biofuels.  
 Hydrogenics, HYGS. Hydrogen, electrolysis generation & fuel cells, H2 storage.  
 Quantum Fuel Systems, QTWW. Compressed gas, in alternative fuel vehicles.  
 Renewable Energy Group, REGI. Biodiesel, natural fats, oils, greases to biofuels.  
 Solazyme, SZYM. Biofuels, microalgae grown w/o sun, drop-in diesel substitute.

**Greener Utilities** - 11% sector weight (5 stocks @2.10% each; +1 \*banded stock)

Calpine, CPN. Geothermal, major North American producer, low-carbon assets.  
 Pattern Energy, PEGI. Wind farms, solar is being added too, GW+ PPA agreements.  
 ITC Holdings, ITC. Grid transmission, advanced integration for wind/renewables.  
 \*RGS Energy, RGSE. Downstream PV, works too in crowdsourcing purchase/loans.  
 Silver Spring Networks, SSNI. Smart grid, two-way communications aids Utilities.  
 SolarCity, SCTY. Downstream PV leasing, can provide solar with no-upfront costs.

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 Chart for an independent ECO tracker (PBW) past 5 years to early 2014:



Source: Bigcharts.com

As seen above by ECO independent tracker (PBW, in bold) etc, last 5 years to mid-Q1 2014 were rough for clean & alternative energy. For example despite ECO ending this period down (a bit), it's still well 'above' a sample Index/ETF (not ours) for Global alternative energy (orange), a narrower tracker for a Solar-only Index/ETF (blue), and Natural Gas Index/ETF (brown). So these were tough years for several themes. Yet a green line at top for (ironically 'brown') WilderHill Progressive Energy Index (WHPRO) 'puts them to shame' this period. It is positive over +100%, with WHPRO tracker (PUW) reaching its bottom near \$14 in 2009 when broad markets were at a nadir; clean energy thus has moved differently from WHPRO. Rather like with solar, ECO has been very volatile, fallen far from its highs - and was at new lows in Nov. 2012.

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**Appendix III: WHPRO Index (via tracker PUW) Descending Component weights in late Q1 2014 on 3/2/2014, or about 4 weeks before the rebalance to start Q2 2014. 58 Stocks:**

<b><u>Name</u></b>	<b><u>Symbol</u></b>	<b><u>Weight</u></b>
Denison Mines Corp	DNN	2.98
Methanex Corp	MEOH	2.6
Cameco Corp	CCJ	2.513
MasTec Inc	MTZ	2.474
Acuity Brands Inc	AYI	2.282
Range Resources Corp	RRC	2.235
Southwestern Energy Co	SWN	2.223
Veeco Instruments Inc	VECO	2.181
WABCO Holdings Inc	WBC	2.105
Tata Motors Ltd ADR	TTM	2.1
Chesapeake Energy Corp	CHK	2.038
Corning Inc	GLW	2.019
Altra Industrial Motion Corp	AIMC	2.007
Owens Corning	OC	2.006
Tenneco Inc	TEN	1.966
Chicago Bridge & Iron Co NV	CBI	1.962
Andersons Inc/The	ANDE	1.952
Covanta Holding Corp	CVA	1.952
Golar LNG Ltd	GLNG	1.95
EnerSys Inc	ENS	1.942
Nuverra Environmental Solutions Inc	NES	1.94
Sasol Ltd ADR	SSL	1.932
Rockwood Holdings Inc	ROC	1.932
Cia Energetica de Minas Gerais ADR	CIG	1.882
McDermott International Inc	MDR	1.877
NRG Yield Inc	NYLD	1.876
General Cable Corp	BGC	1.852
ESCO Technologies Inc	ESE	1.827
Luxfer Holdings PLC ADR	LXFR	1.818
Power Solutions International Inc	PSIX	1.804
Hexcel Corp	HXL	1.801
Advanced Emissions Solutions Inc	ADES	1.779
Remy International Inc	REMY	1.763
Foster Wheeler AG	FWLT	1.761
Regal-Beloit Corp	RBC	1.759
Eaton Corp PLC	ETN	1.738
Energizer Holdings Inc	ENR	1.736
Chart Industries Inc	GTLS	1.733
Siemens AG ADR	SI	1.722
Johnson Controls Inc	JCI	1.706
Woodward Inc	WWD	1.698
Koninklijke Philips NV	PHG	1.684
Emerson Electric Co	EMR	1.651
Apogee Enterprises Inc	APOG	1.651
Centrais Eletricas Brasileiras SA ADR	EBR	1.646

AO Smith Corp	AOS	1.616
Westport Innovations Inc	WPRT	1.57
LSB Industries Inc	LXU	1.539
GrafTech International Ltd	GTI	1.486
Clean Energy Fuels Corp	CLNE	1.186
Kandi Technologies Group Inc	KNDI	1.058
Capstone Turbine Corp	CPST	0.704
Rentech Inc	RTK	0.546
Hannon Armstrong Sustainable Infrastructure	HASI	0.509
Revolution Lighting Technologies Inc	RVLT	0.482
Global Power Equipment Group Inc	GLPW	0.459
China Recycling Energy Corp	CREG	0.419
PMFG Inc	PMFG	0.373

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**WHPRO Index via an Independent tracker (PUW), past 5 years to early 2014:**



Source: bigcharts.com

**Chart for the WHPRO Index, nearly past 4 years to early 2014:**



Source: bigcharts.com

Looking at WilderHill Progressive Energy Index WHPRO (and independent tracker, PUW), it had perhaps been suggested before past highs near 300 on Index - or roughly \$31 on tracker might perhaps be a bit of resistance, 'notable' to break through. Since touching fresh new highs in Q1 2014, it may be interesting to see whether this Index WHPRO/and tracker can - or cannot - more decisively break higher in Quarters ahead in 2014.

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**Appendix IV: for WHPRO Index.**

**WilderHill Progressive Energy Index at Rebalance for Q2 2014. 62 stocks.**

Each stock freely moves according to its share price after the rebalance;

\*Banded stocks are those under \$400 million in size and weighted at 0.5%.

**Alternative Fuel - 18% Sector Weight (10 stocks @1.80% each)**

*Andersons*, ANDE. Ethanol producer, corn-based; rail group is in fuel transport.

*Cameco*, CCJ. Uranium fuel, one of largest producers; also does fuel processing.

*Chesapeake Energy*, CHK. Natural gas, one of larger U.S. independent producers.

*Cosan*, CZZ. Biofuels, Brazil-based using sugarcane feedstock, ethanol exporter.

*Denison Mines*, DNN. Uranium fuel, also non-U.S; decommissions, recycling wastes.

*Green Plains Renewable Energy*, GPRE. Biofuel, ethanol; domestic corn feedstock.

*Methanex*, MEOH. Methanol, liquid fuel can be derived from fossil fuels or organics.

*Range Resources*, RRC. Natural gas, produces in Appalachian & Gulf Coast regions.

*Rentech*, RTK. Syngas & fuels from biomass and waste materials; Gas to Liquids.

*Southwestern Energy*, SWN. Natural gas, U.S. producer, also midstream services.

**Conversion & Storage - 21% Sector weight (12 stocks @1.75% each)**

*Altra Holdings*, AIMC. Mechanical power transmission, electromechanical conversion.

*Capstone*, CPST. Microturbines, distributed generation, combined heat/power, HEVs.

*Chart Industries*, GTLS. Natural gas, LNG; liquefied gas storage/transport, efficiency.

*Chicago Bridge & Iron*, CBI. Nat. gas; also better containment for next-gen nuclear.

*Clean Energy Fuels*, CLNE. Natural gas fleet vehicles, integration and distribution.

*Covanta Holding*, CVA. Incineration, converts waste to energy (WtE); conglomerate.

*Energizer*, ENR. Lithium, NiMH, various new battery and charger technologies.

*EnerSys*, ENS. Battery maker, for telecommunications, utilities, motive power.

*Golar LNG*, GLNG. LNG, major independent carrier, gas transport, regasification.

*MasTec*, MTZ. Engineering & construction: distribution of electricity, natural gas.

*Wabco*, WBC. Mechatronics, better vehicle mechanical/energy/braking controllers.

*Westport Innovations*, WPRT. Enables vehicles' use of natural gas, gaseous fuels.

**Better Efficiency - 18% Sector Weight (10 stocks @1.70% each; +2 \*banded stocks)**

*Acuity Brands*, AYI. LED lights, OLEDs, and controls for indoor & outdoor lighting.

*A.O. Smith*, AOS. Energy efficiency innovations for water heating & monitoring.

*Apogee*, APOG. Advanced glass, for better efficiency, green building designs.

\**China Recycling Energy*, CREG. Recycles waste heat, gas, pressure in industrial uses.

*Emerson Electric*, EMR. Broad work in energy efficiency, storage, lately biofuels.

*Esco Technologies*, ESE. Power grid, advances 2-way metering & communications.

*General Cable*, BGC. Power grid, high voltage transmission cable and wire products

*Koninklijke Philips Electronics NV*, PHG. Efficient LEDs, advanced industrial lighting.

*LSB Industries*, LXU. Greater energy efficiency in building end-use, heating, cooling.

*Regal Beloit*, RBC. Energy efficient motors, in commercial, industrial, homes etc.

\**Revolution Lighting*, RVL. LED lights, multi-branded array and sign lighting.

*Woodward*, WWD. Energy controllers, optimization, industrial turbines in generation.

**New Energy Activity - 18% Sector weight (10 stocks @1.70% each; +2 \*banded)**

*Eaton*, ETN. Hybrids, better electric and fluid power in truck & auto applications.

*Foster Wheeler*, FWLT. Infrastructure, engineering services in WtE, LNG, CCS.

\**Global Power Equipment*, GLPW. Designs, engineering for gas, hydro, nuclear.

*GrafTech*, GTI. Graphite, advanced electrodes for power generation, fuel cells.

*\*Hannon Armstrong*, HASI. Capital: Infrastructure & finance for energy efficiency.  
*Hexcel*, HXL. Lighter composites, advanced structural reinforcement materials.  
*Johnson Controls*, JCI. Building controls, also advanced hybrid vehicle systems.  
*Owens Corning*, OC. Materials lightening, building insulation composite materials.  
*Remy International*, REMY. Electric & hybrid motors, OEM for cars, trucks, trains.  
*Rockwood Holdings*, ROC. Lithium battery recycling, lithium & cobalt supply.  
*Siemens AG*, SI. Conglomerate, is diversified across energy innovation globally.  
*Veeco Instruments*, VECO. Design, manufactures equipment for LED production.

**Emission Reduction - 18% Sector Weight (10 stocks @1.70% each +2 \*banded stocks)**

*ADA-ES*, ADES. Coal emissions reduction, mercury, NOX, CO2, noxious pollutants.  
*Corning*, GLW. Diverse activity includes emissions reduction, filters, and catalysts.  
*\*Energy Recovery*, ERII. Harvesting energy, from industrial fluid flows & pressure.  
*Kandi Technologies*, KNDI. Developing small urban all-electric cars plus trucks.  
*Luxfer Holdings PLC*, LXFR. Advanced materials: reduced emissions, gaseous storage.  
*McDermott*, MDR. Infrastructure: reduces coal emissions, constructs WtE facilities.  
*Nuverra*, NES. Natural gas: recycling water & spill prevention; used oil recycling.  
*\*Peerless*, PMFG. Pollution reduction: effluent separation & filtration systems.  
*Power Solutions*, PSIX. Flex-fuel low-emission engines; nat. gas, biogas, hybrid etc.  
*Sasol Ltd*, SSL. Syngas to synthetic fuel; potential CO2 capture/sequestration (CCS).  
*Tata Motors*, TTM. Smaller & 'nano' vehicles, India-based with worldwide sales.  
*Tenneco*, TEN. Automotive end-of-pipe emissions controls, catalytic converters.

**Utility - 7% Sector weight (4 stocks @1.75% each)**

*Abengoa SA*, ABGB. Energy engineering & infrastructure, worldwide; sustainability.  
*Companhia Energetica de Minas Cemig*, CIG. Brazilian Utility, large hydroelectric.  
*Centrais Electricas Brasileiras*, EBR. Brazilian Utility, large hydro, also nuclear.  
*NRG Yield*, NYLD. Contracted power generation and thermal, also some renewables.

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**Chart, independent WHPRO tracker (PUW) 5 years to early 2014 (vs ECO tracker):**



Source: Bigcharts.com

Here again is WHPRO tracker (PUW) from 2009 at near \$14 - to 2014 around \$32. Much different is an ECO tracker in blue: quite unlike ECO Index® we see over the 5 years WHPRO has been less volatile, hasn't dropped to new low values since, and has moved above its previous highs.

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**Appendix V: WilderHill New Energy Global Innovation Index (NEX)** in late Q1 2014 via tracker (PBD) on 3/2/2014, or about 4 weeks before Rebalance to start Q2 2014. 101 stocks:

<b>Name</b>	<b>Symbol</b>	<b>Weight</b>
Tesla Motors Inc	TSLA	2.318
SMA Solar Technology AG	S92	2.13
REC Silicon ASA	REC	2.101
GT Advanced Technologies Inc	GTAT	1.872
Meyer Burger Technology AG	MBTN	1.826
Acuity Brands Inc	AYI	1.768
Epistar Corp	2448	1.76
Abengoa SA	ABG/P	1.752
Nibe Industrier AB	NIBEB	1.693
Veeco Instruments Inc	VECO	1.69
SolarCity Corp	SCTY	1.683
Acciona SA	ANA	1.681
OSRAM Licht AG	OSR	1.665
Aixtron SE	AIXA	1.605
Rockwool International A/S	ROCKB	1.588
Meidensha Corp	6508	1.576
SunEdison Inc	SUNE	1.575
Seoul Semiconductor Co Ltd	46890	1.574
Canadian Solar Inc	CSIQ	1.551
Kingspan Group PLC	KSP	1.55
Hanergy Solar Group Ltd	566	1.532
Yingli Green Energy Holding Co Ltd ADR	YGE	1.481
International Rectifier Corp	IRF	1.442
Vestas Wind Systems A/S	VWS	1.427
EDP Renovaveis SA	EDPR	1.403
GCL-Poly Energy Holdings Ltd	3800	1.392
Universal Display Corp	OLED	1.381
Cree Inc	CREE	1.371
Nordex SE	NDX1	1.369
China Suntien Green Energy Corp Ltd	956	1.362
Trina Solar Ltd ADR	TSL	1.361
China Everbright International Ltd	257	1.342
Energy Absolute PCL	EA	1.335
Shunfeng Photovoltaic International Ltd	1165	1.326
Enel Green Power SpA	EGPW	1.323
Johnson Controls Inc	JCI	1.322
Contact Energy Ltd	CEN	1.28
SunPower Corp	SPWR	1.265
Gamesa Corp Tecnologica SA	GAM	1.255
AO Smith Corp	AOS	1.251
Xinjiang Goldwind Science & Tech.	2208	1.239
Novozymes A/S	NZYMB	1.223
Silver Spring Networks Inc	SSNI	1.209
Mighty River Power Ltd	MRP	1.195
Sao Martinho SA	SMTO3	1.182

Verbund AG	VER	1.181
Ormat Technologies Inc	ORA	1.178
China Datang Corp Renewable Power	1798	1.173
Itron Inc	ITRI	1.169
Fortum OYJ	FUMIV	1.156
First Solar Inc	FSLR	1.146
Neo Solar Power Corp	3576	1.146
Covanta Holding Corp	CVA	1.13
China Longyuan Power Group Corp	916	1.109
Pattern Energy Group Inc	PEGI	1.099
Huaneng Renewables Corp Ltd	958	1.077
Innergex Renewable Energy Inc	INE	1.071
Motech Industries Inc	6244	1.035
LSB Industries Inc	LXU	1.024
Cosan SA Industria e Comercio	CSAN3	0.973
Byd Co Ltd	1211	0.686
Ballard Power Systems Inc	BLD	0.621
Rubicon Technology Inc	RBCN	0.534
PowerSecure International Inc	POWR	0.508
EnerNOC Inc	ENOC	0.498
GS Yuasa Corp	6674	0.488
China High Speed Transmission Equip.	658	0.465
Enphase Energy Inc	ENPH	0.463
Polypore International Inc	PPO	0.455
REC Solar ASA	RECSOL	0.452
Ricardo PLC	RCDO	0.446
Aerovironment Inc	AVAV	0.43
Ameresco Inc	AMRC	0.424
CENTROTEC Sustainable AG	CEV	0.421
Dialight PLC	DIA	0.406
Solazyme Inc	SZYM	0.391
Sino-American Silicon Products Inc	5483	0.389
Wasion Group Holdings Ltd	3393	0.388
China Singyes Solar Technologies	750	0.378
FuelCell Energy Inc	FCEL	0.372
Energy Development Corp	EDC	0.371
JA Solar Holdings Co Ltd ADR	JASO	0.366
Capstone Turbine Corp	CPST	0.364
ALBIOMA	ABIO	0.36
Falck Renewables SpA	FKR	0.357
Renewables Infrastructure Group Ltd	TRIG	0.337
West Holdings Corp	1407	0.329
Renewable Energy Group Inc	REGI	0.323
SPCG PCL	SPCG	0.311
United Photovoltaics Group Ltd	686	0.308
Taewoong Co Ltd	44490	0.304
Japan Wind Development Co Ltd	2766	0.302
Takuma Co Ltd	6013	0.296
KiOR Inc	KIOR	0.277

Akenerji Elektrik Uretim AS	AKENR	0.274
Fuel Systems Solutions Inc	FSYS	0.251
Sinopoly Battery Ltd	729	0.211
Maxwell Technologies Inc	MXWL	0.191
Saft Groupe SA	SAFT	0.154
Blue Solutions	BLUE	0.146
Trony Solar Holdings Co Ltd	2468	0.058

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For current values of the NEX, see

[http://www.nex-index.com/Constituents\\_And\\_Weightings.php](http://www.nex-index.com/Constituents_And_Weightings.php)

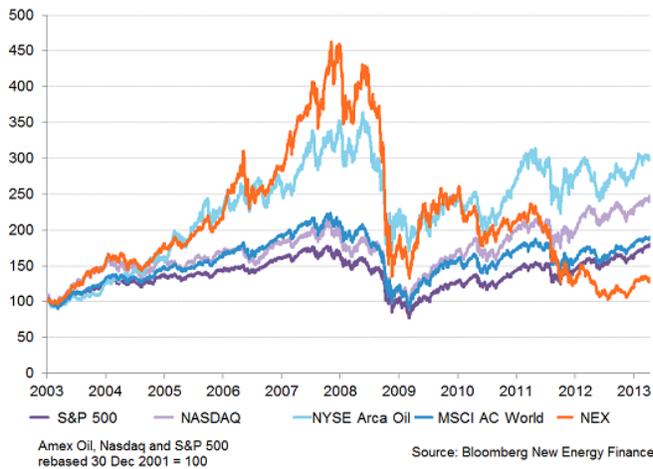
or see also for more NEX data: [http://www.nex-index.com/Constituents\\_And\\_Weightings.php](http://www.nex-index.com/Constituents_And_Weightings.php)

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Here are links to quotes to NEX Index available on the web:

NEX Quotes & Data	Ticker	Bigcharts	Bloomberg	Marketwatch	Yahoo
USD Price Index	NEX	<a href="#">51599W10</a>	<a href="#">NEX:IND</a>	<a href="#">NEX</a>	<a href="#">^NEX</a>
EUR Price Index	NEXEU	<a href="#">26499Z42</a>	<a href="#">NEXEU:IND</a>	<a href="#">NEXEU</a>	<a href="#">^NEXEU</a>
GBP Price Index	EXBP	<a href="#">26499Z40</a>	<a href="#">NEXBP:IND</a>	<a href="#">NEXBP</a>	<a href="#">^NEXBP</a>
JPY Price Index	NEXJY	<a href="#">26499Z38</a>	<a href="#">NEXJY:IND</a>	<a href="#">NEXJY</a>	<a href="#">^NEXJY</a>
USD Total Return Index	NEXUST	<a href="#">26499Z43</a>	<a href="#">NEXUST:IND</a>	<a href="#">NEXUST</a>	<a href="#">^NEXUST</a>
EUR Total Return Index	NEXEUT	<a href="#">26499Z41</a>	<a href="#">NEXEUT:IND</a>	<a href="#">NEXEUT</a>	<a href="#">^NEXEUT</a>
GBP Total Return Index	NEXBPT	<a href="#">26499Z39</a>	<a href="#">NEXBPT:IND</a>	<a href="#">NEXBPT</a>	<a href="#">^NEXBPT</a>
JPY Total Return Index	NEXJYT	<a href="#">26499Z37</a>	<a href="#">NEXJYT:IND</a>	<a href="#">NEXJYT</a>	<a href="#">^NEXJYT</a>

*Below is the NEX Index vs. NYSE Oil vs. Nasdaq vs. S&P500 vs. MSCI World for the past 10 years to late 2013. Note Global NEX that had been well up - indeed was at very top in late 2007 at 450 - instead finishes this period to late 2013 far down at bottom nearer the 100 seen a decade ago:*



AMEX Oil, Nasdaq, S&P 500 rebased 30 Dec 2001 = 100 Source: Bloomberg New Energy Finance

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\*The global NEX Index only is a unique co-equal partnership as between Bloomberg New Energy Finance; Josh Landess, the CEO of First Energy Research based in the U.S., and Dr. Rob Wilder, the CEO of WilderHill Indexes based in the U.S.; the NEX is addressed in prior reports.

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