



Q4 2015 Quarterly Report: WilderHill Clean Energy Index[®], December 31, 2015

For 4th Quarter 2015 the Clean Energy Index[®] (ECO) began near 42 and ended near 49 for a gain of roughly +17%. Or since 2015 began near 55, for the Year it's down by around -10%. This rise in Q4 marked something of a change; the ECO Index[®] dropped 2nd & 3rd Quarters reflecting a clean energy story that had declined sharply even as it carries much risk. Or look at the past 2 years: here the clean energy theme and so ECO first rose some +20%, but after fell into red and didn't re-touch that 2014 crest. Declines dominated clean energy's theme in Summer & Fall 2015, and they also loomed over the fossil fuels too; all dominant dirty energy themes fell dramatically and no theme was unscathed. Finally however, in December and quite unlike fossil fuels, a strong rise in just clean/new energy (not so much elsewhere) produced a rather sharp change in direction mainly here.

We note too a much different Progressive Energy Index[®] (WHPRO) that excludes clean solar, wind, and pure play renewables - WHPRO is instead a 'brown' basket for reducing CO2 & for improving efficiency in dominant energy. At times in past it has moved rather differently than ECO - softer downs, ups, downs. WHPRO may not always show volatility of ECO that 'can & does at times drop like a rock'. In 2015 WHPRO dropped rather closely with ECO to November, and then continued dropping even as ECO rose abruptly.

WilderHill[®] New Energy Global Innovation Index (NEX) that's for new energy *worldwide* mostly outside the U.S. did 'best' of the 3 WilderHill themes over this past year - first up +20% before dropping a bit and ending near nil for 2015. Past 5 years too NEX has moved rather differently than ECO: NEX often had softer downturns - firmer upturns - so NEX is down much less the last 5 years - is above WHPRO - with ECO more significantly negative. To be sure these have been hard recent years across the dominant energy themes - including fossil fuels oil, coal, and natural gas, that have also largely plummeted.

Last 5 years then among the 3 WilderHill Indexes, ECO has fallen hardest by some -50%. WHPRO that was up +50% at one point has also fallen; its 'brown' story can move unlike global new/clean energy. And global NEX has been often 'stronger' than ECO; among the 3 Indexes it has just overtaken WHPRO for the past 5 years. In sum for 2015, the global NEX did relatively 'best' (least losses) to roughly break even, with a recent rise helping both it and the ECO Index over December. Below is the ECO Index in Q4 to late-December:



Source: bigcharts.com

For a yet bigger picture and to see the *huge* falls in energy over 2008 - 2012 that we've addressed in past ECO Reports, step-back for 2007 - November 2015 in the chart below. Included are fossil fuels and interesting & pretty dramatic here is a *huge* fall in Natural Gas (green) - it fell harder than a Solar Index, more than an active alternative energy fund with solar: Natural Gas in this tough period was at a point down by near ~90%!

So we see as lowest/first at very bottom a **Natural Gas tracker, green**. Just above it is a tracker for only **Solar, blue**. Next/third up is a tracker for **Coal, also blue**: it at first did well near **Progressive Energy** in orange, but coal fell hard since 2011 ending below ECO & an active alternative energy fund. Above that is an **active fund, in red** for alternative energy (showing it's pretty hard for an active-fund to regularly beat an Index). Roughly tied here is **ECO Index via an independent tracker, in bold** doing 'better' (less down) long-term than **Natural Gas, Coal, and Solar** - but still far down - ending about the same as an **Oil tracker, also in red** that was initially far up in 2008 falling hard since. After a gap up next higher is **Global new energy NEX via a tracker, brown**. At 'top' is **WilderHill Progressive (WHPRO, via PUW, orange)** for reducing CO2 in major energy - though it has fallen just below nil so here not one theme ends positive, only WHPRO comes close:



Source: bigcharts.com

Or below are same trackers for 2015 to about late-December, in a bit of an inverse performance - relative to that above. **Global NEX Index (via PBD)** is overall Best to Finish. Solar, **in blue** near bottom last 9 years starts out here to Spring rushing out the gate to top - but soon falls hard, rebounding along with ECO in late December. Progressive WHPRO **orange** has a rather poor performance compared to **NEX**; meanwhile **coal** simply plummets. Here are these Trackers YTD 2015 up to late December /late-Q4 2015:



Source: bigcharts.com

Briefly we'll highlight some recent data from the global-in-scope, WilderHill New Energy Global Innovation Index (NEX) - especially since it did 'best' (see Chart above) in 2015. It was the first live Index to capture and track global new energy mainly outside the U.S.; these following data are found in a 09.30.2015 Factsheet at www.nexindex.com

As noted there for start of Q4 2015 (specifically close 30 September) the NEX index was composed of 105 companies listed on 28 exchanges in 23 countries - whose innovative technologies & services focus on an NEX theme of generation and use of cleaner energy, conservation, efficiency and the advancement of renewable energy in general.

Importantly NEX is different from both ECO & WHPRO Indexes in how it's managed & run: for instance the WilderHill New Energy Finance LLC that manages WilderHill New Energy Global Innovation Index (NEX) is a partnership of Bloomberg New Energy Finance, Josh Landess of First Energy Research LLC in the U.S., and Robert Wilder in the U.S.

The NEX Universe

This companies worldwide active in wind, solar, biofuels, hydro, wave and tidal, geothermal and other renewable energy businesses, as well as energy conversion, storage, conservation, efficiency, materials, pollution control, emerging hydrogen and fuel cells. 60 industry analysts are researching NEX Index Components, per http://www.nex-index.com/pdf/2015_09_30_NEX%20Factsheet.pdf

Index Methodology

NEX is a rules-based index and uses equal-weighting methodology modified by sector and market capitalization bands to provide diversification across the clean energy industry. The index is rebalanced quarterly on the last business day of March, June, September and December. At rebalancing no single component can exceed 5% weight.

Eligibility Criteria for Index Constituents:

- Listed on a national exchange or primary listing market
- Three-month average market capitalization of at least \$100 million and significant daily trading volume
- At least 50% of the stocks outside the U.S.
- Bias to pure plays

Index Calculation and Dissemination

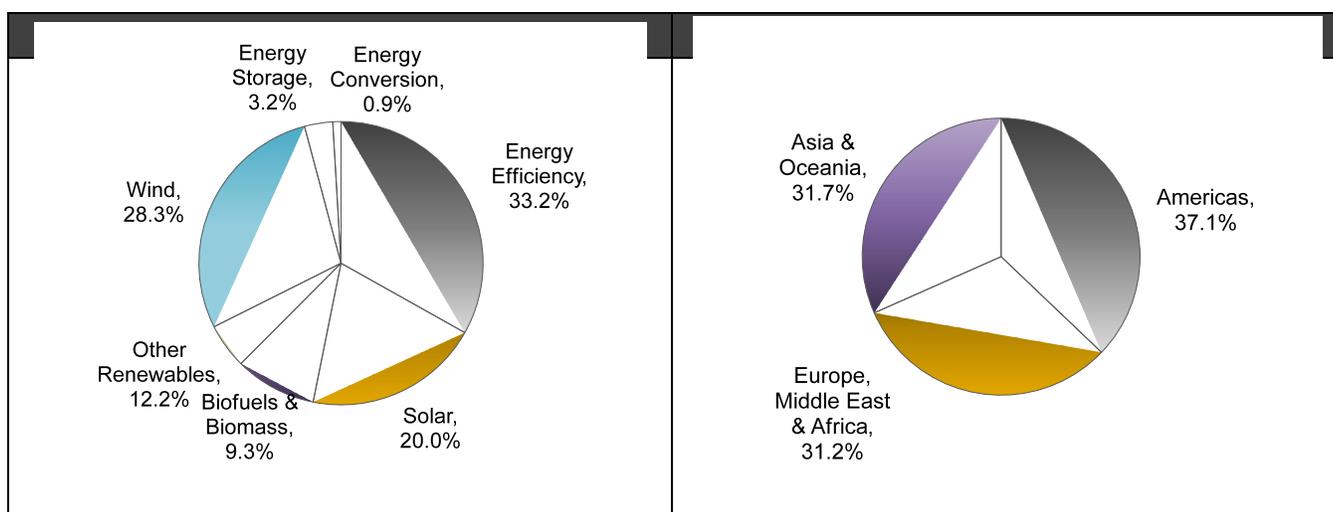
The NEX is calculated by the New York Stock Exchange (NYSE). The NEX closing values are calculated on a 24-hour day that end at 5:30 PM New York time. The end-of-day index calculations use WM closing spot exchange rates as of 4 PM London time and each component stock's closing price on its primary market.

We always welcome inquiries on the NEX, and these can be made as follows:

General Inquiries	info@nexindex.com , +1-760-634-1358
Calculation Support and Subscription	usindex@nyx.com , +1-212-656-4481

Key Statistics		Index Performance		
No. of Constituents	105	Average Return*	-0.1%	
No. of Countries	23	Average Return –	1.9%	
Total Market	264bn	Correlation with MSCI	87.1%	
Largest Company	32bn			
Smallest Company	141m			
		Annualised		MSCI
		1 Year	-17.8%	-8.4%
Average Market	2.5bn	3 Year	11.8%	4.8%
Median Market	901m			
Largest Company	1.91%			
Top 10 holdings	18.00%			

* Since 29th December 2000.



Top 10 Constituents by Weighting

Company	Country	Weighting
Rockwool International A/S	Denmark	1.91%
Seoul Semiconductor Co Ltd	South Korea	1.85%
Johnson Controls Inc	United States	1.83%
Nibe Industrier AB	Sweden	1.81%
Itron Inc	United States	1.80%
Enel Green Power SpA	Italy	1.78%
Cree Inc	United States	1.77%
Huaneng Renewables Corp Ltd	China	1.76%
Gamesa Corp Tecnologica SA	Spain	1.75%
China Power New Energy Development Co Ltd	Hong Kong	1.75%

Notes: Data after the close of trading 30 September 2015. For distribution by region, region is determined by country of listing.

Source: from www.nexindex.com. For more information, please visit www.nexindex.com. WilderHill New Energy Finance, LLC is a separate entity, not affiliated with WilderShares, and assumes no responsibility for the accuracy or completeness of the above data and disclaims all express and implied warranties in connection therewith.

Conclusion:

For 4th Quarter 2015 the Clean Energy Index[®] (ECO) began near 42 and ended near 49 for a gain of roughly +17%. Or since 2015 began near 55, for the Year it's down by around -10%. This rise in Q4 marked something of a change; the ECO Index[®] dropped 2nd & 3rd Quarters reflecting a clean energy story that had declined sharply even as it carries much risk. Or look at the past 2 years: here the clean energy theme and so ECO first rose some +20%, but after fell into red and didn't re-touch that 2014 crest. Declines dominated clean energy's theme in Summer & Fall 2015, and they also loomed over the fossil fuels too; all dominant dirty energy themes fell dramatically and no theme was unscathed. Finally however, in December and quite unlike fossil fuels, a strong rise in just clean/new energy (not so much elsewhere) produced a rather sharp change in direction mainly here.

A word about the U.N. Paris Climate agreement in December: it put clean energy back in a spotlight. Right after that, plus key passage in the U.S. Congress of important Tax Credit extensions for solar and wind, two major Indexes jumped: ECO was up +6% and NEX +4% on December 16th - more after. Related innovations too could also get a boost ahead.

There were no Additions to ECO for Q1 2016. 3 Deletions here were ASYS, BWEN, OESX.

At a differing WilderHill Progressive Energy (WHPRO) there were no Additions for Q1 2016. 4 Deletions there were ABGB, ABY, LXU and WPRT for the start of Q1 2016.

As always we welcome your thoughts and suggestions.

Sincerely,



Dr. Rob Wilder
rwilder@wildershires.com

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Appendix I:

ECO Index (via independent tracker PBW) Descending Weights & Components in late-Q4 on 12/7/2015, or about 3 weeks before rebalance to start Q1 2016. 45 stocks:

<u>Name</u>	<u>HoldingsTicker</u>	<u>Weight</u>
Hanwha Q CELLS Co Ltd ADR	HQCL	5.507
Canadian Solar Inc	CSIQ	4.127
First Solar Inc	FSLR	3.952
Universal Display Corp	OLED	3.792
SunPower Corp	SPWR	3.605
JA Solar Holdings Co Ltd ADR	JASO	3.416
Trina Solar Ltd ADR	TSL	3.358
China Ming Yang Wind Power ADR	MY	3.266
PowerSecure International Inc	POWR	3.131
ITC Holdings Corp	ITC	3.116
Advanced Energy Industries Inc	AEIS	3.111
Gentherm Inc	THRM	3.044
Hexcel Corp	HXL	3.041
Ormat Technologies Inc	ORA	2.983
OPOWER Inc	OPWR	2.874
Silver Spring Networks Inc	SSNI	2.861
Itron Inc	ITRI	2.729
Cree Inc	CREE	2.729
Ameresco Inc	AMRC	2.683
Plug Power Inc	PLUG	2.655
Sky Solar Holdings Ltd ADR	SKYS	2.436
Tesla Motors Inc	TSLA	2.383
SolarCity Corp	SCTY	2.279
Solazyme Inc	SZYM	2.246
Quanta Services Inc	PWR	2.208
Pattern Energy Group Inc	PEGI	2.185
Air Products & Chemicals Inc	APD	2.183
Renewable Energy Group Inc	REGI	2.123
SolarEdge Technologies Inc	SEDG	2.088
Sunrun Inc	RUN	1.918
Amyris Inc	AMRS	1.795
TerraForm Global Inc	GLBL	1.469
TerraForm Power Inc	TERP	1.333
EnerNOC Inc	ENOC	1.189
SunEdison Inc	SUNE	0.991
Maxwell Technologies Inc	MXWL	0.674
ReneSola Ltd ADR	SOL	0.645

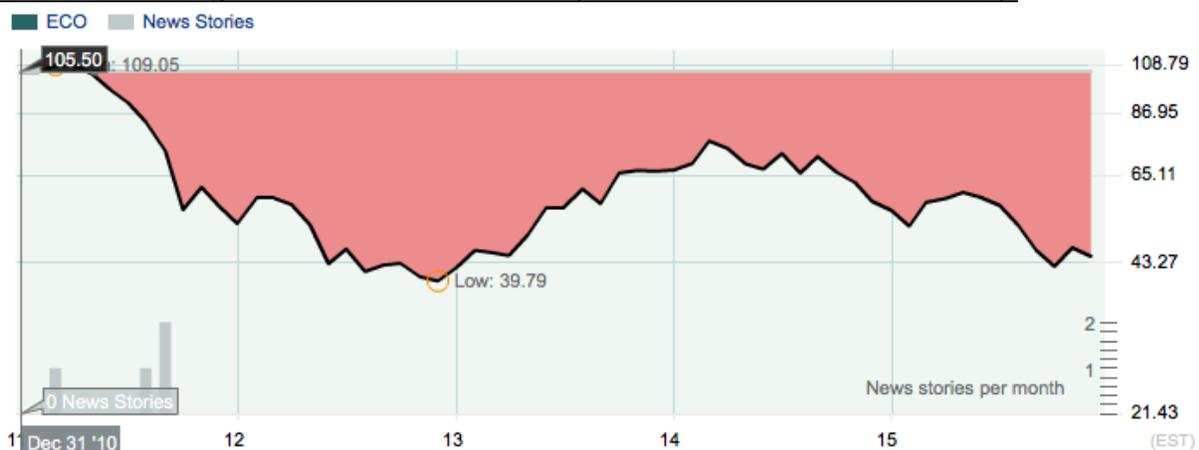
Energy Focus Inc	EFOI	0.637
Hydrogenics Corp	HYGS	0.576
Orion Energy Systems Inc	OESX	0.545
Daqo New Energy Corp ADR	DQ	0.524
Ballard Power Systems Inc	BLDP	0.514
Amtech Systems Inc	ASYS	0.439
Broadwind Energy Inc	BWEN	0.388
Enphase Energy Inc	ENPH	0.252

ECO Index for past 2 years from December 2013 - to late-December 2015. Over this period the clean energy theme reached a High of 82 in March 2014 - yet after by November 2015 it had fallen steeply to touch 42 - before rising somewhat in late December 2015:



Source: bigcharts.com

For a different perspective with very, very pronounced red/huge losses going from about 105 at start of 2011, to about 40 in 2012 - here's last 5 years to Fall 2015. This shows some of the tremendous volatility found here & how this clean energy sector as captured by ECO 'can and does at times drop like a rock' - notably this was again made clear in Q3 when ECO had again touched down near 40 (it would rise some in December):



Source: bigcharts.com

Appendix II, ECO Index for Start of the New Quarter:

INDEX (ECO) SECTOR & STOCK WEIGHTS FOR START OF Q1 2016. 42 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 - 27% sector weight (9 stocks @2.94% each; +1 banded)

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

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

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

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

Hanwha Q Cells, HQCL. Solar, integrated from poly through modules.

Hexcel, HXL. Light composites, in wind blades & spars, aerospace, vehicles.

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

Ormat, ORA. Geothermal, works 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, modules; China-based.

Power Delivery & Conservation - 21% sector weight (7 stocks @2.85%; +2 *banded)

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

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

**Energy Focus*, EFOI. Efficiency, LEDs and entire lighting systems solutions.

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

Itron, ITRI. Meters, utility energy monitoring, measurement & management.

ITC Holdings, ITC. Grid transmission, better integration for wind/renewables.

Quanta Services, PWR. Infrastructure, modernizing grid & power transmission.

SunEdison, SUNE. Producer of polysilicon; also growing its solar services.

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

Greener Utilities - 20% sector weight (7 stocks @2.85% each)

Pattern Energy, PEGI. Wind farms, solar may be added too for GW sized PPAs.

Opower, OPWR. Utility software, advanced cloud based, customer-interfacing.

Silver Spring Networks, SSNI. Smart grid, two-way communications aids Utilities.

Sky Solar, SKYS. Solar farms, creating & operating utility-scale projects.

Sunrun, RUN. Residential solar systems, lease, PPA or purchase rooftop PV.

TerraForm Global, GLBL. Owns operates renewable assets in emerging nations.

TerraForm Power, TERP. Owns operates solar/wind in developed regions, yieldco.

Energy Conversion - 13% sector weight (5 stocks @2.40% each; +2 *banded stocks)

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

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

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

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

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

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

SolarEdge Technologies, SEDG. Inverters: makes solar optimizers, inverters.

Energy Storage - 10% sector weight (4 stocks @2.37%; +1 *banded stock)

**Hydrogenics*, HYGS. Hydrogen, electrolysis generation & fuel cells, H2 storage.

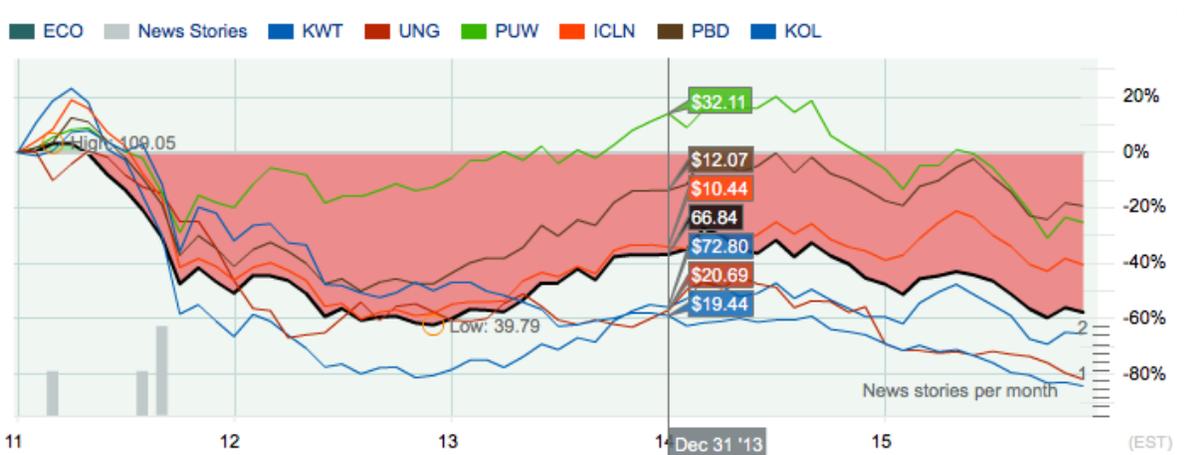
Maxwell, MXWL. Ultracapacitors, an alternative assisting batteries in hybrids.

PowerSecure, POWR. Demand response, smarter grid, distributed generation.
 SolarCity, SCTY. Solar+Energy Storage, for homes, businesses, governments.
 Tesla Motors, TSLA. Electric vehicles, pure-play in EVs and energy storage.

Cleaner Fuels - 9% sector weight (4 stocks @2.25% each)

Air Products & Chemicals, APD. Hydrogen, is a supplier of industrial gases.
 Amyris, AMRS. Biotech, speculative R&D in renewable fuels for transportation.
 Renewable Energy Group, REGI. Biodiesel, natural fats, oils, greases to biofuels.
 Solazyme, SZYM. Biofuels, microalgae grown w/o sun, drop-in diesel substitute.

ECO & some other recent 'tough times' themes the past 5 years to late 2015 (but Chart does not reflect recent gains of December among clean energy themes):



Source: Bigcharts.com

As seen in **ECO** (in bold) and in others, the last years were **very rough** for many themes in clean, alternative, even traditional energy. For example despite **ECO** falling hard and so ending this period down near -50%, it is still here 'above' a tracker for a **Solar-only** Index/ETF (**blue**), a tracker for **Coal** also in **blue** at very bottom, and a **Natural Gas** Index/ETF near bottom (**burnt orange**): recent years have been remarkably tough given robust declines in energy themes!

Bucking a strongly negative finish of those themes is global new energy NEX, **brown**, finishing at very top (tracker **PBD**). Note too **light green** near top ironically is 'brown-themed' WilderHill **Progressive Energy** Index (WHPRO) that's also less negative this period; its independent tracker (**PUW**) hit its 2011 nadir on less downturn. Clean energy, natural gas, & coal themes moved down harshly - with global NEX and WHPRO recovering-somewhat, comparatively speaking.

Appendix III: WHPRO Index (via an independent tracker PUW) Descending Component weights in late-Q4 2015 on 12/7/2015, or about 3 weeks before the rebalance to start Q1 2016. 45 Stocks:

<u>Name</u>	<u>HoldingsTicker</u>	<u>Weight</u>
Tata Motors Ltd ADR	TTM	3.290
Cosan Ltd	CZZ	3.237
Tenneco Inc	TEN	3.142
Acuity Brands Inc	AYI	3.027
Altra Industrial Motion Corp	AIMC	2.963
Woodward Inc	WWD	2.906
EnerSys	ENS	2.847
MasTec Inc	MTZ	2.785
Methanex Corp	MEOH	2.741
Corning Inc	GLW	2.723
AO Smith Corp	AOS	2.719
Green Plains Inc	GPRE	2.715
Koninklijke Philips NV	PHG	2.628
Emerson Electric Co	EMR	2.61
Johnson Controls Inc	JCI	2.607
Eaton Corp PLC	ETN	2.597
Owens Corning	OC	2.58
ESCO Technologies Inc	ESE	2.554
General Cable Corp	BGC	2.527
Apogee Enterprises Inc	APOG	2.493
Regal Beloit Corp	RBC	2.49
Chicago Bridge & Iron Co NV	CBI	2.452
Chart Industries Inc	GTLS	2.451
Andersons Inc/The	ANDE	2.401
WABCO Holdings Inc	WBC	2.358
Cia Energetica de Minas ADR	CIG	2.349
Sasol Ltd ADR	SSL	2.328
Veeco Instruments Inc	VECO	2.295
NRG Yield Inc	NYLD	2.243
Hannon Armstrong Sustainable	HASI	2.231
Calpine Corp	CPN	2.199
Covanta Holding Corp	CVA	2.153
McDermott International Inc	MDR	2.096
Clean Energy Fuels Corp	CLNE	1.993
Abengoa Yield plc	ABY	1.936
Range Resources Corp	RRC	1.904
Golar LNG Ltd	GLNG	1.726
Chesapeake Energy Corp	CHK	1.403
Southwestern Energy Co	SWN	1.396
Abengoa SA ADR	ABGB	0.998
Kandi Technologies Group Inc	KNDI	0.837
LSB Industries Inc	LXU	0.765

Luxfer Holdings PLC ADR	LXFR	0.477
Power Solutions Intl Inc	PSIX	0.459
Westport Innovations Inc	WPRT	0.371

First, is just Progressive Energy Index (WHPRO) in a past 1 year to Q4 (mid-December) 2015 that demonstrates an ample 'sea of red' since a High around 268:



Source: bigcharts.com

Here, in the Same Period:

Global New Energy theme (NEX, in red) as noted is noticeably 'better' than WHPRO here - as Clean Energy (ECO, blue) moved remarkably closely to WHPRO until December - when ECO then rises sharply as WHPRO maintains its slide. For comparative purposes here again are independent trackers for Progressive (**bold**), Clean Energy (PBW, blue), and closest to regaining nil is Global Clean Energy (tracker PBD, red) seen to mid-December:



Source: bigcharts.com

Appendix IV: WHPRO Index for start of New Quarter.

Sectors & Stock Weightings: WilderHill Progressive Energy Index (WHPRO) for start of Q1 2016. 41 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 - 20% Sector Weight (7 stocks @2.78% each +1 *banded stock)

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

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

**Clean Energy Fuels*, CLNE. Natural gas fuel integration; for use in fleet vehicles.

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

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

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

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

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

Conversion & Storage - 20% Sector weight (8 stocks @2.50% each)

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

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

Chicago Bridge & Iron, CBI. Engineering, natural gas, next-gen nuclear designs.

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

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.

Better Efficiency - 23% Sector Weight (9 stocks @2.55% each)

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.

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.

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

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

New Energy Activity - 13% Sector weight (5 stocks @2.60% each).

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

Hannon Armstrong, HASI. Capital, Infrastructure & finance for energy efficiency.

Johnson Controls, JCI. Building controls, also advanced hybrid vehicle systems.

Owens Corning, OC. Materials lightening, building insulation composite materials.

Veeco Instruments, VECO. Design, manufactures equipment for LED production.

Emission Reduction - 16% Sector Weight (6 stocks @2.50% each +2 *banded)

Corning, GLW. Diverse, activity includes emissions reduction, filters, and catalysts.

Kandi Technologies, KNDI. Developing small gasoline and urban electric vehicles.

**Luxfer Holdings PLC*, LXFR. Advanced materials, reduced emissions, gaseous storage.

McDermott, MDR. Infrastructure, reduces coal emissions, constructs WtE facilities.

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 - 8% Sector weight (3 stocks @2.66% each)

Calpine, CPN. Natural Gas & Geothermal, North America, lower-carbon assets
Companhia Energetica de Minas Cemig, CIG. Brazil Utility, large hydroelectric.
NRG Yield, NYLD. Contracted power generation and thermal, also some renewables.

Chart for WHPRO Index (bold) Past 5 years to mid-Q3 - vs an Independent [ECO tracker](#):



Source: Bigcharts.com

WHPRO Index last 5 years to late-Q4 2015. This includes Spring 2011 when it was up near 280 - and still further up in Summer 2014 near 315 - to Q4 2015 dropping down here to nearer 182. Still, it has moved unlike some ‘green energy’ themes; its low Fall 2011 (near 185) actually was relatively ‘better’ than lows put in by many other various new/clean energy themes last 5 years. Much different for example is an ECO tracker, in blue that had dropped hard over 2008 to 2013. By contrast WHPRO last 5 years generally had at first fallen less - but that changed over 2014- through Q4 2015, as WHPRO fell relatively-speaking hard extending its own losses.

Appendix V: WilderHill New Energy Global Innovation Index (NEX) late-Q4 2016 via an independent tracker (PBD) on 12/7/15, about 4 weeks before Rebalance to start Q1 2016.

Name	Holdings/Ticker	Weight
Universal Display Corp	OLED	2.514
Seoul Semiconductor Co Ltd	046890 KS	2.141
Gamesa Corp Tecnologica SA	GAM	2.103
Acuity Brands Inc	AYI	2.052
Meidensha Corp	6508	2.039
Nordex SE	NDX1	2.035
Vestas Wind Systems A/S	VWS DC	2.005
Nibe Industrier AB	NIBEB SS	1.985
AIXTRON SE	AIXA	1.94
AO Smith Corp	AOS	1.897
Enel Green Power SpA	EGPW	1.859
Itron Inc	ITRI	1.852
Cree Inc	CREE	1.807
Kingspan Group PLC	KSP	1.768
Johnson Controls Inc	JCI	1.767
Rockwool International A/S	ROCKB DC	1.747
Wasion Group Holdings Ltd	3393	1.719
EDP Renovaveis SA	EDPR	1.718
China Power New Energy Dev.	735	1.677
Sao Martinho SA	SMT03	1.647
SMA Solar Technology AG	S92	1.601
Saeta Yield SA	SAY	1.585
Xinjiang Goldwind Science	2208	1.574
Veeco Instruments Inc	VECO	1.551
Canadian Solar Inc	CSIQ	1.501
Renewables Infrastructure Ltd	TRIG LN	1.472
TransAlta Renewables Inc	RNW	1.453
Greencoat UK Wind PLC/Funds	UKW LN	1.448
Tesla Motors Inc	TSLA	1.445
First Solar Inc	FSLR	1.445
Gigasolar Materials Corp	3691	1.433
China High Speed Transmission	658	1.403
Huaneng Renewables Corp Ltd	958	1.401
Epistar Corp	2448	1.391
China Datang Renewable Power	1798	1.386
SunPower Corp	SPWR	1.293
Novozymes A/S	NZYMB DC	1.263
Pattern Energy Group Inc	PEGI	1.259
Xinyi Solar Holdings Ltd	968	1.241
Energy Absolute PCL	EA-R TB	1.24
Trina Solar Ltd ADR	TSL	1.228
Green Plains Inc	GPRE	1.191

China Longyuan Power Ltd	916		1.19
China Everbright International Ltd	257		1.183
Shunfeng Intl. Clean Energy	1165		1.151
GCL-Poly Energy Holdings Ltd		3800	1.027
GCP Infrastructure Invest. Ltd	GCP LN		1.017
Covanta Holding Corp		CVA	0.937
Mighty River Power Ltd		MRP	0.875
SolarCity Corp	SCTY		0.861
SolarEdge Technologies Inc	SEDG		0.814
Verbund AG	VER AV		0.807
Contact Energy Ltd	CEN		0.806
Innergex Renewable Energy Inc	INE		0.769
Ormat Technologies Inc	ORA		0.764
Energy Development Corp	EDC		0.761
Vivint Solar Inc	VSLR		0.741
Byd Co Ltd	1211		0.706
GS Yuasa Corp	6674		0.64
Aerovironment Inc	AVAV		0.593
Saft Groupe SA	SAFT FP		0.589
FDG Electric Vehicles Ltd	729		0.574
PowerSecure International Inc	POWR		0.543
OPOWER Inc	OPWR		0.511
Ameresco Inc	AMRC		0.509
Silver Spring Networks Inc		SSNI	0.496
Boralex Inc	BLX		0.468
CENTROTEC Sustainable AG		CEV	0.458
Ricardo PLC	RCDO LN		0.454
Taewoong Co Ltd	044490 KS		0.445
Falck Renewables SpA	FKR		0.434
Sino-American Silicon Products	5483		0.425
Everlight Electronics Co Ltd	2393		0.42
Abengoa Yield plc	ABY		0.418
Neo Solar Power Corp	3576		0.411
Infinis Energy Plc	INFI LN		0.411
Utilitywise PLC		UTW LN	0.385
REC Silicon ASA	REC		0.376
Motech Industries Inc		6244	0.372
Dialight PLC	DIA LN		0.371
United Photovoltaics Group Ltd	686		0.352
Solazyme Inc	SZYM		0.351
JA Solar Holdings Co Ltd ADR		JASO	0.349
West Holdings Corp	1407		0.346
Renewable Energy Group Inc	REGI		0.338
Takuma Co Ltd	6013		0.329
China Singyes Solar Technologies	750		0.321
Capital Stage AG	CAP		0.313

Albioma SA	ABIO FP	0.302
SPCG PCL	SPCG-R TB	0.281
Maxwell Technologies Inc	MXWL	0.268
TerraForm Power Inc	TERP	0.26
Sky Solar Holdings Ltd ADR	SKYS	0.258
Meyer Burger Technology AG	MBTN SW	0.236
EnerNOC Inc	ENOC	0.233
Ballard Power Systems Inc	BLD	0.229
Plug Power Inc	PLUG	0.225
Abengoa SA	ABG/P	0.221
Akenerji Elektrik Uretim AS	AKENR TI	0.219
SunEdison Inc	SUNE	0.205
Intelligent Energy Holdings PLC	IEH LN	0.181
Blue Solutions	BLUE FP	0.171
Enphase Energy Inc	ENPH	0.154
LSB Industries Inc	LXU	0.069

For current values, 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

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

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

Below is **NEX Index** vs NYSE Arca Oil vs NYMEX Oil vs. MSCI World, for ~10 years to latter 2015. Note here **Global NEX** that was near top late 2007 - since then has 'lagged'; in this period it fell very hard over 2008 to 2013 reaching near a bottom from about a decade prior - in 2003:

01 January 2006 - 30 September 2015. Note: Data are re-based to 100 on 30 December 2005.



Source: Bloomberg New Energy Finance

*Global NEX Index only is a unique Partnership of Bloomberg New Energy Finance; Josh Landess of First Energy Research; and Dr. Rob Wilder, for WilderHill New Energy Finance LLC.
