



Q2 2016 Quarterly Report: WilderHill Clean Energy Index[®], June 30, 2016

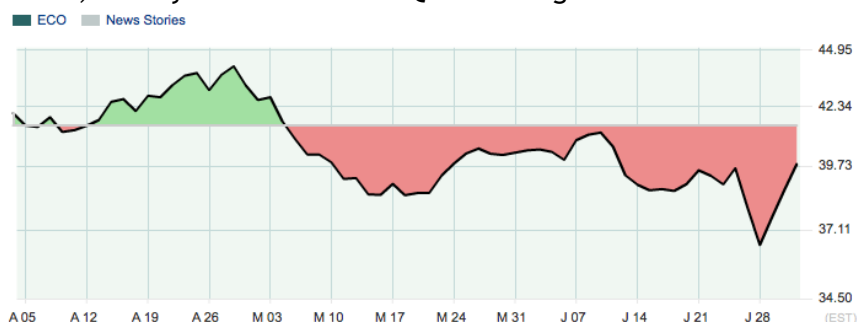
For 2nd Quarter 2016 the Clean Energy Index[®] (ECO) began near 42 and ended near 40, for a loss of about -5%; it's down too some -20% Year to Date. ECO Index[®] also fell most of 2015, reflecting a clean energy theme that has declined sharply at times while carrying much risk. Or look back to start of 2014: the clean energy theme and so ECO at first gained, then fell back and didn't surpass an earlier high in 2014. After a rise in 2015, declines dominated broken by sharp gains late last year, then clean energy fell again Q1 2016 going through Q2. Yet, it must also be said that the major fossil fuels have fallen much harder still than ECO: oil, coal and natural gas have all dropped even farther over the last five years.

An exception is the Progressive Energy Index[®] (WHPRO) excluding solar, wind, & renewables - WHPRO is a more 'brown' theme for better efficiency & reducing CO2 in dominant energy. At times it has moved very differently than ECO: WHPRO hasn't shown the volatility of ECO, that 'can & does at times drop like a rock'. Notably too WHPRO went positive early this Year to Date by March and went over +15%; it has so far stayed positive in a tough year.

Regarding WilderHill[®] New Energy Global Innovation Index (NEX) for clean energy *worldwide* mostly outside the U.S. - the NEX & the WHPRO themes have traded places as leader among WilderHill Indexes over a past 5 years period. Starting say, from 5 years ago, WHPRO & NEX have shown some non-correlation yet mid-June coincidentally came together to nearly intersect around -20%, well above ECO (that previously at times did 'best' of the 3). The Brexit vote sent WilderHill themes down along with world markets, then rebounding after; still, once again more traditional 'dirty energy' has fallen as hard (or even harder).

To sum up the last 5 years among 3 differing WilderHill Indexes, ECO has fallen hard down near -60%, reflecting in part very big drops then in solar (an independent solar-only index has dropped near -90% at times). Notably too that pain is widespread; coal, oil, natural gas all declined much more than ECO, as seen on p.9. By contrast for last 5 years WHPRO & NEX themes are at mid-June point coincidentally as noted nearly 'tied' down about -20%.

For a bit of technical-side information there was unusually an intra-Quarter Deletion from ECO early in Q2. Also, another constituent was bought-out in Q2, so it moved sideways over the Quarter (as happens at times) and was removed as more typical at end of 2nd Quarter. Below, mainly in red is ECO in Q2 including a fall on Brexit news and rebound late June:



Source: bigcharts.com

For a bigger picture including a long great energy crash over 2008 - 2012, step-back to view from January 1, 2007 to June 1, 2016 in a Chart below. Included are fossil fuels and rather dramatic is a fall in Natural Gas (green): Natural Gas this period was down near ~90%!

So we see when starting from very lowest at bottom, a **Natural Gas tracker in green**. Just above it is a tracker for **Solar, in blue**, also far down. Next/third from bottom is a tracker for **Coal, also blue**: it initially did 'well', once near **Progressive Energy** in orange, but fell hard 2011-2015 before rising in 2016 yet it ends below ECO & an active energy fund.

Just above that is an **active fund, red** for alternative energy (that shows it's pretty hard for an active-fund to regularly beat an Index) with some clumping of returns for 3 pretty different themes in clean vs. traditional energy that are nonetheless all down near -70%.

Roughly tied here is **ECO Index via independent tracker in bold**, 'better' (or down less) than **Natural Gas, Coal, and Solar**. ECO is at this point about same as Oil, but still far down. ECO thus ends here near an **Oil tracker also red** that initially was far up but fell very hard. Higher up after a notable gap is **Global new energy NEX via tracker, brown**. Well at 'top' is **WilderHill Progressive (WHPRO via PUW, orange)** for reducing CO2 in major energy - yet below nil too - so no theme ends 'above 0' here, only WHPRO comes nearest positive:



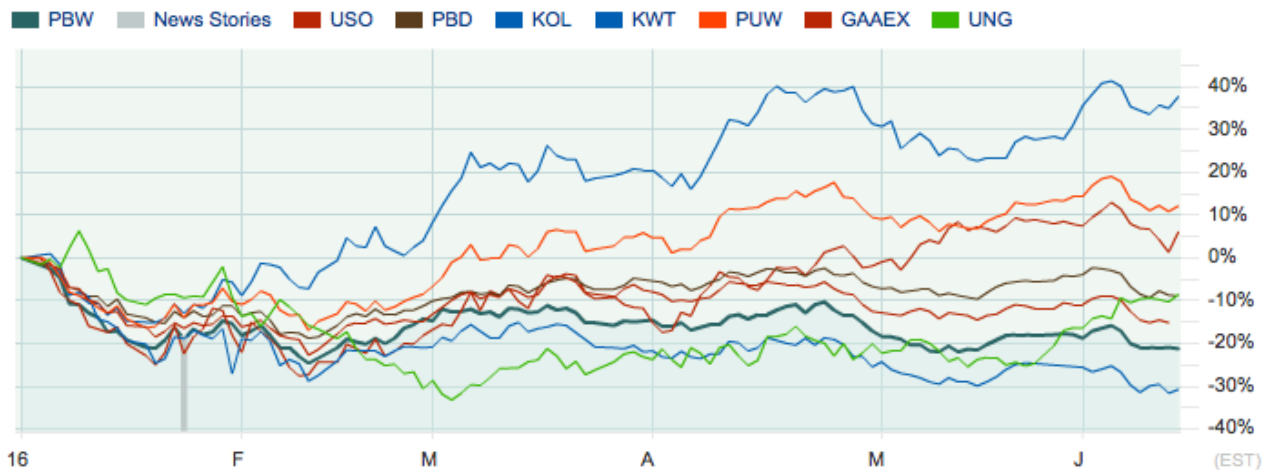
Source: bigcharts.com

Or, below are same trackers for first half (1H) 2016 to mid-June, which shows a quite different performance Year to Date. Three leaders all positive are **coal** (via tracker KOL) in blue that's rebounded some +40 after being hugely down several years, then is **Progressive WHPRO orange** (via tracker PUW) up by near +15%, and then **Oil** is just up around +5%.

The rest are negative YTD, though 'best' here (least down) are two, **natural gas** and **NEX tracker** are virtually tied around -10% in mid-June. An Active fund for alternative energy is down around -15%. ECO is down a bit around -20%, slightly here lagging an active fund. And very hard times have continued for solar, a tracker for it in **blue** once again plummeted.

Here then are these Trackers First Half of 2016 YTD to mid-June:

1H 2016 YTD to mid-June



Source: bigcharts.com

Inside ECO Index, and WHPRO Index: a brief view

Step in now for a close-up, and it's possible to consider for a moment what did relatively best in Q2 inside 2 Indexes with a look at **Top 10** performers in WilderHill Indexes, ECO and WHPRO. Here's 2nd Quarter's Top 10 in ECO captured by a tracker (PBW) on June 15th, about 2 weeks before Quarterly rebalance and so it reflects somewhat a prior 10 weeks:

<u>Name</u>	<u>Ticker</u>	<u>Weight</u>
Universal Display Corp	OLED	4.335
Ormat Technologies Inc	ORA	3.993
Tesla Motors Inc	TSLA	3.867
China Ming Yang Wind Power	MY	3.782
Pattern Energy Group Inc	PEGI	3.777
SolarCity Corp	SCTY	3.673
Advanced Energy Industries	AEIS	3.660
Hexcel Corp	HXL	3.578
ITC Holdings Corp	ITC	3.485
Itron Inc	ITRI	3.459

Also, the % change below from their-own 52-week lows, for change over a longer period. Note that just one constituent is (barely) over +100% from its own lows the past 52 weeks:

OLED: **+109.78%**

ORA: **+31.35%**

TSLA: **+51.78%**

MY: **+29.03%**

PEGI: **+43.27%**

SCTY: **+30.00%**

AEIS: **+78.27%**

HXL: **+10.36%**

ITC: **+48.07%**

ITRI: **+51.13%**

OLED is top weighted above in ECO for its Q2 movement indicating a recent run up in Q2; plus it's also up about +109% past 52 weeks for a longer upswing too, OLED in Organic light emitting diodes, efficient displays. Next down is very different ORA that's in Geothermal and recovered heat energy. Next TSLA is in Electric vehicles, a pure-play in EVs and energy storage. Then, again very different is MY in Wind and large turbines. Next PEGI is in Wind farms, and power purchase agreements. SCTY is Solar+energy storage in homes, businesses, governments. Next AEIS is in Power conditioning, inverters, thin film deposition. Each is very different... Next HXL is in Light composites, used in wind blades, aerospace, vehicles. Next is ITC in Grid transmission, better integration for wind/renewables. Last in Top 10 as of June 15, ITRI is in Meters, utility energy monitoring, measurement & management.

Perhaps the only 'pattern' to jump out above is there is No strong pattern. In past there may have been a Quarter when, say solar jumps out a few weeks before rebalance occurs, but there's been Many Quarters since solar has done this. Here for Q2 2016, there is instead wide representation from wind power, efficient displays, geothermal, grid transmission, metering, electric vehicles and storage, etc - but no one theme is dominating above.

Recall too, this was a down Quarter overall for the whole clean energy theme and so ECO. Thus these are up for past 52 weeks but none hugely (unlike some Quarters in the past) and active funds as well, have had a rather difficult 2nd Quarter indicating it's been tough time including the Year to Date Period for many themes in clean and new energy.

By contrast, WHPRO Index has been up since March, for Year to Date 2016. So a bit of an exception as noted has been Progressive Energy Index (WHPRO) - and here's those Top 10 data for a tracker for it (PUW) in just the recent 2nd Quarter again as of June 15th:

<u>Name</u>	<u>Ticker</u>	<u>Weight</u>
Southwestern Energy Co	SWN	4.485
Range Resources Corp	RRC	3.562
McDermott International Inc	MDR	3.360
Tata Motors Ltd ADR	TTM	3.358
Cosan Ltd	CZZ	3.341
Green Plains Inc	GPRE	3.289
Tenneco Inc	TEN	2.904
Andersons Inc/The	ANDE	2.848
Chart Industries Inc	GTLS	2.840
General Cable Corp	BGC	2.825

Here's their % change from their own 52-week lows for change over a longer period; note however that half this list are here up by over +100% from their own lows past 52 weeks:

- SWN: +153.60%
- RRC: +120.80%
- MDR: +104.32%
- TTM: +69.90%
- CZZ: +135.63%
- GPRE: +46.81%
- TEN: +50.91%
- ANDE: +40.13%
- GTLS: +87.42%
- BGC: +109.65%

Top weighted above for Q2 moves, SWN is also up about +150% past 52 weeks for a longer upswing too; it's in natural gas as a producer also in midstream services. Next down RRC is in natural gas and in Appalachia & Gulf Coast. Next MDR is in better energy Infrastructure, reducing coal emissions, and Waste to Energy facilities. Next TTM is in smaller & 'nano-sized' vehicles, it's India-based with worldwide sales. Next CZZ is in biofuels, Brazil-based using sugarcane feedstock and an ethanol exporter. Next GPRE is also in biofuels, ethanol; it uses domestic corn feedstock. Next TEN is in automotive end-of-pipe emission controls, catalytic converters. Next ANDE is an ethanol producer, corn-based, with rail group in fuel transport. Lastly GTLS is also in natural gas, liquefied gas storage/ transport, efficiency.

In Q2 for WHPRO there's some common characteristics here in Top 10 with representation notably from natural gas production, use & LNG; there is also emissions reduction, end-of-pipe pollution controls, smaller more fuel-efficient cars, and biofuels.

Lastly Top 10 in NEX (via a tracker PBD) were Johnson Controls, Tesla Motors, BYD, Kandi Technologies, Sao Martinho, Energy Absolute PCL, Green Plains, Renewable Energy Group, Verbio Vereinigte BioEnergie, and Acuity Brands, once again reflecting a wide spectrum.

We can also look briefly at a **Bottom 10** too starting with the ECO Index (excluding the *banded stocks which are under \$200M in market cap and so weighted just 0.5%):

Gentherm Inc	THRM	2.968
JA Solar Holdings Co Ltd ADR	JASO	2.921
TerraForm Power Inc	TERP	2.873
Plug Power Inc	PLUG	2.842
SolarEdge Technologies Inc	SEDG	2.799
Cree Inc	CREE	2.778
First Solar Inc	FSLR	2.632
SunPower Corp	SPWR	2.594
Trina Solar Ltd ADR	TSL	2.574
Amyris Inc	AMRS	1.373

Looking above, solar dominates among the biggest loses, with 6 of the above 10.

In WHPRO, its relatively biggest loses over Q2 to June 15 were:

Eaton Corp PLC	ETN	2.322
WABCO Holdings Inc	WBC	2.314
Covanta Holding Corp	CVA	2.251
Emerson Electric Co	EMR	2.248
Chicago Bridge & Iron Co NV	CBI	2.228
Veeco Instruments Inc	VECO	2.205
Regal Beloit Corp	RBC	2.202
Koninklijke Philips NV	PHG	2.134
Golar LNG Ltd	GLNG	1.965
Cia Energetica de Minas Gerais	CIG	1.758

No one single theme dominates here (as much as perhaps solar did in the ECO declines).

Conclusion:

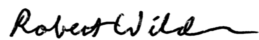
For 2nd Quarter 2016 the Clean Energy Index[®] (ECO) began near 42 and ended near 40, for a loss of about -5%; it's down too some -20% Year to Date. ECO Index[®] also fell most of 2015, reflecting a clean energy theme that has declined sharply at times while carrying much risk. Or look back to start of 2014: the clean energy theme and so ECO at first gained, then fell back and didn't surpass an earlier high in 2014. After a rise in 2015, declines dominated broken by sharp gains late last year, then clean energy fell again Q1 2016 going through Q2. Yet, it must also be said that the major fossil fuels have fallen much harder still than ECO: oil, coal and natural gas have all dropped even farther over the last five years.

Progressive Energy Index (WHPRO) year to date was instead volatile upside - even as clean & global new energy - fossil fuels oil, natural gas, and coal - were down year to date. For Q1 plus Q2, WHPRO relatively 'outperformed' upside including vs. ECO and vs. WilderHill[®] New Energy Global Innovation (NEX) for new energy *worldwide* mostly outside the U.S.

As noted unusually there was one intra-Quarter Deletion from ECO early in Q2, SUNE. Another constituent, OPWR, was bought out during Q2 and so it moved sideways (as happens at times) and was removed as more typical end of 2nd Quarter. There were in total 4 deletions from ECO to start Q3: AMRS, MY, OPWR (and SUNE during Q2); and 3 additions to start Q3: AMSC, FCEL, SQM. At much different WilderHill Progressive Energy Index (WHPRO) to start Q3 2016, there were 2 additions, ALB, FMC; there was one deletion of PHG.

As always we welcome your thoughts and suggestions.

Sincerely,



Dr. Rob Wilder
rwilder@wildershires.com

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Appendix I:

ECO Index (via an independent tracker PBW) for Descending Weights & Components in late-Q2 on 6/15/2016 or about 2 weeks before the rebalance to start Q3. 39 stocks:

<u>Name</u>	<u>Ticker</u>	<u>Weight</u>
Universal Display Corp	OLED	4.335
Ormat Technologies Inc	ORA	3.993
Tesla Motors Inc	TSLA	3.867
China Ming Yang Wind Power	MY	3.782
Pattern Energy Group Inc	PEGI	3.777
SolarCity Corp	SCTY	3.673
Advanced Energy Industries	AEIS	3.66
Hexcel Corp	HXL	3.578
ITC Holdings Corp	ITC	3.485
Itron Inc	ITRI	3.459
Quanta Services Inc	PWR	3.361
Ballard Power Systems Inc	BLDP	3.323
TerraForm Global Inc	GLBL	3.245
Canadian Solar Inc	CSIQ	3.171
Silver Spring Networks Inc	SSNI	3.139
Sunrun Inc	RUN	3.101
Ameresco Inc	AMRC	3.072
Air Products & Chemicals Inc	APD	3.05
Hanwha Q CELLS Co Ltd ADR	HQCL	3.025
Renewable Energy Group Inc	REGI	2.992
Gentherm Inc	THRM	2.968
JA Solar Holdings Co Ltd ADR	JASO	2.921
TerraForm Power Inc	TERP	2.873
Plug Power Inc	PLUG	2.842
SolarEdge Technologies Inc	SEDG	2.799
Cree Inc	CREE	2.778
First Solar Inc	FSLR	2.632
SunPower Corp	SPWR	2.594
Trina Solar Ltd ADR	TSL	2.574
Amyris Inc	AMRS	1.373
Sky Solar Holdings Ltd ADR	SKYS	0.807
Daqo New Energy Corp ADR	DQ	0.702
EnerNOC Inc	ENOC	0.554
Hydrogenics Corp	HYGS	0.542
ReneSola Ltd ADR	SOL	0.512
Enphase Energy Inc	ENPH	0.506
Maxwell Technologies Inc	MXWL	0.496
Energy Focus Inc	EFOI	0.434

*Showing after the intra-quarter removal of one constituent earlier during Q2.

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

INDEX (ECO) SECTOR & STOCK WEIGHTS FOR START OF Q3 2016. 39 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 - 30% sector weight (9 stocks @3.33% each)

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

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 - 19% sector weight (6 stocks @2.91%; +3 *banded)

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

**American Superconductor*, AMSC. Wind, grid conditioning; superconductors.

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.

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

Greener Utilities - 16% sector weight (5 stocks @3.10% each; +1 *banded stock)

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

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, developed nations, yieldco.

Energy Conversion - 17% sector weight (4 stocks @3.75% each; +4 *banded)

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.

**FuelCell Energy*, FCEL. Large fuel cells, high-operating temps, multiple-fuels.

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

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

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

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

Energy Storage - 11% sector weight (3 stocks @3.50% each; +1 *banded stock)

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

SolarCity, SCTY. Solar + Energy Storage, for homes, businesses, governments.

Chemical & Mining Co. of Chile, SQM. Lithium, energy storage, large producer.

Tesla Motors, TSLA. Electric vehicles, pure-play in EVs and energy storage.

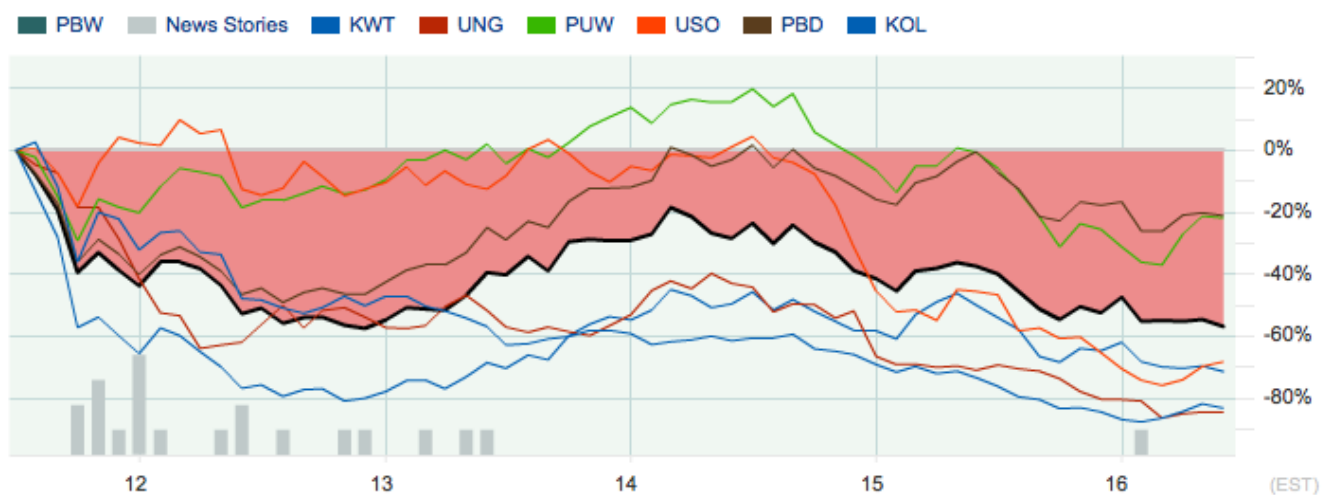
Cleaner Fuels - 7% sector weight (2 stocks @3.25% each; +1 *banded stock)

Air Products & Chemicals, APD. Hydrogen, is a supplier of industrial gases.

**Hydrogenics*, HYGS. Hydrogen, fuel and electrolysis for fuel cells, H2 storage.

Renewable Energy Group, REGI. Biodiesel, natural fats, oils, grease to biofuels.

ECO (via independent tracker, bold) along with 'tough times' clean - and traditional fossil fuel energy themes last 5 years period to June 2016, a time of very strong declines:



Source: Bigcharts.com

As seen in **ECO** (via tracker in **bold**) and several others the past 5 years have been **very rough** for many themes in clean, alternative, and traditional fossil fuel energy. For example despite **ECO** falling hard and so ending this period down near -60%, it still here is well 'above' a tracker for a **Solar-only** Index via tracker (**blue**), also above an **oil** tracker, **orange**, above tracker for **Coal** also **blue** near bottom, and above a **Natural Gas** Tracker finishing bottom (**burnt orange**). These last 5 recent years have clearly been remarkably tough across numerous energy themes!

Also negative 'but with much better' finish and nearly tied are global new energy theme **NEX**, **brown**, finishing near top (tracker **PBD**) - and closely-tied in **light green** (ironically 'brown-themed') is WilderHill **Progressive Energy** Index (**WHPRO**) both relatively 'less down' by -20% for this period. Clean energy, natural gas, oil, & coal themes moved down very harshly since 2014 - with global **NEX** and progressive **WHPRO** declining-somewhat less so comparatively speaking.

Appendix III: WHPRO Index seen via an independent tracker PUW; component weights as seen in late-Q2 2016 on 6/15/2016 or about 2 weeks before the rebalance to start Q3. 40 Stocks:

Name	Ticker	Weight
Southwestern Energy Co	SWN	4.485
Range Resources Corp	RRC	3.562
McDermott International Inc	MDR	3.36
Tata Motors Ltd ADR	TTM	3.358
Cosan Ltd	CZZ	3.341
Green Plains Inc	GPRE	3.289
Tenneco Inc	TEN	2.904
Andersons Inc/The	ANDE	2.848
Chart Industries Inc	GTLS	2.84
General Cable Corp	BGC	2.825
Johnson Controls Inc	JCI	2.804
NRG Yield Inc	NYLD	2.793
Corning Inc	GLW	2.789
Hannon Armstrong Sustainable	HASI	2.762
Acuity Brands Inc	AYI	2.676
Chesapeake Energy Corp	CHK	2.665
MasTec Inc	MTZ	2.639
AO Smith Corp	AOS	2.632
EnerSys	ENS	2.624
Woodward Inc	WWD	2.584
Sasol Ltd ADR	SSL	2.515
Owens Corning	OC	2.505
ESCO Technologies Inc	ESE	2.456
Methanex Corp	MEOH	2.408
Calpine Corp	CPN	2.399
Altra Industrial Motion Corp	AIMC	2.395
Apogee Enterprises Inc	APOG	2.39
Eaton Corp PLC	ETN	2.322
WABCO Holdings Inc	WBC	2.314
Covanta Holding Corp	CVA	2.251
Emerson Electric Co	EMR	2.248
Chicago Bridge & Iron Co NV	CBI	2.228
Veeco Instruments Inc	VECO	2.205
Regal Beloit Corp	RBC	2.202
Koninklijke Philips NV	PHG	2.134
Golar LNG Ltd	GLNG	1.965
Cia Energetica de Minas Gerais	CIG	1.758
Luxfer Holdings PLC ADR	LXFR	0.544
Clean Energy Fuels Corp	CLNE	0.52
Kandi Technologies Group Inc	KNDI	0.46

Appendix IV: WHPRO Index for the start of the New Quarter.

Sectors & Stock Weightings: WilderHill Progressive Energy Index (WHPRO) for start of Q3 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.

Better Efficiency - 22% Sector Weight (8 stocks @2.75% 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
Regal Beloit, RBC. Energy efficient motors, in commercial, industrial, homes etc.
Woodward, WWD. Energy controllers, optimization, industrial turbines in generation.

Conversion & Storage - 24% Sector weight (10 stocks @2.40% each)

Albermarle, ALB. Lithium & Lithium Compounds; for energy storage, transportation.
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.
FMC, FMC. Lithium producer for carbonate, metal, expanding hydroxide capacity.
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.

New Energy Activity - 10% Sector weight (4 stocks @2.50% each).

Eaton, ETN. Hybrids, better electric and fluid power in truck & auto applications.
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 - 14% Sector Weight (5 stocks @2.60% each +2 *banded)

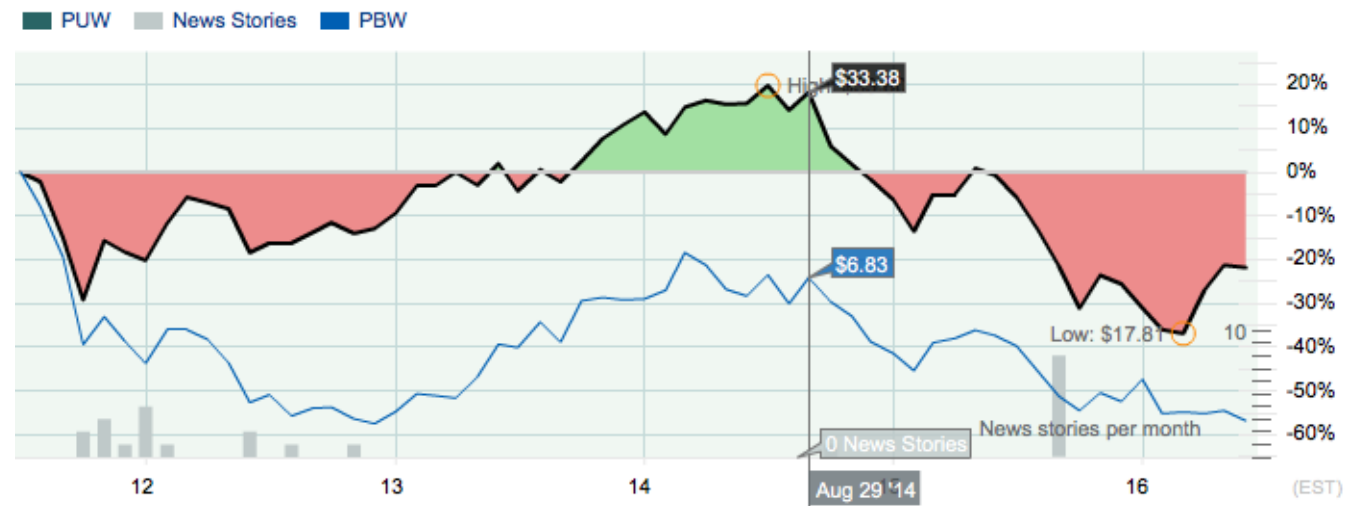
Corning, GLW. Diverse, activity includes emissions reduction, filters, and catalysts.
**Kandi Technologies*, KNDI. Developing small gasoline and urban electric vehicles.
**Luxfer Holdings PLC*, LXFR. Advanced material, reduced emissions, gaseous storage.
McDermott, MDR. Infrastructure, reduces coal emissions, constructs WtE facilities.

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 - 10% Sector weight (4 stocks @2.50% each)

Calpine, CPN. Natural Gas & Geothermal, North America, lower-carbon assets
Companhia Energetica de Minas Cemig, CIG. Brazil Utility, large hydroelectric.
Hannon Armstrong, HASI. Energy efficiency, capital & finance for infrastructure.
NRG Yield, NYLD. Contracted power generation and thermal, also some renewables.

Chart for WHPRO Index via independent tracker (in bold) Past 5 years to June 2016 - versus ECO Index in light blue via independent tracker:



Source: Bigcharts.com

The WHPRO Index last 5 years to June 2016 is seen via a tracker above. This includes a period of WHPRO rising Summer 2011 to Summer 2014 when it hit then a relative high - to its dropping down strongly - then rising so far Year to Date 2016. It has moved here unlike ‘green energy’ themes such as ECO seen in blue. Significantly different over this period, the ECO tracker in blue dropped relatively much harder over 2011 / 2012, and saw less gain first half of 2016

That said they’re both far below their all time highs, ECO Index especially much less so - it having been in 2007 several-fold higher - solar in particular being much higher levels.

Appendix V: WilderHill New Energy Global Innovation Index (NEX) seen late-Q2 2016 via an independent tracker (PBD) on 6/15/16 or ~2 weeks before Rebalance to start Q3. 96 in tracker.:

<u>Name</u>	<u>Ticker</u>		<u>Weight</u>
Johnson Controls Inc	JCI		2.415
Tesla Motors Inc	TSLA		1.996
BYD Co Ltd		1211	0.706
Kandi Technologies Group Inc	KNDI		0.588
Sao Martinho SA	SMT03		1.533
Energy Absolute PCL	EA-R TB		1.349
Green Plains Inc	GPRE		0.517
Renewable Energy Group Inc	REGI		0.397
VERBIO Vereinigte BioEnergie AG	VBK		0.286
Acuity Brands Inc	AYI		2.345
Nordex SE	NDX1		2.222
Kingspan Group PLC	KSP		2.153
Nibe Industrier AB	NIBEB SS		2.117
Xinjiang Goldwind Science & Tech.		2208	2.066
Gamesa Corp Tecnologica SA	GAM		1.909
Vestas Wind Systems A/S	VWS DC		1.867
China High Speed Transmission		658	1.81
Meidensha Corp		6508	1.507
China Everbright International Ltd		257	1.315
SolarCity Corp	SCTY		1.201
Saft Groupe SA	SAFT FP		0.934
FDG Electric Vehicles Ltd		729	0.693
Odelic Co Ltd		6889	0.66
GS Yuasa Corp		6674	0.65
Taewoong Co Ltd	044490 KS		0.57
Ricardo PLC	RCDO LN		0.562
CENTROTEC Sustainable AG	CEV		0.558
Ameresco Inc	AMRC		0.555
Dialight PLC	DIA LN		0.537
China Titans Energy Technology		2188	0.533
Utilitywise PLC	UTW LN		0.457
Ballard Power Systems Inc	BLD		0.382
Takuma Co Ltd		6013	0.332
Enphase Energy Inc	ENPH		0.331
Plug Power Inc	PLUG		0.324
FuelCell Energy Inc	FCEL		0.288
China Singyes Solar Technologies		750	0.25
Blue Solutions	BLUE FP		0.209
Universal Display Corp	OLED		2.741
Itron Inc	ITRI		2.187
Seoul Semiconductor Co Ltd	046890 KS		1.953
Veeco Instruments Inc	VECO		1.899
Wasion Group Holdings Ltd		3393	1.822
Cree Inc	CREE		1.757
Epistar Corp		2448	1.655

Xinyi Solar Holdings Ltd		968	1.402
SMA Solar Technology AG	S92		1.396
SolarEdge Technologies Inc	SEDG		1.144
Canadian Solar Inc	CSIQ		1.107
Gigasolar Materials Corp		3691	0.991
GCL-Poly Energy Holdings Ltd		3800	0.971
First Solar Inc	FSLR		0.919
SunPower Corp	SPWR		0.906
Trina Solar Ltd ADR	TSL		0.898
Shunfeng Intl. Clean Energy		1165	0.856
AIXTRON SE	AIXA		0.758
Samsung SDI Co Ltd	006400 KS		0.745
EnerNOC Inc	ENOC		0.572
Silver Spring Networks Inc	SSNI		0.556
Everlight Electronics Co Ltd		2393	0.497
REC Silicon ASA	REC		0.399
Sino-American Silicon Products Inc		5483	0.336
Motech Industries Inc		6244	0.317
Meyer Burger Technology AG	MBTN SW		0.305
Neo Solar Power Corp		3576	0.291
JA Solar Holdings Co Ltd ADR	JASO		0.291
Maxwell Technologies Inc	MXWL		0.176
GCP Infrastructure Investments Ltd	GCP LN		1.321
Novozymes A/S	NZYMB DC		1.422
Pattern Energy Group Inc	PEGI		2.298
TransAlta Renewables Inc	RNW		2.179
Huaneng Renewables Corp Ltd		958	2.145
China Longyuan Power Group Corp		916	2.131
Saeta Yield SA	SAY		2.098
Renewables Infrastructure Group	TRIG LN		1.965
EDP Renovaveis SA	EDPR		1.926
China Power New Energy Devel.		735	1.469
Atlantica Yield plc	ABY		1.287
Verbund AG	VER AV		0.984
Contact Energy Ltd	CEN		0.978
Mighty River Power Ltd	MRP		0.949
Ormat Technologies Inc	ORA		0.942
Innergex Renewable Energy Inc	INE		0.938
Energy Development Corp	EDC		0.766
Boralex Inc	BLX		0.697
Greencoat UK Wind PLC/Funds	UKW LN		0.576
TerraForm Power Inc	TERP		0.563
China Datang Corp Renewable		1798	0.511
Falck Renewables SpA	FKR		0.476
Albioma SA	ABIO FP		0.403
West Holdings Corp		1407	0.365
Vivint Solar Inc	VSLR		0.365
SPCG PCL	SPCG-R TB		0.361
United Photovoltaics Group Ltd		686	0.35

Capital Stage AG	CAP	0.292
Akenerji Elektrik Uretim AS	AKENR TI	0.269

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: **NEX Index** vs NYSE Arca Oil vs NYMEX Oil vs. MSCI World for ~10 years just to late 2015. Note the **Global NEX** was once near top late in 2007 - but since then it has 'lagged' hugely; this period it fell hard 2008 to 2015 reaching near a bottom from a decade prior:

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



Source: Bloomberg New Energy Finance

Appendix VI:

WilderHill New Energy Global Innovation Index (NEX) for start of Q3 2016. 94 stocks.

NAME	Currency	NEX Sector	NEX Starting Weight
Taewoong Co Ltd	KRW	RWD	0.005
China Power New Energy Develop.	HKD	RWD	0.017
Saeta Yield SA	EUR	RWD	0.017
Greencoat UK Wind PLC	GBp	RWD	0.017
Senvion SA	EUR	RWD	0.017
Boralex Inc	CAD	RWD	0.017
Renewables Infrastructure Group	GBp	RWD	0.017
China High Speed Transmission	HKD	RWD	0.017
Pattern Energy Group Inc	USD	RWD	0.017
TransAlta Renewables Inc	CAD	RWD	0.017
Nordex SE	EUR	RWD	0.017
Huaneng Renewables Corp Ltd	HKD	RWD	0.017
Gamesa Corp Tecnologica SA	EUR	RWD	0.017
Xinjiang Goldwind Science & Tech.	HKD	RWD	0.017
China Longyuan Power Group	HKD	RWD	0.017
EDP Renovaveis SA	EUR	RWD	0.017
Vestas Wind Systems A/S	DKK	RWD	0.017
West Holdings Corp	JPY	RSR	0.003
China Singyes Solar Technologies	HKD	RSR	0.003
Vivint Solar Inc	USD	RSR	0.003
Meyer Burger Technology AG	CHF	RSR	0.003
JA Solar Holdings Co Ltd	USD	RSR	0.003
United Photovoltaics Group Ltd	HKD	RSR	0.003
REC Silicon ASA	NOK	RSR	0.003
Motech Industries Inc	TWD	RSR	0.003
SPCG PCL	THB	RSR	0.003
Neo Solar Power Corp	TWD	RSR	0.003
Capital Stage AG	EUR	RSR	0.003
Shunfeng International Clean En.	HKD	RSR	0.003
Sino-American Silicon Products	TWD	RSR	0.003
Trina Solar Ltd	USD	RSR	0.012
SolarEdge Technologies Inc	USD	RSR	0.012
Gigasolar Materials Corp	TWD	RSR	0.012
Canadian Solar Inc	USD	RSR	0.012
GCP Infrastructure Investments	GBp	RSR	0.012
TerraForm Power Inc	USD	RSR	0.012
Atlantica Yield plc	USD	RSR	0.012
SMA Solar Technology AG	EUR	RSR	0.012
SolarCity Corp	USD	RSR	0.012
SunPower Corp	USD	RSR	0.012
GCL-Poly Energy Holdings Ltd	HKD	RSR	0.012
Xinyi Solar Holdings Ltd	HKD	RSR	0.012
First Solar Inc	USD	RSR	0.012
Akenerji Elektrik Uretim AS	TRY	ROH	0.002
Innergex Renewable Energy Inc	CAD	ROH	0.009
Energy Development Corp	PHP	ROH	0.009

Ormat Technologies Inc	USD	ROH	0.009
Contact Energy Ltd	NZD	ROH	0.009
Mighty River Power Ltd	NZD	ROH	0.009
Verbund AG	EUR	ROH	0.009
VERBIO Vereinigte BioEnergie AG	EUR	RBB	0.003
Renewable Energy Group Inc	USD	RBB	0.003
Albioma SA	EUR	RBB	0.003
Takuma Co Ltd	JPY	RBB	0.003
Green Plains Inc	USD	RBB	0.003
Canvest Environmental Protect.	HKD	RBB	0.012
Sao Martinho SA	BRL	RBB	0.012
Energy Absolute PCL	THB	RBB	0.012
China Everbright International Ltd	HKD	RBB	0.012
Novozymes A/S	DKK	RBB	0.012
Maxwell Technologies Inc	USD	ENS	0.002
Blue Solutions	EUR	ENS	0.002
FDG Electric Vehicles Ltd	HKD	ENS	0.009
GS Yuasa Corp	JPY	ENS	0.009
Samsung SDI Co Ltd	KRW	ENS	0.009
BYD Co Ltd	HKD	ENS	0.009
China Titans Energy Technology	HKD	EEF	0.005
Utilitywise PLC	GBp	EEF	0.005
EnerNOC Inc	USD	EEF	0.005
Ameresco Inc	USD	EEF	0.005
Odelic Co Ltd	JPY	EEF	0.005
Dialight PLC	GBp	EEF	0.005
Kandi Technologies Group Inc	USD	EEF	0.005
Wasion Group Holdings Ltd	HKD	EEF	0.005
Ricardo PLC	GBp	EEF	0.005
Everlight Electronics Co Ltd	TWD	EEF	0.005
Silver Spring Networks Inc	USD	EEF	0.005
Epistar Corp	TWD	EEF	0.020
Veeco Instruments Inc	USD	EEF	0.020
AIXTRON SE	EUR	EEF	0.005
Seoul Semiconductor Co Ltd	KRW	EEF	0.020
Meidensha Corp	JPY	EEF	0.020
Itron Inc	USD	EEF	0.020
Cree Inc	USD	EEF	0.020
Universal Display Corp	USD	EEF	0.020
Nibe Industrier AB	SEK	EEF	0.020
Kingspan Group PLC	EUR	EEF	0.020
Acuity Brands Inc	USD	EEF	0.020
Johnson Controls Inc	USD	EEF	0.020
Tesla Motors Inc	USD	EEF	0.020
FuelCell Energy Inc	USD	ECV	0.003
Ballard Power Systems Inc	CAD	ECV	0.003
Plug Power Inc	USD	ECV	0.003
Enphase Energy Inc	USD	RSR	0.003

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