



Q1 2018 Quarterly Report: WilderHill Clean Energy Index[®], March 30, 2018

For 1st Quarter 2018 the Clean Energy Index[®] (ECO) began near 53, and by late Q1 (March 21st) it had returned there as little Quarterly change; the last few days however were volatile as it dipped near 50 for several percentage down in Q1. This is after some notable gains in 2017 (with the clean energy ECO up roughly +37%, global new energy up near +29%) then regarded as likely not sustainable and more than broad market averages. Indeed look farther back to roughly last 5 years since 2014 and this clean energy theme & so ECO Index[®] at first gained, but then fell and didn't re-test highs that year with declines only broken later on in 2015; it fell 1st half 2016, went sideways 2nd half, then climbed strongly over all of 2017 - for a clean energy theme that can drop hard at times (or rise) and which carries much risk.

Yet it should also be noted the fossil fuels have fallen far harder the past 5 years than ECO: oil, natural gas, and coal have all dropped *much* more in the last 5 years than clean energy. Coal rose steeply in 2016 & 2017, but then volatile coal dropped late in Q1 2018.

Quite different once again was Progressive Energy Index[®] (WHPRO) that generally excludes solar, wind & renewables: a differing WHPRO theme is for reducing CO2 & pollution from - and for obtaining greater efficiencies in - dominant energy today. In 2016 WHPRO moved up near +40% in a year ECO declined. In 2017, ECO did much 'better' - when WHPRO was flat. We've seen WHPRO can move quite unlike ECO (which 'can & does at times drop like a rock'); meanwhile the WHPRO theme, down over Q1, is non-correlative with fossil fuel indexes.

For WilderHill[®] New Energy Global Innovation (NEX) capturing clean energy *worldwide* mostly outside U.S., it 'outperformed' ECO over some of Q1. Seen longer-term for last 5 years, we observe NEX did 'best' of 3 WilderHill Indexes gaining over +50% (going more strongly 'up' than many clean/new energy passive trackers and active funds); ECO here is up near +20%, and Progressive is down about -5% this period. Interestingly with NEX well up, ECO up some, and WHPRO just down - fossil fuel themes are instead all down strikingly as is seen in charts dropping roughly -30% down for coal, -60% to -75% down for oil & natural gas.

Charts in pages ahead show relative performances over past 12 months, and for 10 years. Returning to this clean energy theme, here first is ECO for most of Q1 to late March and this shows upwards momentum seen last year, wasn't present first few months of 2018:



Source: bigcharts.com

Look next at last 12 months to early March 2018 for many various energy themes across clean as well as dirtier traditional and non-renewables - and rather large differences appear.

In this next Chart and starting from bottom, Natural Gas is clearly trailing down some -20%. Prices for that particular energy carrier have crashed for years now and the causes include fracking that's opened up vast, cheap new & potential domestic U.S. gas supplies. Despite OPEC's attempts to put in a floor, this glut has been kept something of a damper so far on U.S. price increases, given that many shuttered wells can be re-opened inexpensively:



Source: bigcharts.com

Also flat for much of last year was Oil (rising since). And basically flat was Progressive Energy Index, finishing near nil: because WHPRO's theme for reducing CO2 means exposure to natural gas for replacing dirtier coal, it's not surprising that has faced headwinds as well.

Finishing somewhat positive 'only' up some +10% this past 12 months is an independent Index for Global clean energy (not ours) as seen in its tracker. Finishing just above it is an active mutual fund for alternative energy: it ends also near +10% to early March.

Next up are very different Indexing themes. One is for clean energy mainly outside the U.S. captured and tracked by WilderHill New Energy Global Innovation NEX, & its independent tracker. Then higher is Clean Energy ECO, via its independent tracker up some +25%. Finishing up near +30% are Nasdaq Index QQQ, and higher is coal. Latter coal rose quite a bit in 2 years with candidacy & then election of a pro coal U.S. President, along with rising coal demand outside the U.S. - but it has retreated in Q1. Next a Solar-only Index is up significantly here, along with its significant and robust volatility over the past year (and longer).

As usual we'll now step back for a much longer view, looking at some 10 years from around 2008 to early 2018 in a chart below. Included are the fossil fuels and most dramatic and at farthest at bottom is again Natural Gas, which has crashed here by ~90%! Thus starting again at bottom is the natural gas tracker. Just above it is a tracker for Solar far down near -90%. Less down is Oil that's fallen very hard but has lately risen. Hence then natural gas and solar themes are very strongly down when viewed for the past roughly 10 years.

Next up as we've seen for some time are 2 closely clumping themes: one an active fund for alternative energy (long showing it's pretty hard for an active-fund to beat an Index); and just above it is ECO Index via independent tracker. The 2 are nearly-tied and while quite down -70%, they're doing 'better' (down less) than Natural Gas, Solar, and Oil too by a tick.

Next is Coal, here down some -60%, and a theme that once trailed; its tracker rose hard since 2016/2017 as noted despite facing pretty dismal economics (and fell afterwards in latter Q1). Just above it is WilderHill Global New Energy, via its tracker down some -50%. Among varied themes then *global clean energy and *coal are 'doing somewhat better' - but that's after some big early falls hence they're finishing here down around -50% to -60%.

Above those 6 after a big gap to the top is WilderHill Progressive (WHPRO) via PUW that's for reducing CO2 & improving efficiency in major energy today. It ends these 10 years near nil, only energy theme here just above water if starting early. Note however that it's still basically flat to down over past 5+ years and that most trackers don't begin ~10 years ago:



Source: bigcharts.com

How have Individual constituents within ECO & WHPRO fared the past 52-weeks?

Returning to Clean Energy / Progressive ECO & WHPRO - we'll glance backwards starting from March 2018 - to observe how *constituents within* ECO & WHPRO fared last 52-weeks.

Considering individual components in the past Year for relative Lows, Highs or in between - to early-March 2018, we see Top Performers in ECO are again spread diversely as last Quarter. Not surprisingly some new leaders now in Q1 are found at differing places from last Quarter's Q4 2017 'winners/losers' (with some from Q4 again noted here).

ECO:

Now in Q1 2018 individual constituents near their own Highs as of early March include:

AMRC in energy services is a repeat winner since previously was near its own highs in Q4 too; (moving on, BGC isn't here as it was near highs in Q4 in being bought out so that reflected a one-time action and its no longer a component); CREE is seen in LED lighting though it wasn't near its highs in Q4 2017; (previously FSLR in thin film large-scale solar was near highs in Q4 but not now); HXL making lightweight composites including for wind blades & spars is in, (but unlike in Q4 neither PWR from energy services, nor poly supplier DQ are near highs).

ECO constituents near their own 52-week lows were a diverse lot too. Again in Q1 2018 and repeating Q4 2017 is less-polluting water-based battery recycler AQMS though this was after a steep run-up; (previously, small geothermal firm HTM was here in Q4 but it after spiked in valuation on being bought out); now in Q1 is large leading geothermal firm ORA near its lows; HQCL, a Korean-based solar energy manufacturer is seen here as near its lows in late Q1; (global solar parks firm SKYS was seen Q4 2017 but it has since moved off its lows; likewise clean power Yieldco TERP has moved off lows now in Q1; and thin film equipment maker VECO that had previously faced IP disputes has in Q1 moved up from its prior lows as well).

WHPRO:

At WHPRO the 'winners' near their 52-weeks Highs are diverse and includes efficient water heating with AOS like it did in Q4; (but AGR seen Q4 in energy services has come off highs, so has has GLW fallen off in environmental technologies); near highs is GTLS in natural gas which benefitted from acquisitions, restructuring and U.S. Tax cuts; in biofuels CZZ is again up near its own highs much like Q4 2017; once again here in electric power services is EMR; unlike Q4 we now see that HCCI is near highs in environmental & waste services.

WHPRO lows however once again like in Q4, were not especially diverse. For Q1 2018 there's some clumping again in natural gas as price declines have hit producers hard; we see CHK again as a natural gas producer; also CLNE which facilitates natural gas fuel use in vehicles; and once again HDSN which works in recycling refrigerants; (by contrast PEIX which had been near lows late Q4 2017 is now up some off those lows, as is GPRE in biofuels, and CECE in filtration); unlike Q4, TTM a conglomerate working in small efficient vehicles is near its lows. In sum several firms here that were 'near lows' in Q4 have now moved off that list.

The following page is first for ECO highs / lows etc.
The subsequent page is then WHPRO highs / lows etc.

ECO Index Highs and Lows of Individual Components Past 52 weeks to March 9, 2018:



WHPRO Index Highs/ Lows of Components
 Past 52 weeks to March 9, 2018:

AIMC	36.50	53.70	
ANDE	29.60	39.35	
AOS	49.48	68.39	
APOG	40.03	59.98	
AGR	41.86	53.46	
AYI	141.68	211.76	
GTLS	32.04	61.43	
CECE	4.00	12.03	
CHK	2.53	6.59	
CIG	1.89	3.84	
CLNE	1.31	3.05	
GLW	26.32	35.10	
CZZ	5.63	11.89	
CVA	13.00	17.30	
ETN	69.82	89.85	
ENS	61.33	84.74	
EMR	56.77	74.45	
ESE	50.30	66.80	
FMC	59.26	98.70	
GPRE	15.60	26.05	
GLNG	19.32	31.64	
HCCI	12.85	25.20	
HASI	17.33	25.28	
HDSN	5.37	10.40	
KNDI	3.50	9.90	
LXFR	10.85	16.21	
LDL	42.51	60.00	
MTZ	36.40	55.53	
MDR	5.56	9.07	
MEOH	39.48	64.60	
NYLD	15.55	20.15	
OC	59.26	96.52	
PEIX	3.10	7.58	
RRC	11.93	30.30	
RBC	67.84	87.50	
REX	72.71	107.87	
SWN	3.42	8.94	
TTM	26.50	37.62	
WBC	111.68	162.20	
WWD	65.22	89.30	

Conclusion:

For 1st Quarter 2018 the Clean Energy Index[®] (ECO) began near 53 and late Q1 (March 21st) it had returned there in little Quarterly change; the last few days however were volatile and it dipped near 50 for several percentage down in Q1. This is after some notable gains in 2017 (with the clean energy ECO up roughly +37%, global new energy up near +29%) then regarded as likely not sustainable and more than broad market averages. Indeed look farther back to roughly last 5 years since 2014 and this clean energy theme & so ECO Index[®] at first gained, but then fell and didn't re-test highs that year with declines only broken later on in 2015; it fell 1st half 2016, went sideways 2nd half, then climbed strongly over all of 2017 - for a clean energy theme that can drop hard at times (or rise) and which carries much risk.

Yet it should also be noted fossil fuels have fallen far harder the same past 5 years than ECO: oil, natural gas, and coal have all dropped *much* more in the last 5 years than clean energy. Coal had risen hard in 2016 & 2017, but in latter Q1 2018 coal dipped robustly.

Lastly two constituents deleted from ECO for Q2 were HTM & JASO; one addition to ECO for Q2 was ENPH for microinverters/battery storage placed in the Index's Energy Storage sector. At WilderHill Progressive Energy Index (WHPRO) there were no deletions to start Q2 2018; there was one addition of FCX there going into WHPRO Conversion and Storage Sector.

As always we welcome your thoughts and suggestions.

Sincerely,



Dr. Rob Wilder
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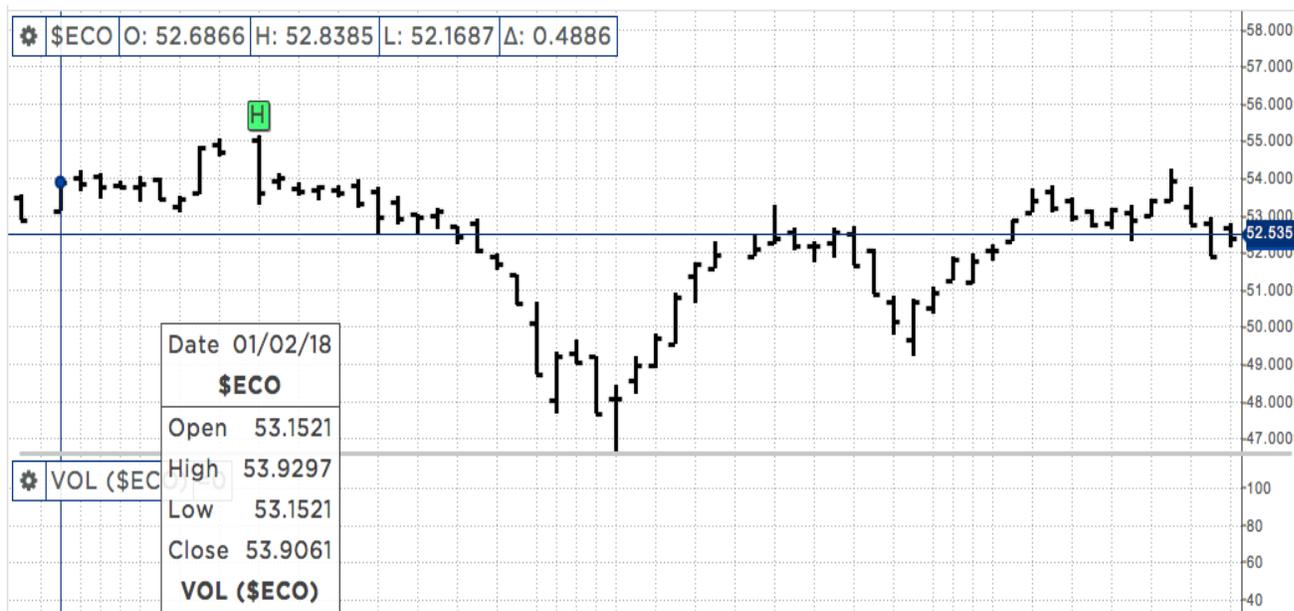
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Appendix I:
ECO Index (via independent tracker PBW) Descending Weights & Components seen in
late-Q1 on 3/12/2018, or about ~2 weeks before rebalance to start Q2 2018. 40 stocks:

<u>Name</u>	<u>Symbol</u>	<u>Weight</u>
SolarEdge Technologies Inc	SEDG	4.31
Veeco Instruments Inc	VECO	4.07
Ameresco Inc	AMRC	3.97
Sunrun Inc	RUN	3.72
TPI Composites Inc	TPIC	3.52
Cree Inc	CREE	3.47
Itron Inc	ITRI	3.44
Hanwha Q CELLS Co Ltd ADR	HQCL	3.40
Hexcel Corp	HXL	3.39
MYR Group Inc	MYRG	3.22
Gentherm Inc	THRM	3.21
TerraForm Power Inc	TERP	3.16
Advanced Energy Industries Inc	AEIS	3.15
JA Solar Holdings Co Ltd ADR	JASO	3.09
First Solar Inc	FSLR	3.02
Atlantica Yield plc	AY	2.93
Canadian Solar Inc	CSIQ	2.90
Air Products & Chemicals Inc	APD	2.89
Quanta Services Inc	PWR	2.85
Maxwell Technologies Inc	MXWL	2.74
Tesla Inc	TSLA	2.65
Ormat Technologies Inc	ORA	2.64
Renewable Energy Group Inc	REGI	2.63
Pattern Energy Group Inc	PEGI	2.59
Daqo New Energy Corp ADR	DQ	2.53
Plug Power Inc	PLUG	2.47
SunPower Corp	SPWR	2.43
Universal Display Corp	OLED	2.34
JinkoSolar Holding Co Ltd ADR	JKS	2.32

Sociedad Quimica y Minera de Chile	SQM	2.29
Ballard Power Systems Inc	BLDP	2.19
Albemarle Corp	ALB	2.07
US Geothermal Inc	HTM	0.75
American Superconductor Corp	AMSC	0.71
Aqua Metals Inc	AQMS	0.63
LSI Industries Inc	LYTS	0.60
FuelCell Energy Inc	FCEL	0.53
Sky Solar Holdings Ltd ADR	SKYS	0.45
Amtech Systems Inc	ASYS	0.41
Hydrogenics Corp	HYGS	0.39

ECO Index for the First Quarter (Q1) through mid/late March 2018



Source: NYSE.com

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

INDEX (ECO) SECTOR & STOCK WEIGHTS FOR START OF Q2 2018. 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 - 29% weight (9 stocks @3.22% 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.

JinkoSolar, JKS. Solar, wafers through solar modules, China-based OEM.

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

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

TPI Composites, TPIC. Wind Blades; also light-weighting for transportation.

Power Delivery & Conservation - 15% sector weight (5 stocks @2.90%; +1 *banded)

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

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

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

MYR Group, MYRG. Transmission and Distribution, includes solar & wind farms.

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

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

Energy Conversion - 23% sector weight (7 stocks @3.07% each; +3 *banded)

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

**Amtech*, ASYS. Equipment Manufacturer, solar, LEDs lights, semiconductors.

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

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

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

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

**LSI Industries*, LYTS. Lighting, LEDs, is vertically integrated U.S. manufacturer.

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

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

Veeco, VECO. Thin film equipment, for LEDs, energy efficient electronics.

Greener Utilities - 12% sector weight (4 stocks @2.87% each; +1 *banded stock)

Atlantica Yield, AY. Yieldco, Contracted renewables assets, also transmission.

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

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

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

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

Energy Storage - 15% sector weight (5 stocks @2.90% each; + 1 banded stock)

Albermarle, ALB. Lithium, specialty materials in batteries; for energy storage.

**Aqua Metals*, AQMS. Recycling lead acid batteries, eliminating toxic wastes.

Enphase, ENPH. Microinverters, also energy storage systems and software.

Maxwell, MXWL. Ultracapacitors, an alternative to batteries as in hybrids.

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

Tesla Motors, TSLA. Electric vehicles, solar; purer-play in EVs & energy storage.

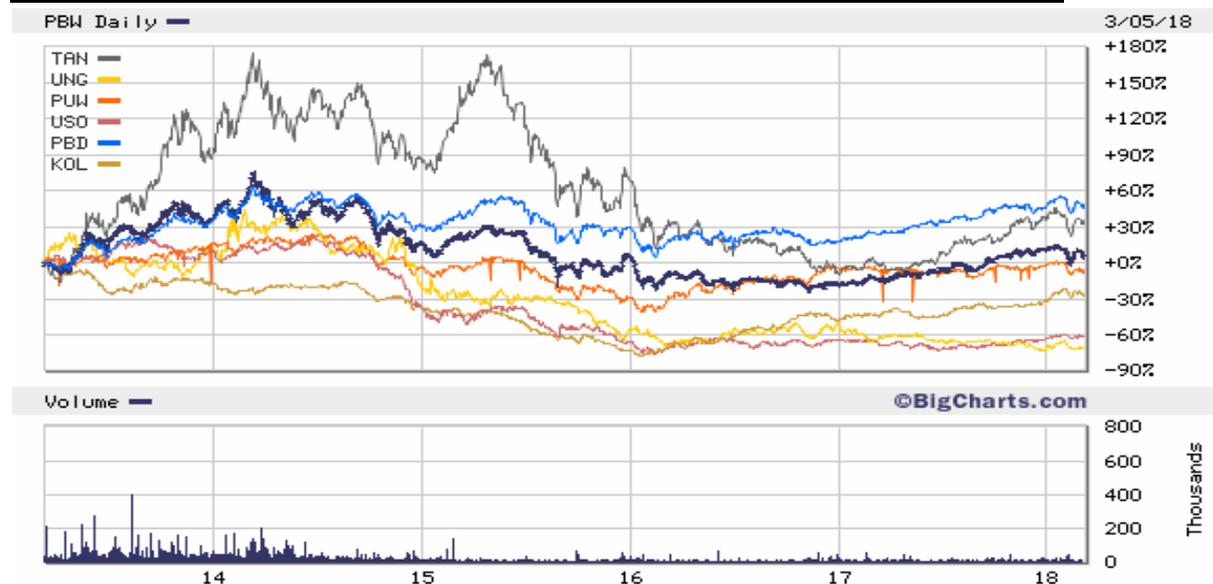
Cleaner Fuels - 6% sector weight (2 stocks @2.75% each; +1 *banded stock)

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, REGL. Biodiesel, natural fats, oils, grease to biofuels.

ECO (via independent tracker in bold) plus other key clean & fossil fuel themes over the past 5 years; 2013 to early 2018, a period of 'tough times' with big declines:



Source: bigcharts.com

As seen by ECO (via a tracker **bold**) plus several other themes above, these last 5 years were very rough for many themes across clean and alternative energy & the traditional fossil fuels. For example, despite **ECO** falling hard and ending this period only up near +10%, this clean energy theme still is robustly above an oil tracker, as well as Natural Gas tracker that are both down far in negative territory, plus a tracker for Coal still underwater after rising.

Clean energy is 'only' up some +10%; yet fossil fuels are down around -30% to -70%.

A tracker for Solar, once far at top, fell, has re-risen again to go moderately over ECO up some +30%. Modestly here below ECO, is the Progressive WHPRO tracker sideways over 2017. The last 5 years were remarkably tough across many energy themes, including the fossil fuels oil, coal & natural gas! But Not All Energy themes suffered so harshly...

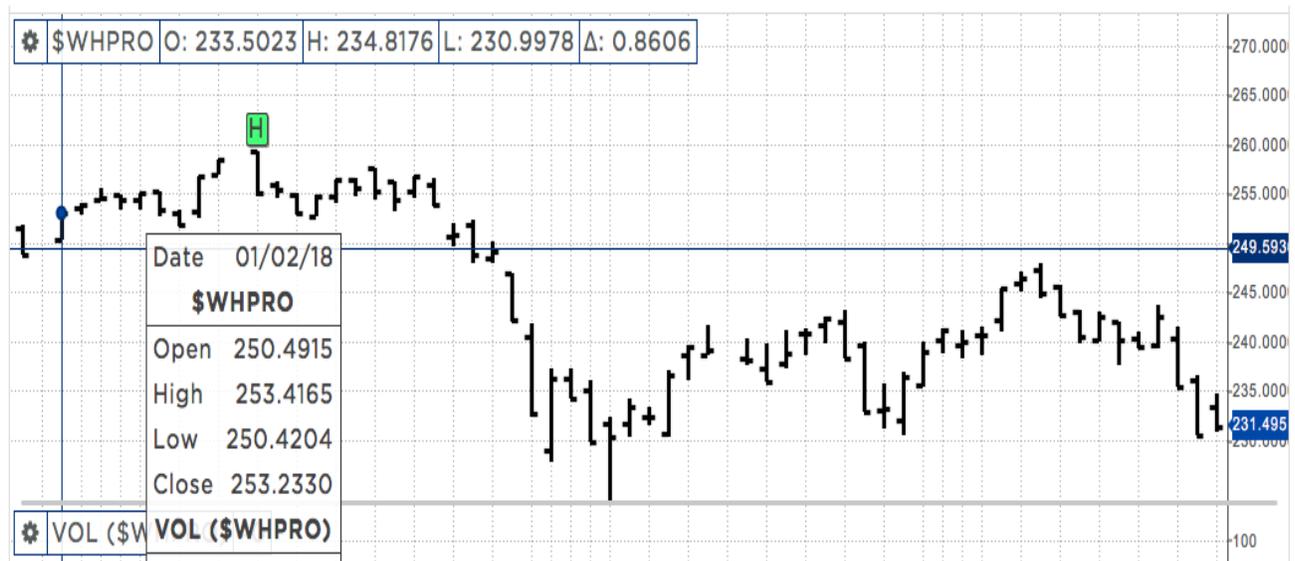
Of some note for finishing positively & 'much better' is global new energy NEX Index with its tracker at very top this timeframe. NEX is here up near +50% past 5 years. (Mostly non-energy NASDAQ QQQ did much better than that). It's interesting that Global clean / new energy as captured by NEX, did relatively 'better' than ECO since both are in clean energy, though the former's theme is mainly outside the U.S. The NEX also did quite 'better' than a separate, independent Index for global clean energy.

Appendix III: WHPRO Index via independent tracker PUW; component weights as seen in late-Q1 2018 on 3/12/2018 or about ~2 weeks before the rebalance to start Q2 2018. 41 Stocks:

<u>Name</u>	<u>Symbol</u>	<u>Weight</u>
Chart Industries Inc	GTLS	3.81
Cosan Ltd	CZZ	3.59
Cia Energetica de Minas Gerais ADR	CIG	3.59
Andersons Inc/The	ANDE	3.48
Green Plains Inc	GPRE	3.44
REX American Resources Corp	REX	3.15
EnerSys	ENS	3.03
MasTec Inc	MTZ	2.97
Range Resources Corp	RRC	2.89
Golar LNG Ltd	GLNG	2.88
WABCO Holdings Inc	WBC	2.88
Methanex Corp	MEOH	2.87
AO Smith Corp	AOS	2.81
Altra Industrial Motion Corp	AIMC	2.77
McDermott International Inc	MDR	2.76
Apogee Enterprises Inc	APOG	2.72
Emerson Electric Co	EMR	2.69
Heritage-Crystal Clean Inc	HCCI	2.67
ESCO Technologies Inc	ESE	2.65
Avangrid Inc	AGR	2.62
Eaton Corp PLC	ETN	2.57
FMC Corp	FMC	2.54
Woodward Inc	WWD	2.50
Covanta Holding Corp	CVA	2.50
Regal Beloit Corp	RBC	2.48
NRG Yield Inc	NYLD	2.48
Southwestern Energy Co	SWN	2.47
Chesapeake Energy Corp	CHK	2.43
Lydall Inc	LDL	2.33
Tenneco Inc	TEN	2.32

Acuity Brands Inc	AYI	2.30
Corning Inc	GLW	2.24
LUXFER HOLDINGS PLC	LXFR	2.20
Owens Corning	OC	2.19
Hannon Armstrong Sustainable Infra.	HASI	2.18
Tata Motors Ltd ADR	TTM	1.97
Hudson Technologies Inc	HDSN	0.46
CECO Environmental Corp	CECE	0.46
Pacific Ethanol Inc	PEIX	0.39
Kandi Technologies Group Inc	KNDI	0.37
Clean Energy Fuels Corp	CLNE	0.36

WHPRO for the First Quarter through mid/late March 2018



Source: NYSE.com

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

Sectors & Stock Weightings: WilderHill Progressive Energy Index (WHPRO) for start of Q2 2018. 42 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 - 26% Sector Weight (8 stocks @3.12% each +2 *banded)

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 Energy, GPRE. Biofuel, ethanol; using U.S. domestic feedstock.
Methanex, MEOH. Methanol, liquid fuel may be derived from fossil fuels or organics.
**Pacific Ethanol*, PEIX. Biofuels, major U.S. producer of lower-carbon fuels.
Range Resources, RRC. Natural gas, produces in Appalachian & Gulf Coast regions.
Rex American, REX. Biofuels, with subsidiaries is a major U.S. ethanol producer.
Southwestern Energy, SWN. Natural gas, U.S. producer, also midstream services.

Conversion & Storage - 23% Sector weight (9 stocks @2.55% each)

Altra Holdings, AIMC. Mechanical power transmission, electromechanical conversion.
Chart Industries, GTLS. Natural gas, LNG; liquefied gas storage/transport, efficiency.
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.
Freeport-McMoRan, FCX. Lithium producer; copper; also battery-grade cobalt JV.
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 - 18% Sector Weight (7 stocks @2.57% 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.
Regal Beloit, RBC. Energy efficient motors, in commercial, industrial, homes etc.
Woodward, WWD. Energy controllers, optimization, industrial turbines in generation.

Emission Reduction - 13% Sector Weight (4 stocks @2.87% each +3 *banded)

**CECO Environmental*, CECE. End-of-pipe emissions controls and pollution reduction.
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. Natural Gas; fewer emissions/CO2 vs. coal; EPCI in LNG facilities.
Tata Motors, TTM. Smaller & 'nano' vehicles, India-based with worldwide sales.
Tenneco, TEN. Automotive end-of-pipe emissions controls, catalytic converters.

New Energy Activity - 10% Sector weight (4 stocks @2.37% each +1 *banded stock).

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

**Hudson*, HDSN. Refrigerant HFCs reclamation; reduces potent greenhouse gases.
Heritage Crystal Clean, HCCI. Oil re-refining, modern waste reuse and recycling.
Lydall, LDL. Thermal and filtration separation; innovative energy efficiency.
Owens Corning, OC. Materials lightening, building insulation composite materials.

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

Avangrid, AGR. Electricity & Natural Gas, generation, storage, distribution.
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 the WHPRO Index via independent tracker in bold for Past 5 years to early 2018 - versus ECO Index as seen here in yellow:



Source: bigcharts.com

WHPRO here in bold for last 5 years to early 2018 as seen via its **tracker** in bold, above. Following a modest rise into Summer 2015 hitting its relative high - then dropping strongly afterwards to a February 2016 nadir - and rising in 2016 - it has gone mainly sideways since. Thus it finishes near nil - while ECO which had gone up & dropped more, has risen in 2017 - here near +10% (past Quarterly Reports WHPRO finished up farther for past 5 years).

Hence the **WHPRO** theme for less CO2/pollution from fossil fuels can move unlike the ECO basket; the latter dropped relatively much harder early 2014 through late 2016.

That said all 3 WilderHill Indexes are now very far below their own previous all-time highs. ECO is much, *much* lower - having been in 2007 several-fold higher - (that crash in part was due to the solar sub-theme falling so greatly from its peaks) - and as noted fossil fuels have all fallen too. So Charts can differ greatly, depending notably on their starting point/s. Moreover as always past movements are not an indication of future performance.

Appendix V: WilderHill New Energy Global Innovation Index (NEX) seen late-Q1 2018 via independent tracker (PBD) on 3/12/18 or ~2 weeks before Rebalance to start Q2 2018. 105 in tracker:

<u>Name</u>	<u>Symbol</u>	<u>Weight</u>
Veeco Instruments Inc	VECO	2.05
Saeta Yield SA	SAY	2.04
SMA Solar Technology AG	S92	1.95
Orsted A/S	ORSTED DC	1.87
Epistar Corp	2448	1.84
Cree Inc	CREE	1.80
EDP Renovaveis SA	EDPR	1.78
Siemens Gamesa Renewable En.	SGRE	1.77
Itron Inc	ITRI	1.75
Philips Lighting NV	LIGHT	1.72
SolarEdge Technologies Inc	SEDG	1.69
Nordex SE	NDX1	1.66
Tesla Inc	TSLA	1.65
China High Speed Transmission	658	1.65
Vestas Wind Systems A/S	VWS DC	1.62
Landis+Gyr Group AG	LAND SW	1.61
Huaneng Renewables Corp Ltd	958	1.59
Credit Suisse Real Estate Green	GREEN SW	1.58
Sino-American Silicon Products Inc	5483	1.58
Renewables Infrastructure Group	TRIG LN	1.58
Kingspan Group PLC	KSP	1.57
Xinjiang Goldwind Science & Tech.	2208	1.57
Nibe Industrier AB	NIBEB SS	1.56
China Longyuan Power Group	916	1.53
Boralex Inc	BLX	1.50
OSRAM Licht AG	OSR	1.45
NRG Yield Inc	NYLD	1.40
Xinyi Solar Holdings Ltd	968	1.39
Seoul Semiconductor Co Ltd	046890 KS	1.39
Meidensha Corp	6508	1.38

BYD Co Ltd	1211	1.37
Acuity Brands Inc	AYI	1.37
GS Yuasa Corp	6674	1.36
TransAlta Renewables Inc	RNW	1.35
Meyer Burger Technology AG	MBTN SW	1.32
Pattern Energy Group Inc	PEGI	1.32
Hannon Armstrong Sustainable Infra.	HASI	1.22
First Solar Inc	FSLR	1.22
Samsung SDI Co Ltd	006400 KS	1.20
Universal Display Corp	OLED	1.20
TerraForm Power Inc	TERP	1.19
GCP Infrastructure Investments Ltd	GCP LN	1.19
Canadian Solar Inc	CSIQ	1.17
Atlantica Yield plc	AY	1.14
FDG Electric Vehicles Ltd	729	1.14
China Everbright International Ltd	257	1.12
Green Plains Inc	GPRE	1.12
Drax Group PLC	DRX LN	1.10
Superblock PCL	SUPER-R TB	1.10
GCL-Poly Energy Holdings Ltd	3800	1.09
Sociedad Quimica y Minera de Chile	SQM	1.08
Panda Green Energy Group Ltd	686	1.05
SunPower Corp	SPWR	1.01
Energy Absolute PCL	EA-R TB	0.93
Novozymes A/S	NZYMB DC	0.93
JinkoSolar Holding Co Ltd ADR	JKS	0.91
Takuma Co Ltd	6013	0.82
Verbund AG	VER AV	0.73
Mercury NZ Ltd	MCY	0.64
Contact Energy Ltd	CEN	0.64
Energy Development Corp	EDC	0.62
Innergex Renewable Energy Inc	INE	0.59
Ameresco Inc	AMRC	0.58
Ormat Technologies Inc	ORA	0.56

Enphase Energy Inc	ENPH	0.54
Ricardo PLC	RCDO LN	0.54
LSI Industries Inc	LYTS	0.54
Caverion OYJ	CAV1V FH	0.53
TPI Composites Inc	TPIC	0.51
China Power Clean Energy Develop.	735	0.50
Wasion Group Holdings Ltd	3393	0.50
Everlight Electronics Co Ltd	2393	0.48
Odelic Co Ltd	6889	0.47
Greencoat UK Wind PLC/Funds	UKW LN	0.46
Senvion SA	SEN	0.45
Ballard Power Systems Inc	BLDP	0.45
China Titans Energy Technology	2188	0.44
Dialight PLC	DIA LN	0.43
Sunrun Inc	RUN	0.41
REC Silicon ASA	REC	0.40
EF-ON INC	9514	0.40
Advanced Lithium Electrochemistry	5227	0.39
Encavis AG	CAP	0.38
SPCG PCL	SPCG-R TB	0.38
Motech Industries Inc	6244	0.36
JA Solar Holdings Co Ltd ADR	JASO	0.35
Kandi Technologies Group Inc	KNDI	0.35
Neo Solar Power Corp	3576	0.35
Maxwell Technologies Inc	MXWL	0.35
China Singyes Solar Technologies	750	0.34
West Holdings Corp	1407	0.34
Tanaka Chemical Corp	4080	0.33
SaltX Technology Holding AB	SALTB SS	0.30
Canvest Environmental Protection	1381	0.30
Shunfeng Internl. Clean Energy	1165	0.30
Albioma SA	ABIO FP	0.29
Vivint Solar Inc	VSLR	0.28
Gigasolar Materials Corp	3691	0.27

Renewable Energy Group Inc	REGI	0.27
Daqo New Energy Corp ADR	DQ	0.26
CropEnergies AG	CE2	0.24
eRex Co Ltd	9517	0.22
VERBIO Vereinigte BioEnergie AG	VBK	0.18
NEL ASA	NEL	0.18
Plug Power Inc	PLUG	0.15

Recent Past: Sector Weightings in NEX for start of 2018; e.g. seen here for start of *Past *Q1 in 2018:*

Key	Sectors	Index Sector Weights - To Start Q1 2018*
ECV	Energy Conversion	1.00%
EEF	Energy Efficiency	30.67%
ENS	Energy Storage	7.64%
RBB	Renewables - Biofuels & Biomass	7.74%
ROH	Renewables - Other	3.92%
RSR	Renewable - Solar	23.37%
RWD	Renewable - Wind	25.66%

And More Recently: Here are NEX Sector Weights for Start of *Q2 2018:

ECV	0.8%
EEF	30.5%
ENS	8.8%
RBB	7.9%
ROH	3.9%
RSR	22.5%
RWD	25.5%

*NEX Sector Weights are based on a regularly-performed survey of market capitalizations of companies that are active in New Energy and that are quoted on non-OTC exchanges. The results are adjusted for several factors including exposure to New Energy and some exchange restrictions particularly limiting investability. If the results were not adjusted, the sector numbers would be significantly different.

Going into Q1 2018 this survey took into account more than 650 companies.

see, http://www.nex-index.com/Constituents_And_Weightings.php
 For Component values see, http://www.nex-index.com/Constituents_And_Weightings.php
 And for several variants, <https://www.solactive.com/?s=wilderhill>

Appendix VI:

WilderHill New Energy Global Innovation Index (NEX) for start of Q2 2018.

Grouped generally by NEX Index Sector:

(subject to revision; see http://www.nexindex.com/Constituents_And_Weightings.php)

Also Index Composition at, <https://www.solactive.com/?s=wilderhill&indexmembers=US96811Y1029>

<u>Name</u>	<u>NEX Sector</u>	<u>Weight</u>
Ballard Power Systems Inc	ECV	0.5%
Hannon Armstrong Sustainable Infra	EEF	1.6%
Nibe Industrier AB	EEF	1.6%
Wasion Group Holdings Ltd	EEF	0.5%
Ameresco Inc	EEF	0.5%
Kandi Technologies Group Inc	EEF	0.5%
Odelic Co Ltd	EEF	0.5%
BYD Co Ltd	ENS	1.4%
Advanced Lithium Electrochemistry	ENS	0.4%
Novozymes A/S	RBB	1.2%
Albioma SA	RBB	0.3%
Canvest Environmental Protection Group	RBB	0.3%
VERBIO Vereinigte BioEnergie AG	RBB	0.3%
Innergex Renewable Energy Inc	ROH	0.7%
SunPower Corp	RSR	1.2%
SMA Solar Technology AG	RSR	1.2%
TerraForm Power Inc	RSR	1.2%
China Singyes Solar Technologies Holdings	RSR	0.3%
Shunfeng International Clean Energy Ltd	RSR	0.3%
West Holdings Corp	RSR	0.3%
Siemens Gamesa Renewable Energy SA	RWD	1.6%
Pattern Energy Group Inc	RWD	1.6%
Xinjiang Goldwind Science & Technology	RWD	1.6%
NRG Yield Inc	RWD	1.6%
China High Speed Transmission Equipment	RWD	1.6%
Huaneng Renewables Corp Ltd	RWD	1.6%
Nordex SE	RWD	1.6%
TransAlta Renewables Inc	RWD	1.6%
Renewables Infrastructure Group Ltd	RWD	1.6%
Senvion SA	RWD	0.4%
China Power Clean Energy Development	RWD	0.4%
Plug Power Inc	ECV	0.1%
NEL ASA	ECV	0.1%
Tesla Inc	EEF	1.6%
Universal Display Corp	EEF	1.6%

Acuity Brands Inc	EEF	1.6%
Cree Inc	EEF	1.6%
Epistar Corp	EEF	1.6%
OSRAM Licht AG	EEF	1.6%
Itron Inc	EEF	1.6%
Philips Lighting NV	EEF	1.6%
Seoul Semiconductor Co Ltd	EEF	1.6%
Kingspan Group PLC	EEF	1.6%
Veeco Instruments Inc	EEF	1.6%
Landis+Gyr Group AG	EEF	1.6%
Meidensha Corp	EEF	1.6%
Credit Suisse Real Estate Fund Green Prop.	EEF	1.6%
Caverion OYJ	EEF	0.5%
Ricardo PLC	EEF	0.5%
Everlight Electronics Co Ltd	EEF	0.5%
Dialight PLC	EEF	0.5%
LSI Industries Inc	EEF	0.5%
EF-ON INC	EEF	0.5%
Sociedad Quimica y Minera de Chile SA	ENS	1.4%
Samsung SDI Co Ltd	ENS	1.4%
GS Yuasa Corp	ENS	1.4%
FDG Electric Vehicles Ltd	ENS	1.4%
Tanaka Chemical Corp	ENS	0.4%
Maxwell Technologies Inc	ENS	0.4%
SaltX Technology Holding AB	ENS	0.4%
Energy Absolute PCL	RBB	1.2%
Green Plains Inc	RBB	1.2%
Takuma Co Ltd	RBB	1.2%
Drax Group PLC	RBB	1.2%
CropEnergies AG	RBB	0.3%
Renewable Energy Group Inc	RBB	0.3%
eRex Co Ltd	RBB	0.3%
Ormat Technologies Inc	ROH	0.7%
Contact Energy Ltd	ROH	0.7%
Verbund AG	ROH	0.7%
Mercury NZ Ltd	ROH	0.7%
Energy Development Corp	ROH	0.2%
First Solar Inc	RSR	1.2%
Sino-American Silicon Products Inc	RSR	1.2%
SolarEdge Technologies Inc	RSR	1.2%

GCL-Poly Energy Holdings Ltd	RSR	1.2%
Meyer Burger Technology AG	RSR	1.2%
Xinyi Solar Holdings Ltd	RSR	1.2%
Canadian Solar Inc	RSR	1.2%
Atlantica Yield plc	RSR	1.2%
Superblock PCL	RSR	1.2%
GCP Infrastructure Investments Ltd	RSR	1.2%
JinkoSolar Holding Co Ltd	RSR	1.2%
Encavis AG	RSR	0.3%
Panda Green Energy Group Ltd	RSR	0.3%
SPCG PCL	RSR	0.3%
Sunrun Inc	RSR	0.3%
Daqo New Energy Corp	RSR	0.3%
Neo Solar Power Corp	RSR	0.3%
Gigasolar Materials Corp	RSR	0.3%
REC Silicon ASA	RSR	0.3%
Motech Industries Inc	RSR	0.3%
Vivint Solar Inc	RSR	0.3%
Enphase Energy Inc	RSR	0.3%
Vestas Wind Systems A/S	RWD	1.6%
Orsted A/S	RWD	1.6%
China Longyuan Power Group Corp Ltd	RWD	1.6%
Boralex Inc	RWD	1.6%
EDP Renovaveis SA	RWD	1.6%
Greencoat UK Wind PLC/Funds	RWD	0.4%
TPI Composites Inc	RWD	0.4%
Lextar Electronics Corp	EEF	0.5%
Voltabox AG	ENS	0.4%
BCPG PCL	RSR	1.2%
Scatec Solar ASA	RSR	0.3%
CS Wind Corp	RWD	0.4%
RENOVA Inc	RWD	0.4%
PNE Wind AG	RWD	0.4%
Unison Co Ltd/South Korea	RWD	0.4%

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*The Global NEX Index only is a Partnership of two entities: Josh Landess of First Energy Research; and Dr. Rob Wilder of WilderHill - jointly making WilderHill New Energy Finance (WHNEF): this NEX Index alone is owned & produced by WHNEF.
