

Next Economy Index

First Quarter Review • March 31, 2018



Green Alpha[®]

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Why Invest in the Next Economy Index?

- Passive, diversified exposure to many sectors and industries
- Global companies driving the transition to the Next Economy™
- Invests in innovative solutions to core economic and environmental risks
- Fossil fuel free since inception

Inception Date: December 30, 2008

Style: All-Cap Global Growth Equity

Available Vehicle: Separately Managed Account

Next Economy Investment Philosophy

Green Alpha's investment philosophy is straight forward: don't invest in companies that cause global systemic risks; instead, invest in the solutions.

We believe companies that create or enable innovative solutions to climate change, resource scarcity and widening inequality are the greatest growth drivers of the twenty-first century. That's the Next Economy.



Portfolio Construction: Next Economy Index

The Green Alpha Next Economy Index is a passively managed index designed to reflect and benchmark the Next Economy™ – the unfolding, solutions-oriented, innovation-driven, highly efficient economy. It exists to: (1) define all aspects of the Next Economy (2) demonstrate the diversity, growth, breadth and depth of the Next Economy, and (3) serve as a performance benchmark for sustainable active, public equity investment strategies. The Index seeks long-term capital appreciation and serves as a basis for all of Green Alpha Advisors' actively managed portfolios. The portfolio uses a modified market-cap weighting and is rebalanced annually. While the managers may choose to add or remove companies from the Index on an inter-rebalance basis, it is anticipated that these changes will not have a large effect on portfolio turnover. Like all Green Alpha portfolios, the Next Economy Index is a fossil fuel free, all-cap, cross-sector, global equity strategy.

Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information.

Portfolio Overview: Next Economy Index

Portfolio characteristics and how they compare to the S&P 500 and other Green Alpha portfolios

Next Economy Index Characteristics

- **Largest Next Economy basket** – by definition, the Index is the most diversified Green Alpha portfolio by number of stocks; all stocks that pass Green Alpha's investment process to enter the Index
- **Fundamentals-driven** – because the quality of the companies you invest in and the price you pay for them matter
 - ✓ **High growth** – indicated by Sales Growth, drop from current P/E to Forward P/E as revenue and earnings grow
 - ✓ **Compelling valuation** – demonstrated by Price/Sales, Price/Book metrics
 - ✓ **Strong balance sheet, solid management execution** – expressed by LT Debt/Equity, Current Ratio
- **Fossil fuel free since inception** – we have never invested in companies that prospect, extract, refine, or transport fossil fuels, nor fossil-fired utilities
- **Diversified** – we look for solutions wherever we can find them - across the globe, in firms of all sizes, and in every industry
- **Public equities, long-only** – largest asset class, largest opportunity for impact

Characteristics	Green Alpha Next Economy Index	Benchmark: S&P 500	Green Alpha Growth & Income	Sierra Club Green Alpha	Green Alpha Next Economy Select
# of Securities	95	500	30	39	52
Sales Growth, 1-Year Trailing	16.83%	10.98%	9.51%	16.08%	16.05%
P/E, Current	37.31	36.56	42.21	35.29	31.25
P/E, 1-Year Forward [†]	20.32	16.39	17.64	18.95	16.57
Price/Sales	1.69	2.15	1.91	1.37	0.99
Price/Book	2.95	3.23	2.03	2.48	2.10
LT Debt/Equity	0.58	0.86	0.95	0.70	0.66
Current Ratio	2.80	2.02	2.95	3.30	2.89
Dividend Yield	1.68%	1.95%	5.09%	2.09%	2.16%
US Domicile	75.94%	100%	72.18%	72.09%	66.42%
Non-US Domicile	23.07%	-	25.29%	26.63%	28.77%
Cash	1.00%	-	2.54%	2.22%	4.81%
Market Capitalization Weighted Avg (US\$B)	60.89	198.76	20.32	49.82	34.47
Turnover, 1-Year Trailing	18%	-	16%	24%	15%
Beta, 1-Year Trailing	1.06	1.00	0.92	1.03	0.99

[†] Bloomberg consensus estimates

^{††} Bloomberg Investment Classification System

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Top Ten Positions

And how the top five positions are driving progress toward the Next Economy

Alphabet, Inc. (Communications, Media)

- Provider of unlimited access to global information. Anyone with access to Google has better access to information than the richest person on earth had 20 years ago.
- Innovation-driven venture capital fund with dozens of fascinating “moonshots” (e.g., “Project Loon – the balloon-powered internet for everyone”). All extremely well capitalized by the best ad-serving machine in history.
- Global operations use 100% renewable energies.
- Sole woman in Senior Management is an award-winning CFO. Board of Directors has three women (23%), including the Audit Committee Chair.

NVIDIA Corp. (Technology, Semiconductors)

- GeForce chip architecture sets the standard for high-speed processing applications such as: graphics processing, AI and deep learning, autonomous machines (including self-driving vehicles), crypto currency mining, data centers, cloud computing, design and production visualization.
- Machines empowering algorithms & AI are essential to increasing economic efficiency & sustainability of global economy.
- Strong 33% women in Senior Management Team, including two critically influential positions: EVP/CFO & EVP/Operations. Board of Directors includes three women (25%); replaced one male Director with a woman since 2016.

Dassault Systemes, SA ADR (Technology, Software)

- Provides the software required to create, model, & test designs of any kind.
- Design applications across entire economy, right down to chip architecture itself.
- Increases global economic productivity by streamlining design processes from concept stage to production stage; faster, more effective design is one of the major reasons why pace of innovation is accelerating.
- Led by two women in Senior Management, including Chief Strategy Officer. Impressive five women (45%) on the Board.

IBM (Technology, Services)

- Has been very adroitly managing transition from legacy IT & consulting services to innovation powerhouse.
- Highlights: top patent holder across domains; enabling distributed ledger; pioneering AI; leaders in quantum computing; developing security methods atop lattice cryptography; advancing nanotechnology; developing & applying Watson (AI) across industries, including medicine, water, food safety.
- Female CEO is building a diverse team to maximize the company's ability to innovate, with six women (29%) in Senior Management & three women on the Board of Directors (23%), including several key Committee Chairs.

Alibaba: (Consumer Discretionary, eCommerce)

- Largest, hyper-efficient, data-driven e-commerce platform connecting buyers to 10 million sellers/producers. Intermediary between sellers & buyers, unlike other large e-commerce companies which buy products from merchant & then resell.
- Low barrier to entry for sellers, making e-commerce more accessible for smaller businesses.
- Immense investors in R&D into technology & efficiency/logistics of commerce.
- Impressive five women (31%) on the Senior Management Team, including CFO.

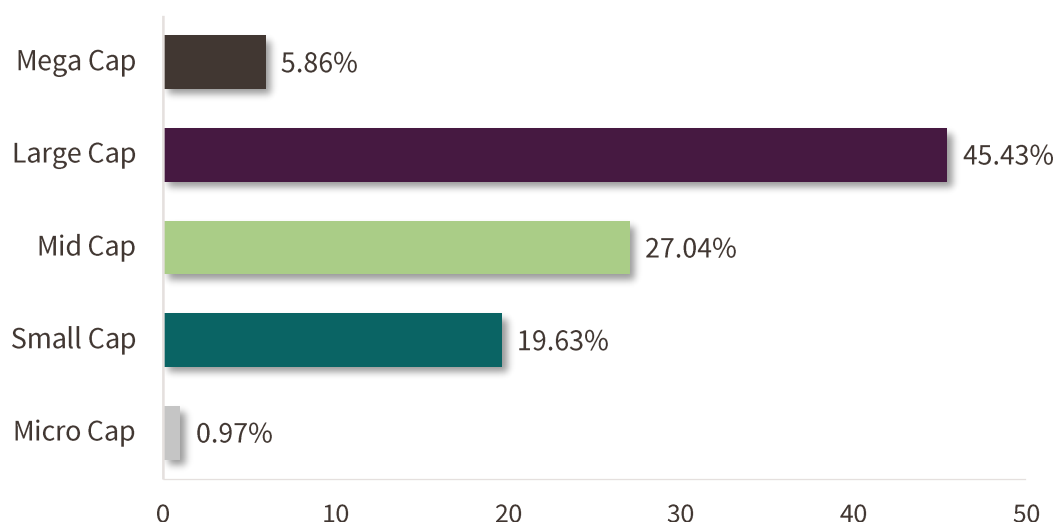
Company Name	Ticker	Weight
Alphabet, Inc.	GOOG	2.51%
NVIDIA Corp.	NVDA	2.25%
Dassault Systemes SA	DASTY	1.99%
Int'l Business Machines	IBM	1.87%
Alibaba Group	BABA	1.79%
Applied Materials, Inc.	AMAT	1.76%
Seagate Technology	STX	1.71%
Square, Inc.	SQ	1.67%
Gilead Sciences, Inc.	GILD	1.65%
Apple, Inc.	AAPL	1.63%
% of Portfolio		18.83%

Please see the final page of this document for important disclosures about portfolio, benchmark and characteristic information.

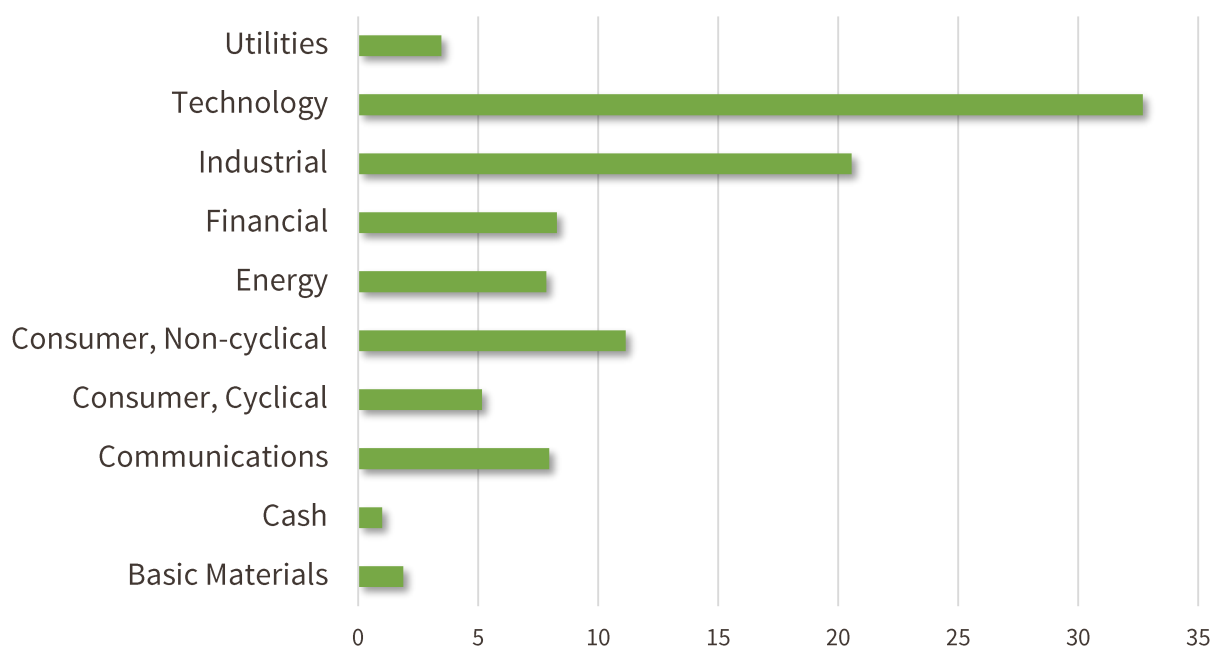
Allocation by Market Cap & Sector

Our search for Next Economy companies is unconstrained. We seek solutions to systemic risks wherever they exist – across sectors, market caps, and geographies. The following divisions are the result of our Next Economy process, rather than the starting point.

Equity Allocation by Market Cap



BICS^{††} Sector Allocation (% of Portfolio)



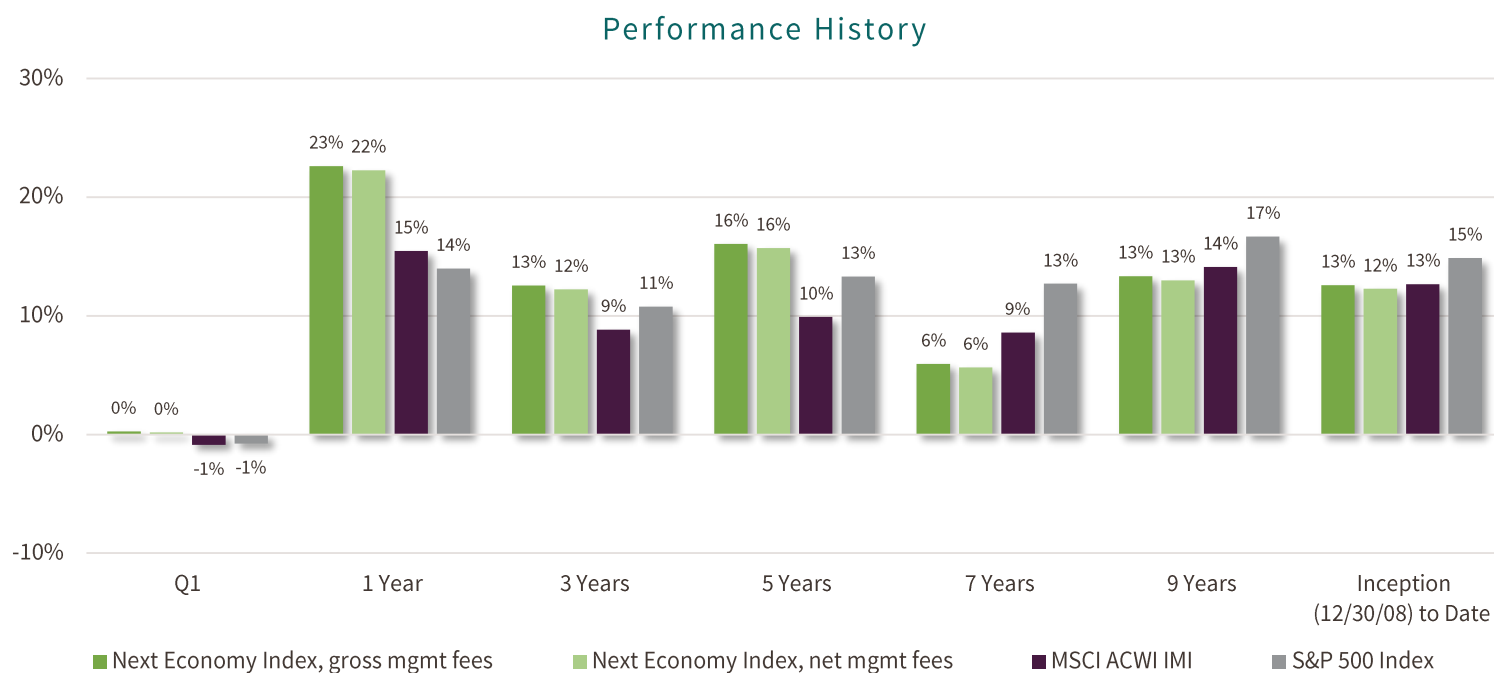
[†] Bloomberg consensus estimates

^{††} Bloomberg Investment Classification System

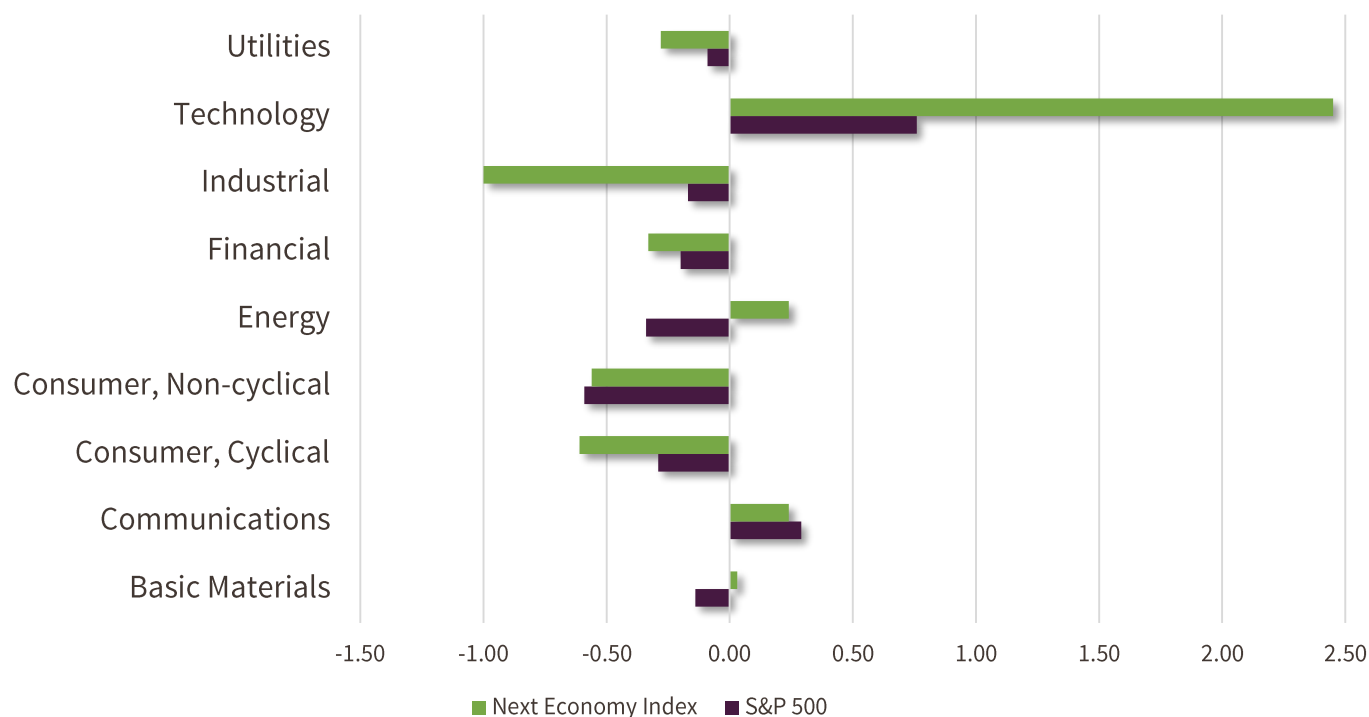
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Performance History & Sector Attribution

For commentary, see pages 7 - 8.



Year to Date 2018 Sector Attribution by BICS^{††}



[†] Bloomberg consensus estimates

^{††} Bloomberg Investment Classification System

All returns presented above that are greater than 1 year in length have been annualized. Performance data quoted represent past performance. Past performance does not guarantee future results and current performance may be lower or higher than the data quoted. Next Economy Index performance results reflect actual performance for a representative account, net of actual management fees and transaction costs. Assets managed in the Next Economy Index strategy representative account receive a reduced fee from the standard fee schedule. Next Economy Index performance results do not reflect the reinvestment of dividends and interest. Extreme periods of underperformance or outperformance are due to the concentrated nature of the strategy and the impact of specific security selection. Such results may not be repeatable. Please see more important disclosures on page 9 of this document.

Top Five Contributors & Detractors

Next Economy innovation doesn't unfold overnight—or even a quarter. Think of this as one way of looking at the previous quarter's performance, not necessarily the long-term picture.

Five Largest Contributing Stocks – 1st Quarter

Company Name	Ticker	Average Weight	Stock Price Return	Contribution to Portfolio Return
Seagate Technology	STX	1.50%	41.34%	0.49%
Square, Inc.	SQ	1.51%	41.91%	0.47%
Dassault Systemes, SA ADR	DASTY	1.76%	28.73%	0.43%
NVIDIA Corporation	NVDA	2.22%	19.76%	0.36%
Lumentum Holdings, Inc.	LITE	1.08%	30.47%	0.30%

Five Largest Detracting Stocks – 1st Quarter

Company Name	Ticker	Average Weight	Stock Price Return	Contribution to Portfolio Return
Universal Display Corp.	OLED	1.09%	-41.47%	-0.50%
Exact Sciences Corp.	EXAS	1.17%	-23.24%	-0.29%
Hain Celestial Group, Inc.	HAIN	0.87%	-24.35%	-0.25%
Acuity Brands, Inc.	AYI	1.10%	-20.85%	-0.25%
Herman Miller, Inc.	MLHR	1.09%	-19.83%	-0.23%

Past performance is not a guarantee of future results. To obtain information about the calculation methodology used to select the representative account's largest contributors and detractors from performance or to obtain a list showing every holding's contribution to the account's performance during the measurement period, contact us at info@greenalphaadvisors.com. Given differences in account sizes, custodial fee arrangements and other client-specific factors, not all accounts invested in the Next Economy Index experienced the exact portfolio contributions shown above. The holdings identified throughout this document do not represent all of the securities purchased, sold, held or otherwise recommended for advisory clients. Nothing in this document should be considered recommendation to purchase or sell any particular security.

Manager Commentary

Q1 2018 in Review



The first quarter of 2018 was one of the more volatile quarters in recent performance history for Green Alpha strategies, as well as for global and U.S. equities in general. Let's review the "whens" and "whats" of this shift, and how this relates to the ongoing tech revolution.

The beginning of the quarter saw a continuation of 2017's bull run for stocks as investors were persuaded that the passage of the Republican tax plan, in lowering taxes for U.S. corporations, would make business more profitable and earnings increases would follow. However, sentiment shifted abruptly following the January employment figures, as investors were spooked by rising wages, in turn raising inflation and thus interest rate fears, meaning corporate earnings could be projected to decrease as they would have to pay more interest on their debt. But then, by the end of March, inflation fears were allayed somewhat as Chicago Purchasing Manager Index (PMI) fell in March to a reading of 57.4, which was a one-year low, from 61.9 in February. So perhaps inflation won't be too severe, and interest rates may not need to rise as much after all.

Cue late March stock rally. All this keeps the Fed in its difficult position; it must normalize rates without hindering economic growth, while trying to predict overall price inflation in the face of sometimes conflicting data.

We've also seen a lot of volatility align with signals of on-again, off-again trade war threats. Experience (some very recent) shows that while tariffs are meant to shore up U.S. industry, retaliatory tariffs from countries importing U.S. exports make those exports less competitive. This leads to a counter effect, wherein domestic consumers see higher prices for products they buy, less demand for the products they make, lower pay, and higher unemployment. **Here, as with climate science, we see the U.S. increasingly outside of the global mainstream.** Formerly the champions and great beneficiaries of trade and globalization, the U.S. is now seen by many as running the other way, raising general economic uncertainty and raising market volatility.

We'll keep watching. Short-term developments, while not particularly meaningful in terms of portfolio returns for the long-term investor, do add up over time into the long-term picture. Events at the beginning of a major transition can have large effects on how the economy evolves. For example, tariffs that aim to thwart the growth of renewable energies in the U.S. mean that the U.S. is willingly giving up its historical lead in the solar industry, particularly in solar PV. We are encouraged that the best efforts of incumbent fossil fuel interests in the U.S. have not managed to stop growth in renewables – a sign that renewables' advantageous economics are hard to repudiate – but we can simultaneously lament that the momentum and growth in these key technologies is now being ceded to markets more enthusiastic about developing them (read: China).

As always, our response to all this is to keep our focus on the long-term, remaining invested in multi-year growth trends that will ultimately be affected less by shorter term policy machinations and more by innovative pursuit. This also underscores the importance of looking for Next Economy opportunities across the globe. If combative, protectionist economics hampers the U.S.'s efficiency-led growth, other nations will continue to pick up the slack, and we as investors will seek those global opportunities accordingly.

When thinking about the larger story of the Next Economy, we know that there will always be inevitable moments of setback and slowdown amidst prevailing long-term growth and evolution. And Q1 did indeed see much more important, long-term indications of development across several areas of the Next Economy.

Even in the presence of political noise, the energy space has been successfully pulling away from the inefficient legacy economy.
(continued on page 8)

Manager Commentary (cont.)

Q1 2018 in Review

Wind power firms announced development of turbines over 250 meters in length generating 12 megawatts, capable of powering 16,000 households at a time, making it likely that the price of wind generated electricity will continue to fall.

And we've already seen some significant price declines. Bloomberg reported that "The economic case for building new coal and gas capacity is crumbling, as batteries start to encroach on the flexibility and peaking revenues enjoyed by fossil fuel plants." The three key technologies driving this shift experienced impressive price declines between 2010-2017; total costs fell by 77% for solar PV, 38% for onshore wind, and 79% for lithium-ion battery storage. When we see such phenomenal price declines over the course of seven short years, achieving economic sustainability looks like more than a dream.

Solar may particularly benefit from significantly larger scale, and Q1 saw no shortage of evidence that global installations continue to boom. We learned that global solar capacity grew faster than fossil fuels in 2017, and China installed an unprecedented 97 gigawatts (GW) of solar capacity in the year. We also heard that Soft Bank and Saudi Arabia will be collaborating on the world's largest solar power generation project, expected to ultimately have the capacity to produce up to 200GW.

Meanwhile, in the automotive sector, U.S. EV sales in March 2018 grew 42% versus March 2017. This is a lot considering that the U.S. is a laggard in global terms; at least a dozen nations, including the world's largest auto market, China, have indicated an intention to ban internal combustion engine vehicles altogether in the coming couple of decades. What about EVs deployed for businesses? Consider this headline: "It's the beginning of the end' for internal combustion engines, says UPS as it updates its fleet to electric."

The electric transportation revolution is now visible even in aviation. In Q1, we saw electric aircraft start to take shape in reality as multiple designers showed off practical designs and prototypes, and Norway announced it will make all short-haul flights electric by 2040.

The strands are coming together, almost faster than we can keep up with them, to form a clear story of global economic evolution that is significant, enduring, and likely to be profitable for early adopters. The short-term Q1 ephemera will be only memories before long, while the tsunami of the global transition to the Next Economy will continue to prove unstoppable. Here's to an exciting Q2.

Next Economy Index – Please refer to page 4 for Sector Allocation chart & page 5 for Sector Attribution chart

We were pleased to see the Next Economy Index deliver a modestly positive return in a very tumultuous first quarter of 2018. The lion's share of the positive return was from the sector with the largest allocation in the Index—technology. Within tech, there was an advanced semiconductor rally, and we also saw solid gains from software and digital security. Energy and communications tied for second largest contributing sectors. Solar and wind equipment makers and installers did particularly well, while utilities and manufacturers lagged this quarter. Our second largest sector by allocation, industrials, was responsible for most of the negative performing names. This was partly due to concentration in the sector and because the lighting and display sub-sector of industrials fared particularly poorly in the quarter. Electric vehicles also detracted from performance, which led consumer cyclicals as a sector to be the second most detracting sector in the portfolio. Consumer cyclicals were also impacted by concerns about capital spending, which kept sustainable office furniture makers negative for the quarter. In the non-cyclical consumer sector, organic foods and the healthcare complex were the worst performers.

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- The SPDR S&P 500 ETF (SPY) seeks to provide investment results that, before expenses, correspond generally to the price and yield performance of the S&P 500 Index. Investors can invest directly in SPY.
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