

# Opportunities from China's Environmental Renaissance

Overview of the KraneShares  
MSCI China Environment ETF  
(Ticker: KGRN)



# Introduction to KraneShares

## About KraneShares

Krane Funds Advisors, LLC is the investment manager for KraneShares ETFs. Our suite of China focused ETFs provides investors with solutions to capture China's importance as an essential element of a well-designed investment portfolio. We strive to provide innovative, first to market strategies that have been developed based on our strong partnerships and our deep knowledge of investing. We help investors stay current on global market trends and aim to provide meaningful diversification. Krane Funds Advisors, LLC is majority owned by China International Capital Corporation (CICC).





## KraneShares MSCI China Environment ETF

### Investment Strategy:

The KraneShares MSCI China Environment ETF (KGRN) seeks to track the performance of the MSCI China IMI Environment 10/40 Index. The Index is comprised of securities that derive at least 50% of their revenues from environmentally beneficial products and services. The Index is based on five key Clean Technology environmental themes: Alternative Energy, Sustainable Water, Green Building, Pollution Prevention and Energy Efficiency. The Index aims to serve as a benchmark for investors seeking exposure to Chinese companies that focus on contributing to a more environmentally sustainable economy by making efficient use of scarce natural resources or by mitigating the impact of environmental degradation. Constituent selection is based on data from MSCI Environment, Social, and Governance (ESG).

### China's Environmental Protection Highlights:

- China is the world leader in total renewable energy capacity, at approximately 31% of total global capacity<sup>1</sup>.
- China's goal is to spend \$360 billion on renewable energy<sup>2</sup> by 2020 and have renewable energy account for 35% of its electricity consumption by 2030<sup>3</sup>.
- Meeting these standards would create as much new renewable energy capacity as the entire US electricity system<sup>4</sup>, and China would represent half of the world's green building floor space<sup>5</sup>.
- China has a proven track record of achieving ambitious long term renewable energy goals set forth within The Five Year Plan.

### KGRN Features:

- Access to China's fast-growing environmental protection industry that has rapidly become the largest renewable energy market in the world<sup>1</sup>.
- Exposure to companies that stand to benefit from China's increased focus and spending on clean energy technologies.
- Benchmarked to an MSCI ESG Index: MSCI is the #1 index provider for Socially Responsible Investment (SRI), Corporate governance, and ESG indexes according to a 2015 & 2016 survey of 1,300 participants conducted by SRI Connect and Extel.

1. REN21's Renewables 2019 Global Status Report (GSR)

2. Michael Forsythe, "China Aims to Spend at Least \$360 Billion on Renewable Energy by 2020", The New York Times, 1/5/2017, retrieved on 9/30/2019.

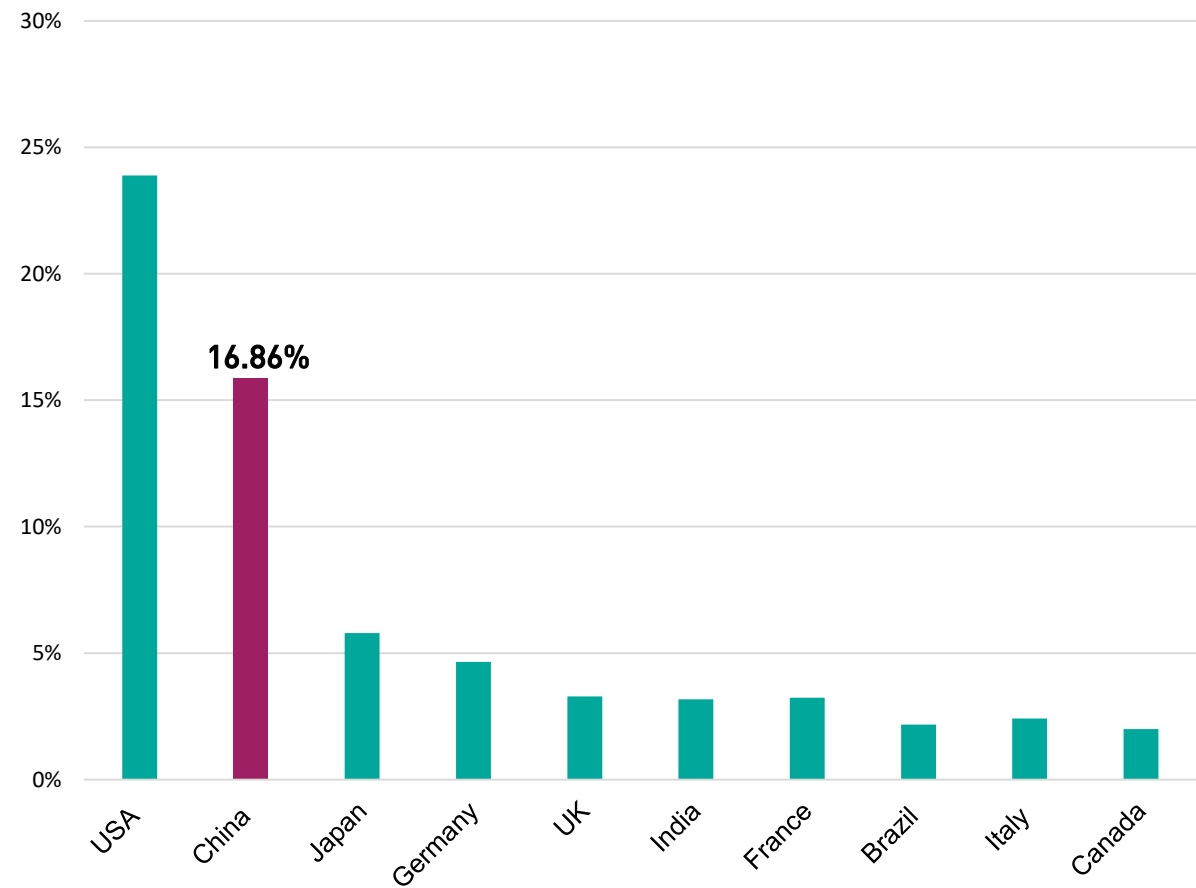
3. Bloomberg, "China Steps Up Its Push Into Clean Energy", 9/26/2018, retrieved 9/30/2019.

4. US Energy Information Administration, "What is U.S. electricity generation by energy source?", 3/1/2019.

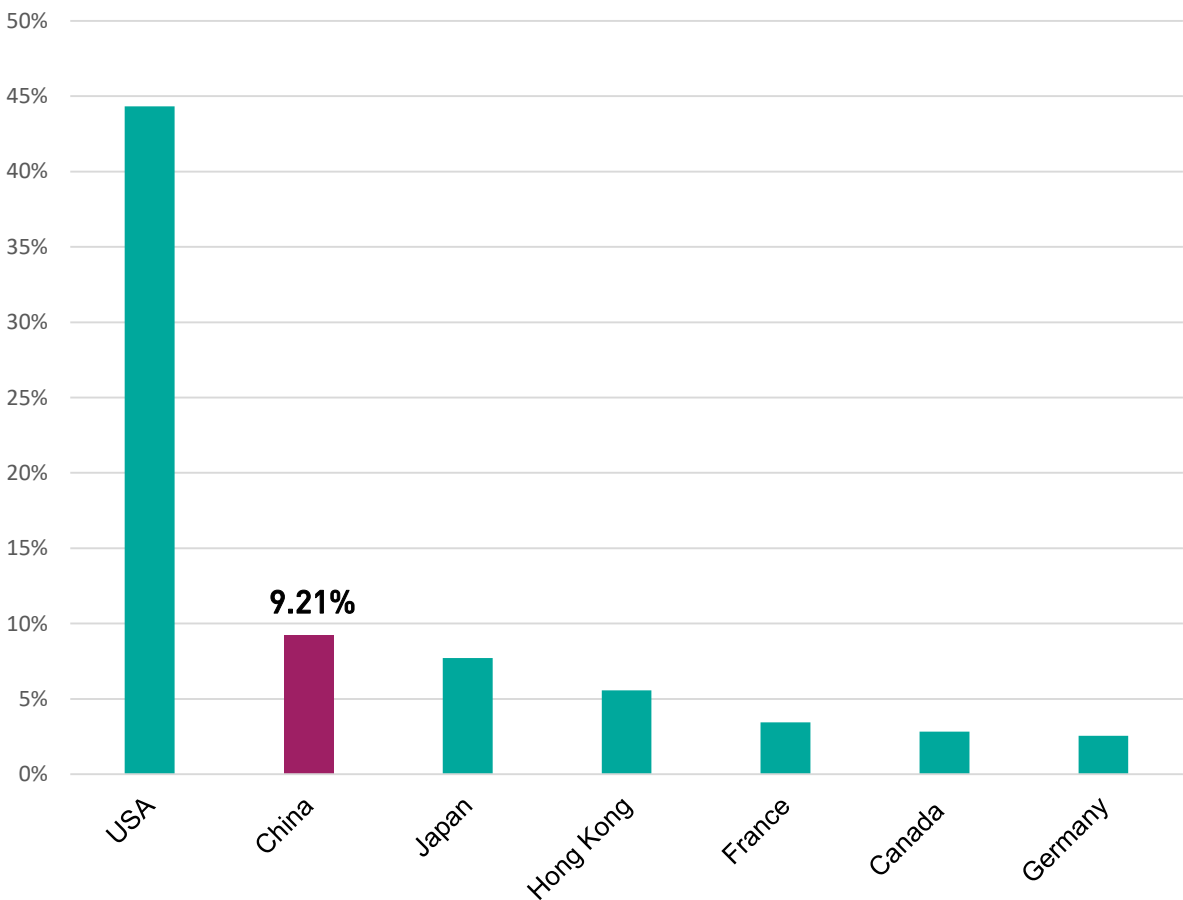
5. UTC, Accelerating the World's Largest Green Building Market: China. Oct. 4, 2016.

China has grown to become the second largest economy and second largest stock market in the world.

Share of World GDP in 2018

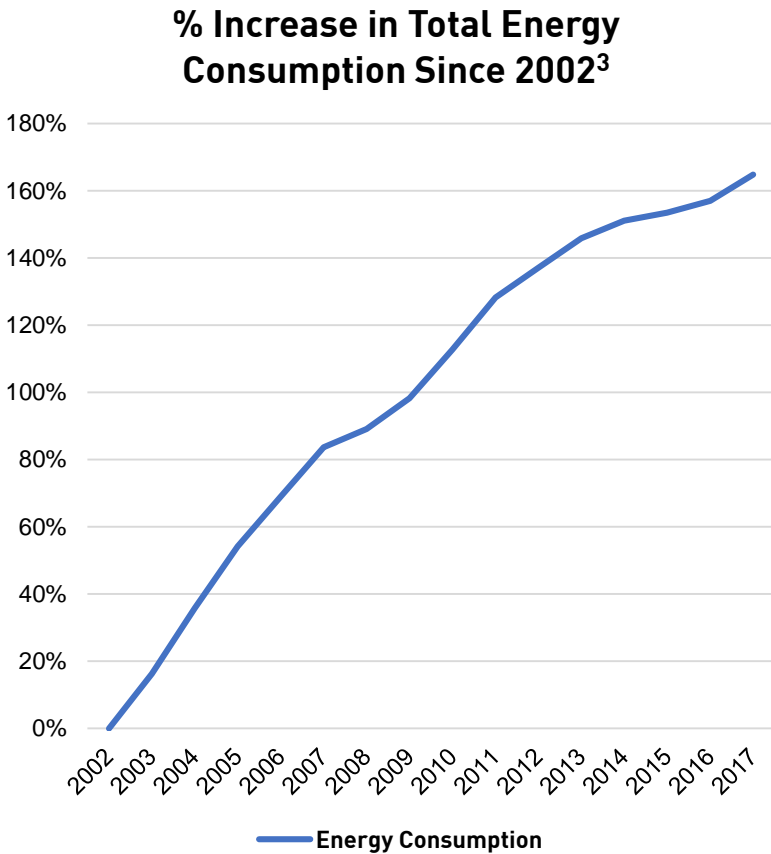
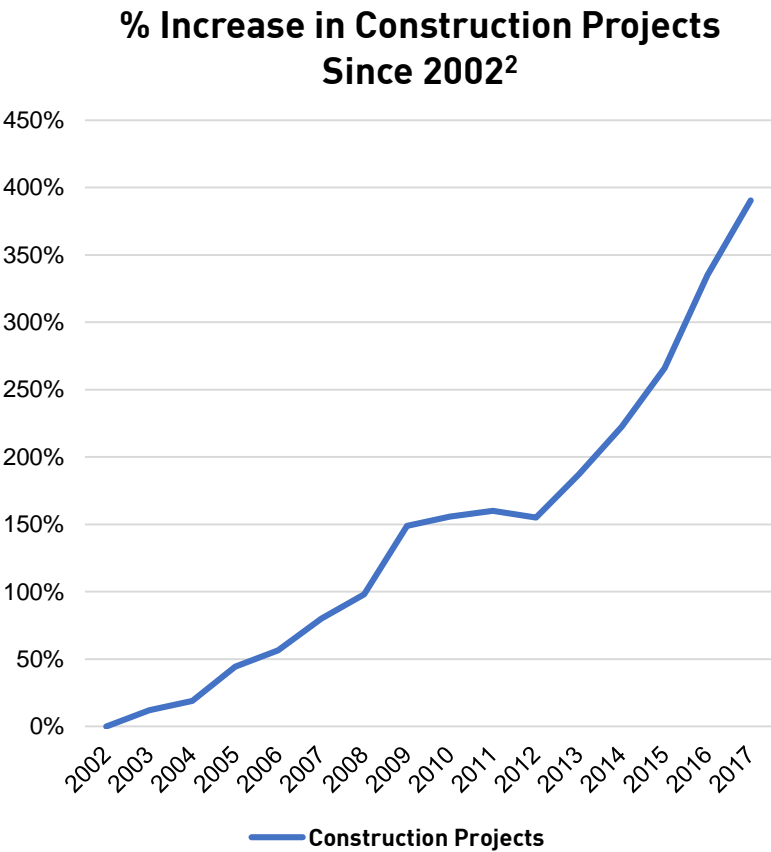
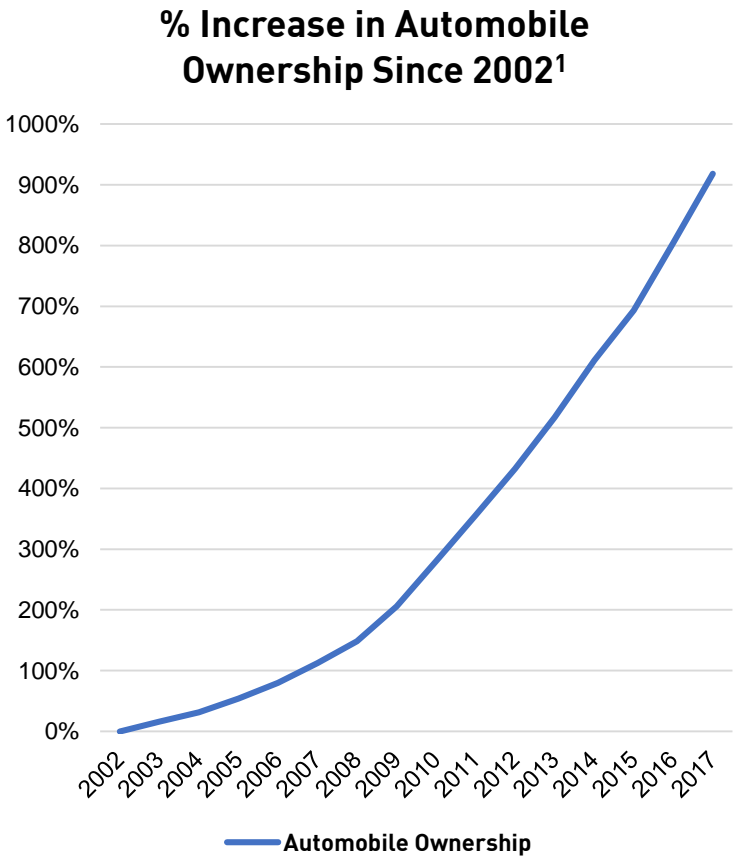


Share of World Market Capitalization in 2018



Data from the World Bank as of 12/31/2018, retrieved on 9/30/2019.

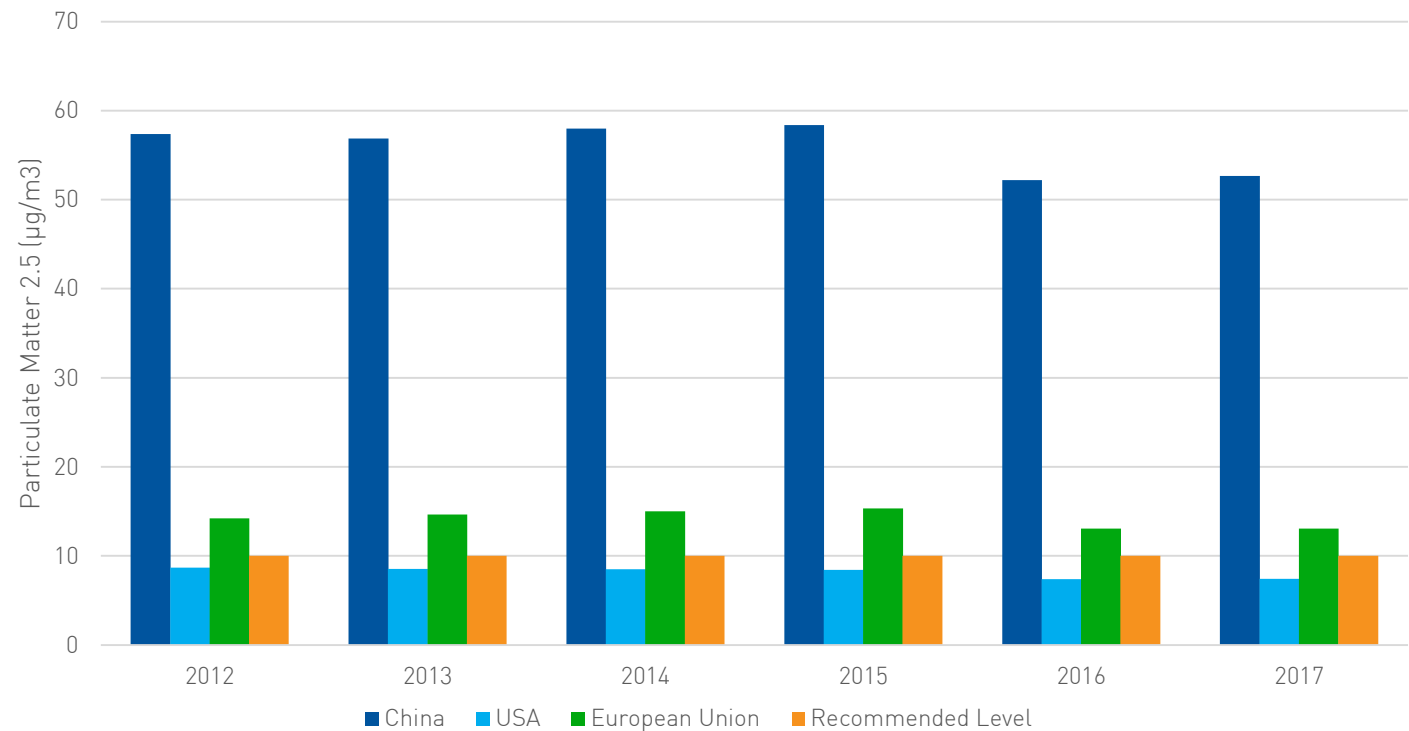
China's economic growth has come with a corresponding increase in automobile ownership, construction projects and energy consumption, particularly coal consumption; all currently at their decade highs.



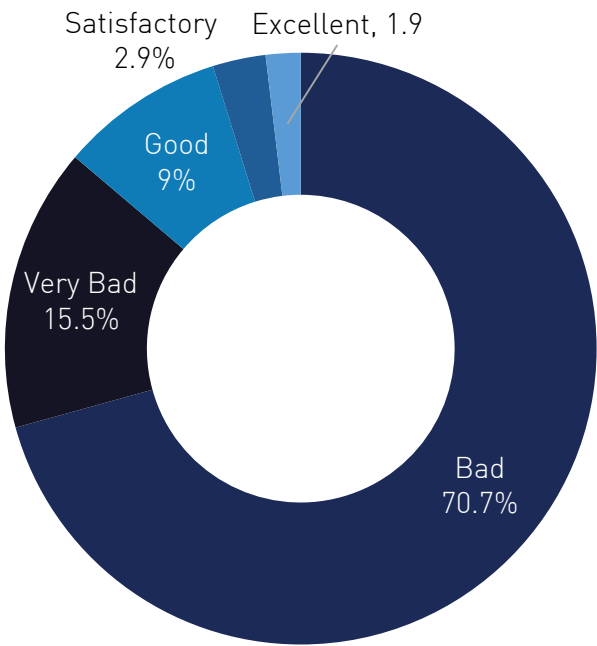
1. Data from China's National Bureau of Statistics 2018, Possession of Civil Vehicles, retrieved on 9/30/2019.  
 2. Data from China's National Bureau of Statistics 2018, Number of Projects Under Construction, retrieved on 9/30/2019.  
 3. Data from China's National Bureau of Statistics 2018, Total Consumption of Energy and Its Composition, retrieved on 9/30/2019.

China’s rapid economic development has impacted the environment. Levels of air and water pollution in China are much higher than those recommended by the World Health Organization.

Average Annual Exposure to PM2.5 Air Pollution<sup>1</sup>



2018 Overall Groundwater Quality<sup>2</sup>



<sup>1</sup>Data from the World Bank and from the World Health Organization’s “Air Quality Guidelines”. Retrieved on 9/30/2019.

<sup>2</sup>Data from China Water Risk State of Ecology & Environment Report Review 2018. Retrieved on 9/30/2019.

## China has a model for how to successfully address environmental concerns.

Many cities have encountered pollution during their development and have subsequently taken action to reduce it

### 1952 Great Smog of London



- Due to the burning of coal, smog was common in London during this time. However, in December 1952, an anticyclone created an inversion – trapping the pollution and blanketing the capital for the next five days.
- May have killed as many as 12,000 people in London due to sickness<sup>1</sup>.
- Four years later, the Clean Air Act banned the burning of polluting fuels and was considered an environmental turning point across the UK.

### 1966 New York City's "Killer Smog"



- A large mass of stagnant air trapped pollutants in NYC for three days.
- This was the third harmful smog incident in NYC within 15 years.
- The smog served as a catalyst for greater national awareness of air pollution, and the 1967 Air Quality Act and 1970 Clean Air Act were issued as a result.

### Experts Believe China Is Not So Different:

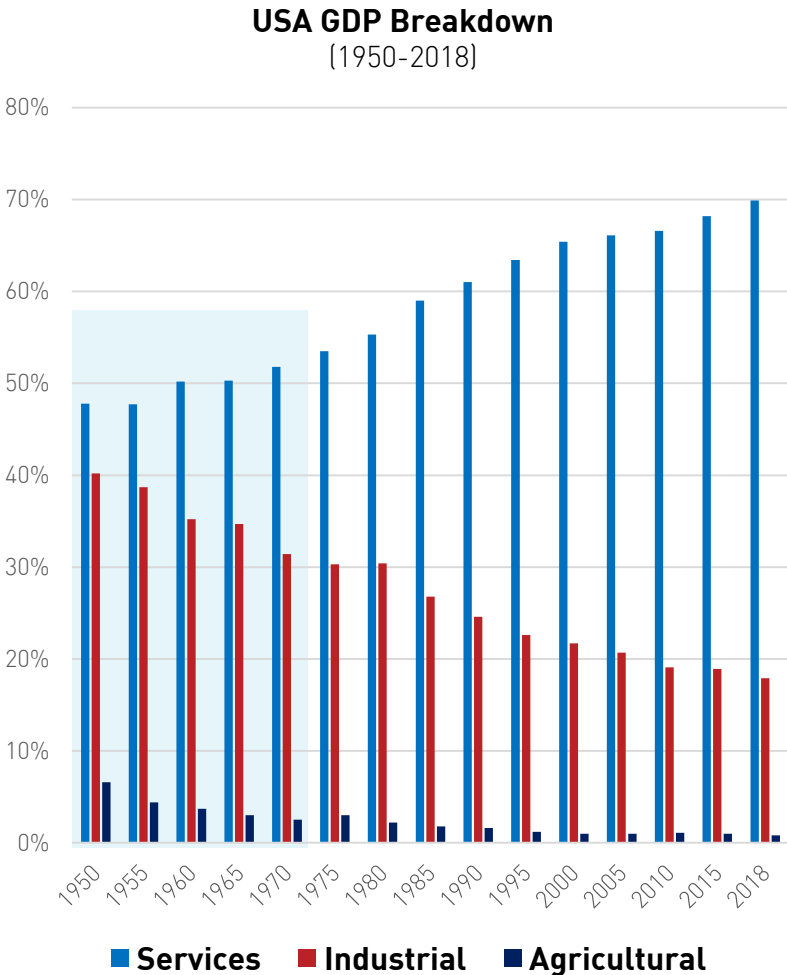
Elizabeth M. Lynch, a legal scholar and founder of *China Law and Policy*, said that images of visible air pollution in Beijing from 2012, “aren’t that much different from pictures of New York City in the 1950s and 1960s, or London during the same time.”<sup>2</sup>

<sup>1</sup>Bell, M.; Davis, D & Fletcher, T. (2004). A Retrospective Assessment of Mortality from the London Smog Episode of 1952: The Role of Influenza and Pollution. *Environ Health Perspect.* 112: 6–8.

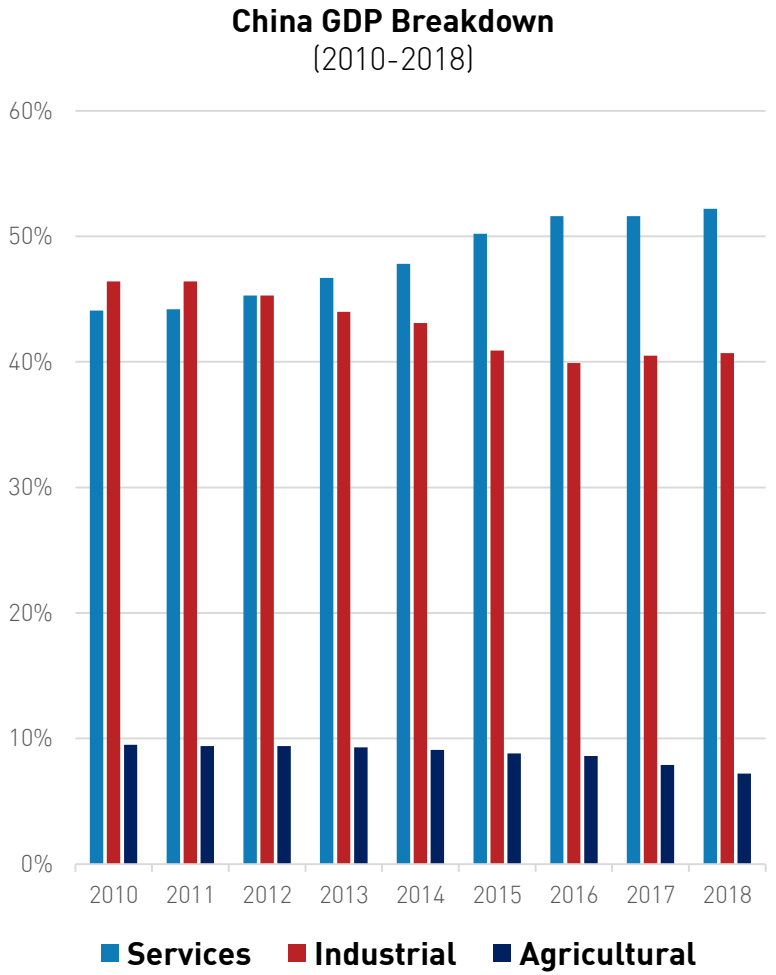
<sup>2</sup>China Law and Policy, Beijing Air Pollution- A Silver Lining on the Smog Cloud. Jan. 13, 2013

# As China's economy has shifted away from its dependency on manufacturing, it is now better equipped to deal with environmental concerns.

- China's economy has become more balanced in recent years as services surpassed industrials as the largest contributor to GDP
- The US underwent a similar shift from the 1950's to the 1970's, and today the percent of US GDP generated from services far exceeds that of industrials
- With a more balanced economy, China is now better equipped to tackle pollution issues generated from its industrial sector



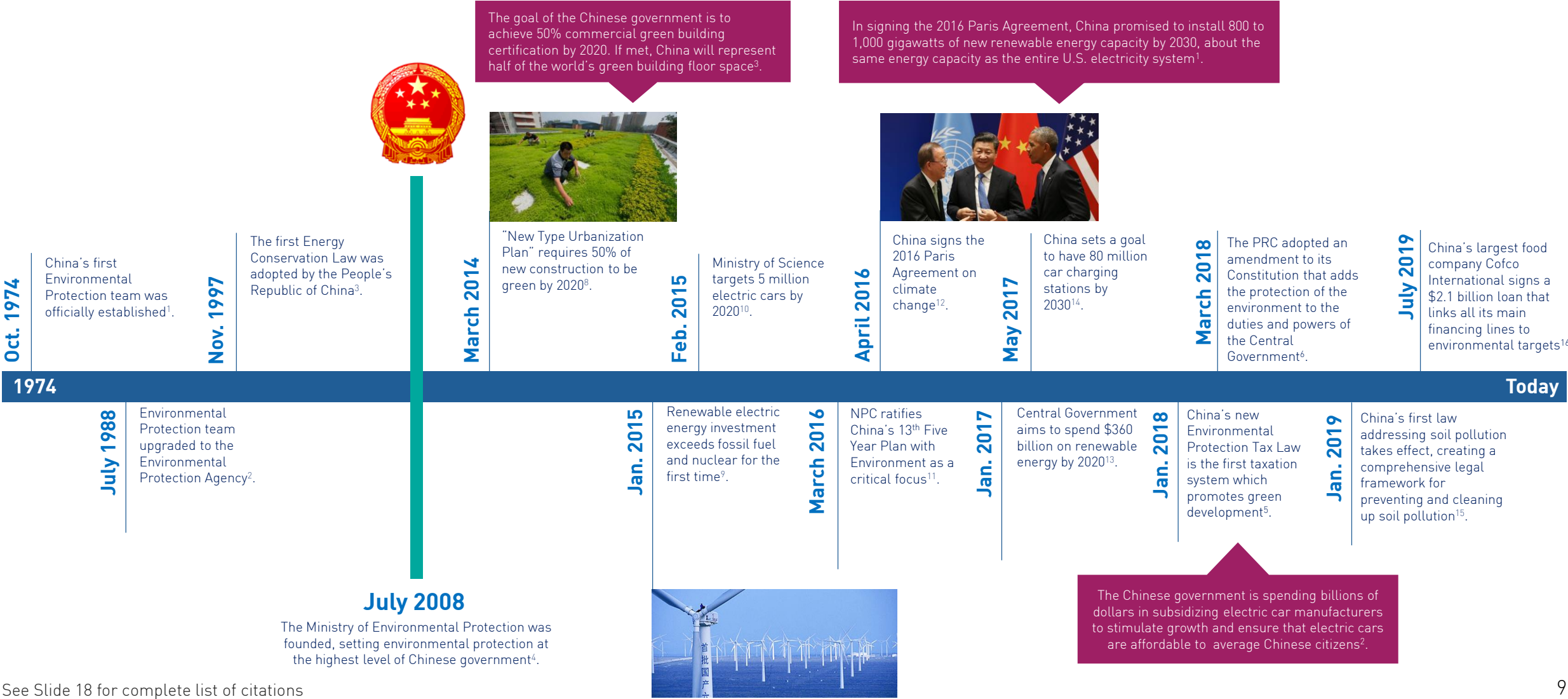
Data from U.S. Bureau of Economic Analysis (excludes government sector) as of 11/01/2018. Retrieved 9/30/2019.



Data from Bloomberg as of 12/31/2018. Retrieved 9/30/2019.

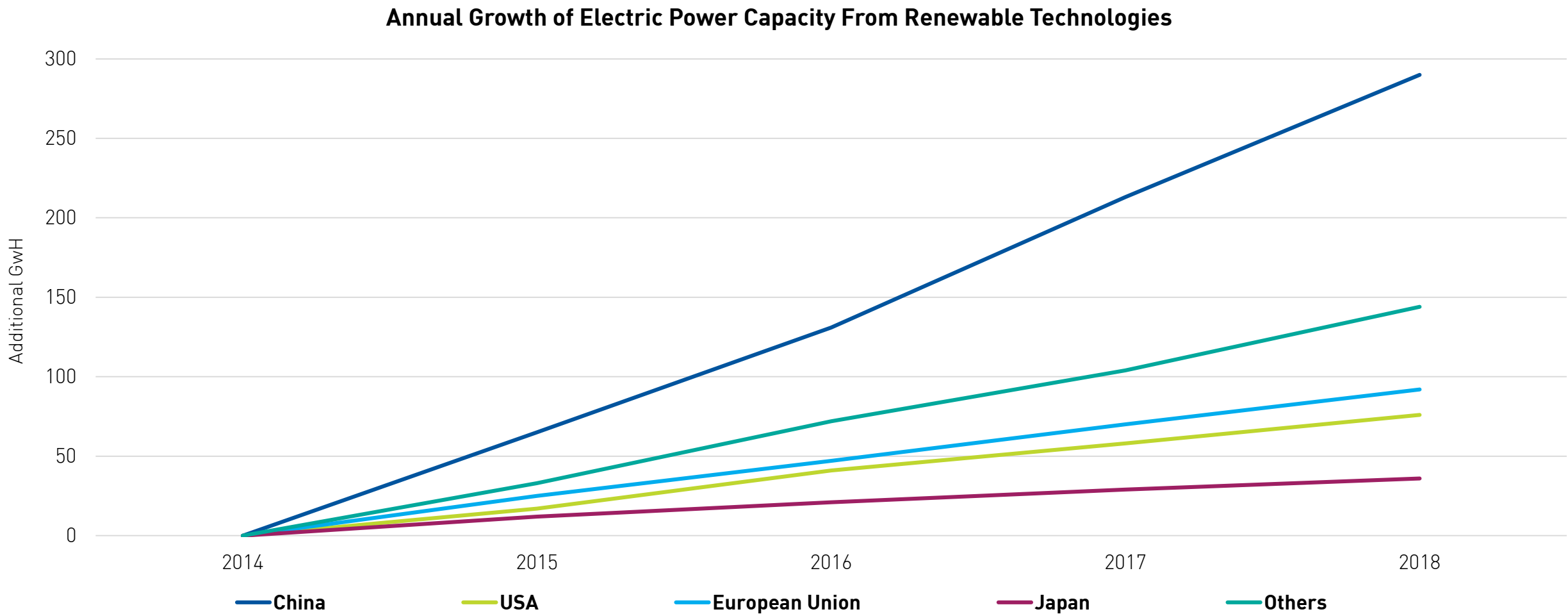


# China's focus on environmental protection has strengthened following the formation of the Ministry of Environmental Protection in July 2008.



See Slide 18 for complete list of citations

China has outpaced other world leaders in growth of electric power capacity from renewable technologies.








Data from International Energy Agency as of 12/31/2018. Retrieved on 9/30/2019.

**While China is the world leader in total renewable energy, at 31% of global capacity, there is still significant room for growth.**

In terms of per capita renewable power output, China produces less than half the capacity of the United States and one third the capacity of the European Union.

Renewable Electric Power Global Capacity. Top Regions / Countries, 2018 <sup>1</sup>									
	Global	BRICS	EU-28	China	USA	Germany	India	Japan	UK
Technology	Gigawatts								
Bio-Power	130	44	42	17.8	16.2	8.4	10.2	4.0	7.7
Geothermal Power	13.3	0.1	0.9	~0	2.5	~0	0	0.5	0
Hydropower	1,132	519	130	322	80	5.6	45	22	1.9
Ocean Power	0.5	~0	0.2	0	~0	0	0	0	~0
Solar PV	505	214	115	176	62	45	33	56	13
Concentrating Solar Thermal Power	5.5	0.8	2.3	0.2	1.7	0	0.2	0	0
Wind Power	591	262	179	210	96	59	35	3.7	21
Total renewable power capacity (including hydropower)	2,378	1,040	469	727	260	119	124	86	44
Total renewable power capacity (not including hydropower)	1,246	521	339	404	180	113	78	64	42
Per capita capacity (kilowatts per inhabitant, not including hydropower)	0.2	0.2	0.7	0.3	0.6	1.4	0.06	0.5	0.6

China's 2018 Global Rank in Power Capacity		
	Wind Power	1st
	Hydropower	1st
	Solar Power	1st
	Bio Power	1st
	Geothermal Power	3rd

Source: REN21's Renewables 2019 Global Status Report (GSR) pg 187.



## China has proven highly capable of achieving its ambitious targets for increasing renewable energy capacity.

- By the end of 2015 China exceeded the goal it set for total renewable energy capacity in the 12<sup>th</sup> Five Year Plan by 11.8%
- Total renewable energy capacity increased 12.2% year over year from 2017 to 2018
- China's 13<sup>th</sup> Five Year Plan aims to increase overall renewable energy capacity 45.5% by 2020

	2017 Actual Numbers	2018 Actual Numbers	13th 5 year plan energy targets (2016 - 2020)
	Gigawatts		
Bio-Power	15	17.8	15
Geothermal Power	~0	~0	0.53
Hydropower	313	322	380
Solar PV	131	176	110
Concentrating Solar Thermal Power	1	0.2	5
Wind Power	188	210	210
<b>Total</b>	<b>648</b>	<b>727</b>	<b>720.53</b>

Data compiled from "China 13th Electricity Development Five Year Plan (2016-2020)" [iea.org](http://iea.org) and REN21's Renewables 2019 Global Status Report (GSR)

## KGRN is benchmarked to an MSCI index – MSCI is the world's largest provider of ESG indexes and research<sup>1</sup>

MSCI is committed to determining which companies best match their ESG criteria



**#1** for SRI<sup>3</sup> Research,  
Corporate Governance  
and ESG Indexes  
as voted by

**1,300**

participants of the SRI Connect and  
Extel Survey, 2015 & 2016

over

**\$85bn**

in assets are benchmarked to  
MSCI ESG Indexes<sup>2</sup>



**99 of top 100**  
global investment  
managers are  
MSCI clients<sup>2</sup>

<sup>1</sup> By number of indexes and by assets tracking the indexes compared with publically available information produced by FTSE and S&P Dow Jones

<sup>2</sup> As of September 2017, based on Bloomberg, Morningstar and MSCI data. Active AUM includes data as of June, 2017 reported in September 2017 by eVestment. Data excludes mandate or policy benchmark related assets.

<sup>3</sup> 'SRI' - Socially Responsible Investment.

# The MSCI Process

- MSCI ESG Research analyzes thousands of companies worldwide to help institutional investors understand how ESG factors can impact the long-term risk and return profile of their investments.
- By re-weighting free-float market cap weights based upon ESG metrics, the indexes enhance exposure to companies that demonstrate a higher MSCI ESG Rating and a positive ESG trend, while maintaining a broad and diversified investment universe<sup>1</sup>.



Source: MSCI ESG RESEARCH: OVERVIEW AND PRODUCTS, 2018.

<sup>1</sup>MSCI Environmental, Social, and Governance (ESG) Indexes: A modern approach to ESG Indexes, as of 8/4/2017.



## Five Key Clean Technology Themes of KGRN:



### Sustainable Water

Firms that attempt to resolve water scarcity and water quality issues



### Pollution Prevention

Firms focused on pollution prevention, waste minimization or recycling



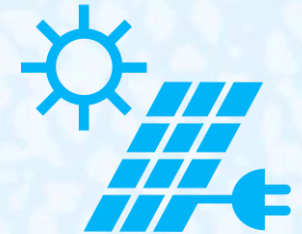
### Alternative Energy

Firms supporting the development of renewable energy and alternative fuels



### Green Building

Firms that directly support achieving sustainable building standards



### Energy Efficiency

Firms that address the global demand for energy and minimize effects on the environment

## Example fund holdings from the Five Key Clean Technology Themes of KGRN:

Theme		Example constituent	Fund holding weight (as of 9/30/2019)	Company logo	Company Description
	<b>Alternative Energy</b>	China Longyuan Power Group	4.77%		China Longyuan Power Group Corp Ltd designs, develops, manages, and operates wind farms. The Company also sells the electricity generated by the wind.
	<b>Sustainable Water</b>	Beijing Enterprise Water	4.54%		Beijing Enterprises Water Group Limited develops water treatment systems. The Group specializes in water services and environmental protection businesses, with waste water treatment as its core business segment.
	<b>Green Building</b>	China Vanke	6.73%		China Vanke Co., Ltd. is a property development company. The Company develops residential properties in Shenzhen, Shanghai, Beijing, Tianjin, Shenyang, Nanjing, and other big cities in China.
	<b>Pollution Prevention</b>	China Everbright International	7.59%		China Everbright International Limited provides environmental protection project management and consultancy services. The Company's operations are broken up into environmental energy, environmental water, environmental construction and environmental technology.
	<b>Energy Efficiency</b>	Tianneng Power Intl	1.81%		Tianneng Power International Limited manufactures motive battery products. The Company's batteries are used predominantly in electric bikes.

## KraneShares MSCI China Environment ETF (Ticker: KGRN)

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### KGRN Performance History as of 9/30/2019

	Cumulative %			Average Annualized %		
	3 Mo	6 Mo	Since Inception	1 Yr	3 Yr	Since Inception
Fund NAV	-7.20%	-14.20%	-28.99%	-9.38%	–	-15.97%
Closing Price	-8.04%	-14.72%	-29.53%	-9.98%	–	-16.29%
Index	-7.51%	-14.72%	-28.60%	-8.99%	–	-15.74%

The performance data quoted represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than their original cost and current performance may be lower or higher than the performance quoted. For performance data current to the most recent month end, please visit [www.kraneshares.com](http://www.kraneshares.com).

The Index reflects the reinvestment of any cash distributions after deduction of any withholding tax using the maximum rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

Index returns are for illustrative purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses (except for withholding taxes described above). Indexes are unmanaged and one cannot invest directly in an index.

Fund Details	As of 9/30/2019
Primary Exchange	NYSE Arca
Cusip	500767850
Total Annual Fund Operating Expense	0.80%
Inception Date	10/12/2017
Distribution Frequency	Semiannually
Index Name	MSCI China IMI Environment 10/40 Index
Index Ticker	Bloomberg: M1CXCIE
Number of Holdings (ex Cash)	41

Top Ten Holdings as of 9/30/2019 excluding cash. The Fund's Holdings are Subject to Change.	Ticker	%
CHINA CONCH VENTURE HOLDINGS	586 HK	9.87
CHINA EVERBRIGHT INTL LTD	257 HK	7.59
BYD CO LTD-H	1211 HK	7.54
CHINA VANKE CO LTD-H	2202 HK	6.73
HUANENG RENEWABLES CORP-H	958 HK	5.81
SHIMAO PROPERTY HOLDINGS LTD	813 HK	4.88
CHINA LONGYUAN POWER GROUP-H	916 HK	4.77
BEIJING ENTERPRISES WATER GR	371 HK	4.54
XINYI SOLAR HOLDINGS LTD	968 HK	4.42
YUEXIU REAL ESTATE INVESTMEN	405 HK	3.75



**Slide 9 List of Citations:**

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14. Supchina, "Electric vehicles now 1.2 percent of car market in China." May 26, 2017.
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16. Bloomberg News, "Chinese Food Giant Raises \$2.1 Billion in Country's First Sustainability Loan." July 16, 2019.

## Important Notes

**Carefully consider the Funds' investment objectives, risk factors, charges and expenses before investing. This and additional information can be found in the Funds' full and summary prospectus, which may be obtained by visiting [www.kraneshares.com](http://www.kraneshares.com). Read the prospectus carefully before investing.**

ETF shares are not redeemable with the issuing fund other than in large Creation Unit aggregations. Instead, investors must buy or sell ETF Shares in the secondary market with the assistance of a stockbroker. In doing so, the investor may incur brokerage commissions and may pay more than net asset value (NAV) when buying and receive less than net asset value when selling. The NAV of the Fund's shares is calculated each day the national securities exchanges are open for trading as of the close of regular trading on the New York Stock Exchange ("NYSE"), normally 4:00 P.M. Eastern time (the "NAV Calculation Time"). Shares are bought and sold at market price not NAV. Closing price returns are based on the midpoint of the bid/ask spread at 4:00 P.M. Eastern Time (when NAV is normally determined).

Investing involves risk, including possible loss of principal. There can be no assurance that a Fund will achieve its stated objectives. The Funds are subject to political, social or economic instability within China which may cause decline in value. Fluctuations in currency of foreign countries may have an adverse effect to domestic currency values. Emerging markets involve heightened risk related to the same factors as well as increase volatility and lower trading volume. Narrowly focused investments may be subject to higher volatility. The Fund may invest in derivatives, which are often more volatile than other investments and may magnify the Fund's gains or losses. The Fund is non-diversified.

Although the information provided in this document has been obtained from sources which Krane Funds Advisors, LLC believes to be reliable, it does not guarantee accuracy of such information and such information may be incomplete or condensed.

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Forward-looking statements (including Krane’s opinions, expectations, beliefs, plans, objectives, assumptions, or projections regarding future events or future results) contained in this presentation are based on a variety of estimates and assumptions by Krane. These statements generally are identified by words such as “believes,” “expects,” “predicts,” “intends,” “projects,” “plans,” “estimates,” “aims,” “foresees,” “anticipates,” “targets,” “should,” “likely,” and similar expressions. These also include statements about the future, including what “will” happen, which reflect Krane’s current beliefs. These estimates and assumptions are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive, and financial risks that are outside of Krane’s control. The inclusion of forward-looking statements herein should not be regarded as an indication that Krane considers forward-looking statements to be a reliable prediction of future events and forward-looking statements should not be relied upon as such. Neither Krane nor any of its representatives has made or makes any representation to any person regarding forward-looking statements and neither of them intends to update or otherwise revise such forward-looking statements to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying such forward-looking statements are later shown to be in error. Any investment strategies discussed herein are as of the date of the writing of this presentation and may be changed, modified, or exited at any time without notice.

This material represents an assessment of the market environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. This information should not be relied upon by the reader as research or investment advice regarding the funds or any stock in particular. [R\_US\_KS\_SEI]