

# Sustainability and “green development” under China’s 14<sup>th</sup> FYP

**Sinolytics Primer**

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## Contact

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## Profile

- Founded in 2017, Sinolytics is a client-serving, research-based consultancy with offices in **Berlin, Beijing and Zurich**
- Uniquely blending **in-depth research** with management consulting approach to **problem solving**
- Operating at the **nexus of business and policy** and analyzing **China's political economy**, Sinolytics advises companies from across business sectors and functional areas
- **50+ clients**, including some of the largest and most respected foreign companies operating in China

## Key expertise areas



### Macro-, industrial and S&T/innovation policies

14th FYP, automotive, S&T cooperation, 5G/new infrastructure



### China's digital economy and digital transformation

Digital platforms, valuetization of data, AI, startups/VC



### Market governance and regulatory compliance

CLS encryption/PIP/MLPS 2.0/x-border, CSCS, environment



### Social policies: welfare and domestic consumption

Health, pension, urbanization, rural economy and labor



### Finance, geoeconomics (trade/investment) & geopolitics

Financial opening-up, BRI, RCEP, tech decoupling, EU-China



### Public and Governmental Affairs (PGA)

Structures, strategy, stakeholder analysis, network support

## Approach

**Primary source and Chinese-language research**

**Problem-solving and developing tailored solutions**

**Flexible delivery formats: strategies, reports, workshops**

**Depth in content, while strong in contextualization**

**Extensive expert network and research partners**

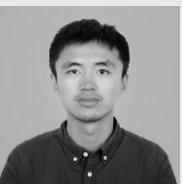


# Sinolytics' interdisciplinary team specialized in China's sustainability policies



**Markus Herrmann Chen**  
陈瑞华  
Managing Director

Markus is an experienced advisor to European corporate and public sector clients with expertise in China's foreign economic policy including trade policy and the Belt and Road Initiative, financial policy, S&T/innovation policies as well as public / government affairs strategies. Markus holds a MLaw from universities of Bern and Geneva focusing on international public and WTO law and a CAS from ETHZ in public policy.



**Bin Yan**  
严斌  
Consultant

Bin is a financial specialist with investment expertise in environmental sectors of China. Prior to Sinolytics, Bin worked as an PE investment manager for eight years, mostly in China New Enterprise Capital, covering environmental and pharmaceutical sectors. Previously he worked in the transaction dep. of PwC Beijing office. Bin holds a B.A. in Accounting from Peking University and a M.A. in Banking & Finance at the University of St. Gallen



**Tiffany Wong**  
黄亭嘉  
Consultant

Tiffany is an experience consultants to clients navigating China's technology markets. Her engagements include leading cybersecurity strategy projects, focusing on cross-border data flow and compliance mechanisms. She also supports clients on geopolitical issues and government and public affairs strategies. She holds an M.A. from Johns Hopkins in International Economics and China Studies and a B.A. from the University of Chicago in Political Science and International Relations.



**Dr. Jost Wübbeke**  
龙信鑫  
Director

Jost is an expert on industrial policies of China. He advises corporate clients especially in the areas of shipping, ports and intermodal transport and provides support to build partnerships with Chinese companies. Before joining Sinolytics, he was Head of Economy and Technology at the Mercator Institute for China Studies and put a focus on BRI. He has a PhD from FU Berlin on China's industrial policy. He also holds degrees in International Relations and China Studies from Berlin and Bochum and was a research fellow at Tsinghua University.



**Hailin Wang**  
王海林  
Consultant

Hailin has extensive experience researching and analyzing industrial policy and corporate performance, especially in the areas of energy policy, sustainability and environmental protection. Before Sinolytics, he was working for an international environmental protection NGO. Hailin obtained his B.A. in Economics (major in Finance) from Southwestern University of Finance and Economics and holds an M.A. in Political, Legal, and Economic Philosophy from University of Bern. He has passed CFA level I and also studied Global Legal Studies at University of Luzern.



**Martin Catarata**  
丁子涵  
Analyst

Martin is specialized in China's industrial policy and innovation system. He has previously worked on smart manufacturing, semiconductors and China's automotive landscape. Martin has also worked extensively on China's construction projects along the BRI, analyzing the geo-economic impact of the BRI on third countries. Before joining Sinolytics, he served as research assistance to the Political Economy department at University Trier and is currently pursuing a PhD on China's maritime connectivity. Martin holds a B.A. and M.A. in Political Science and Chinese Studies from University of Trier.

'Two Sessions' endorsed 14<sup>th</sup> Five-Year-Plan in March 2021 shaping its development trajectory until 2035



# China's 14<sup>th</sup> Five-Year-Plan is seen as of historic importance

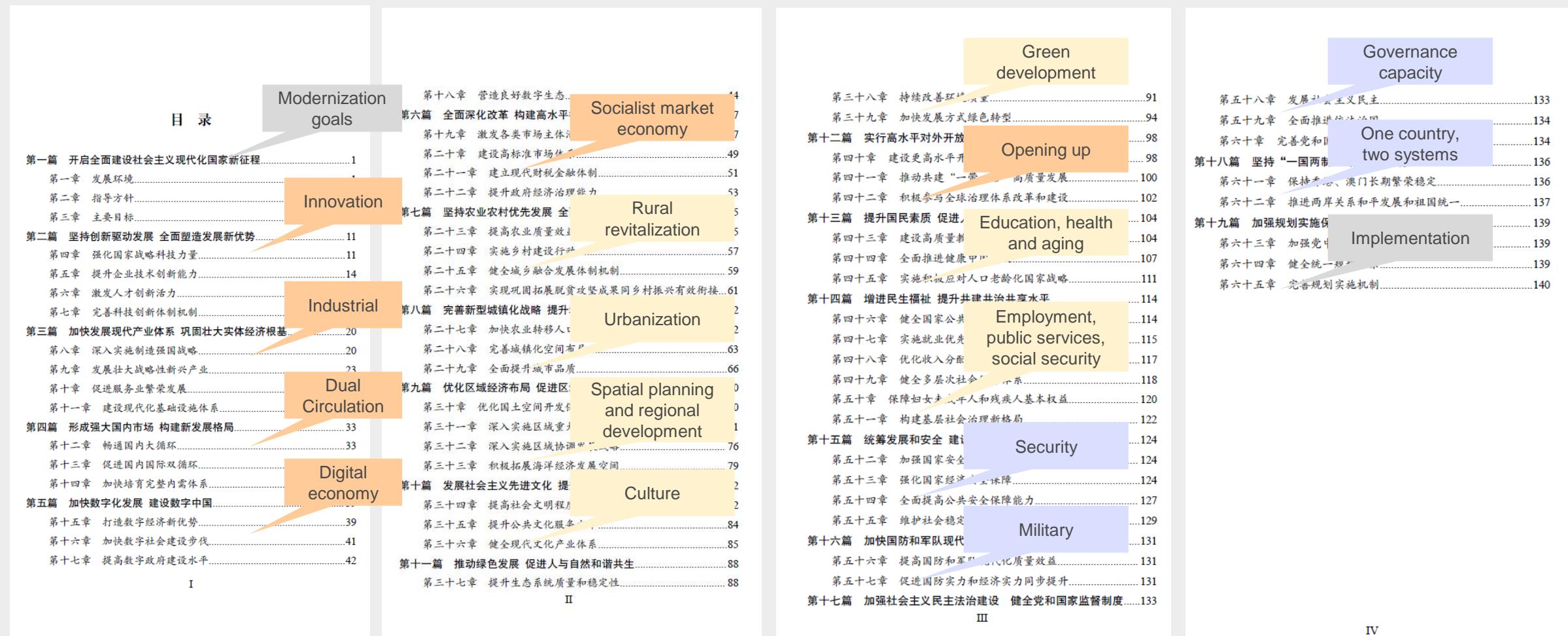


«The core of the plan is to realize the **biggest strategic shift** since the Third Plenary Session of the 11th Central Committee [1977-1982] and the establishment of a market economy system»

«规划核心要义就是实现(十一届)三中全会以来、建立市场经济体制以来最大的一个战略转移»

***Li Junru***  
*Vice-President of the Central Party School*

14<sup>th</sup> FYP with 19 chapters and 65 sub-chapters – chapter #11 focuses on “green development”



## Economic policy

## Social policy

## **Security/governance**

## FYP goals/governance

# 14<sup>th</sup> FYP tries to respond to demanding environment trying to make China's development more resilient

## Key factors shaping the 14<sup>th</sup> FYP



### Development imperative and avoiding “middle income trap” – doubling GDP by 2035 (vs. 2020)

- Adjust investment-led growth model and address overcapacities and high debt level



### Unabated US-China rivalry – and geopolitics

- “US containment and suppression as big threat” (美国遏制打压是一大威胁)
- “The world today is undergoing major changes unseen in a century”



### “Institutional confidence” (制度自信)

- Covid-control: “major strategic outcome”
- China’s “system advantage” (制度优势)
- East is rising, West declining” (“东升西降”是趋势)



### Fragility of supply chains exposed during Covid

- Covid as «stress test under combat conditions», strive for ability to «self-circulate» (自我循环)
- Diversify imports and leverage BRI partners for «safe and secure» supply chains



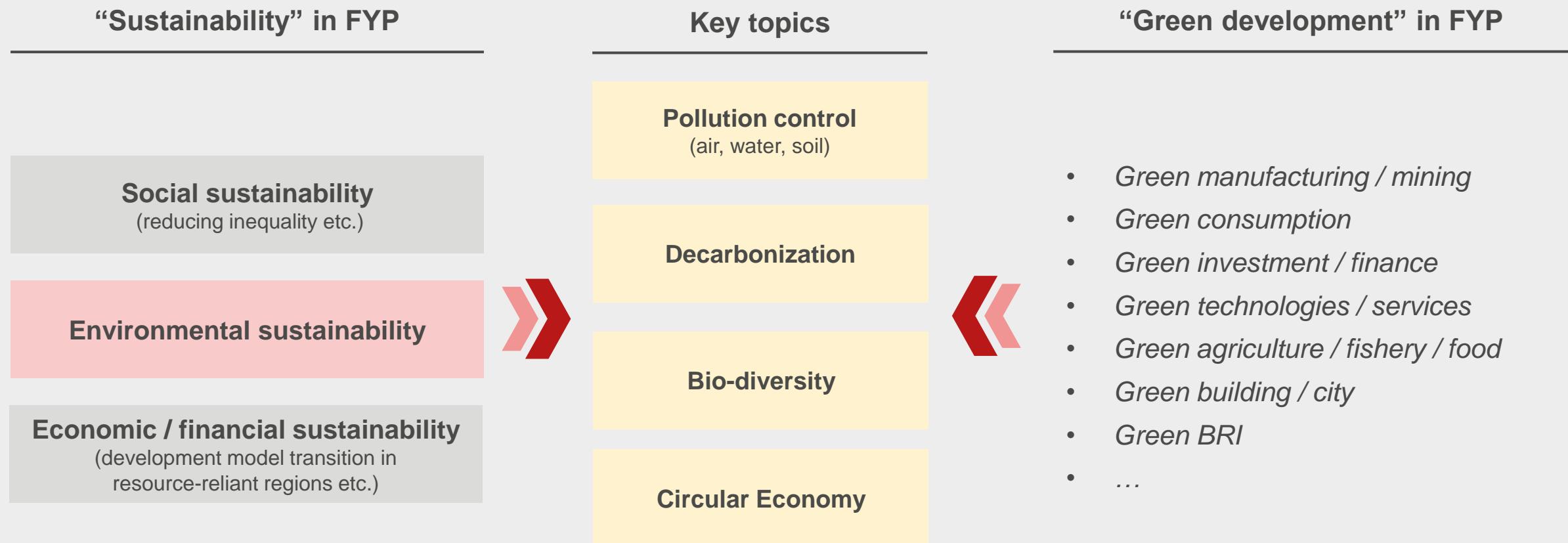
### Xi's consolidated power

- 19th CCP Central Committee's 5<sup>th</sup> Plenum further consolidated Xi's power referring to Xi as “grand navigator and helmsman” (核心领航掌舵)

## Key policy shifts

- 1 **Dual Circulation:** more emphasis on domestic demand (内需体系) relying on private/middle-class consumption and “super-sized” domestic market
- 2 **“Large gravitational field” (引力场):** new rationale for continued opening-up and making China center of world economy
- 3 **“Data” as factor of production (生产要素), digital economy and cyber-sovereignty and data protection**
- 4 Rediscovering value of **manufacturing base**, financial system to “serve real economy”
- 5 **Human health and environment:** new ecological balance, public health and decarbonization
- 6 **Market forces:** e.g. continued factor liberalization (esp. labor and land), capital market, anti-monopoly, evolving industrial policy tools
- 7 **Tech self-sufficiency** («bottleneck technologies») tightly coupled with **national security concerns**:
- 8 Heightened **security needs** across range of issues: food, data, energy, supply chain, technology, overseas interests
- 9 Bolstering of **state economy** and role of **SOEs** to help implement strategic priorities
- 10 New **urbanization concepts** (“metropolitan circles”) and **regional development strategies** (e.g. GBA)

Key policy shifts make China market economically more attractive but politically/regulatorily more challenging



# Baseline: China with high urgency to take decarbonization actions...

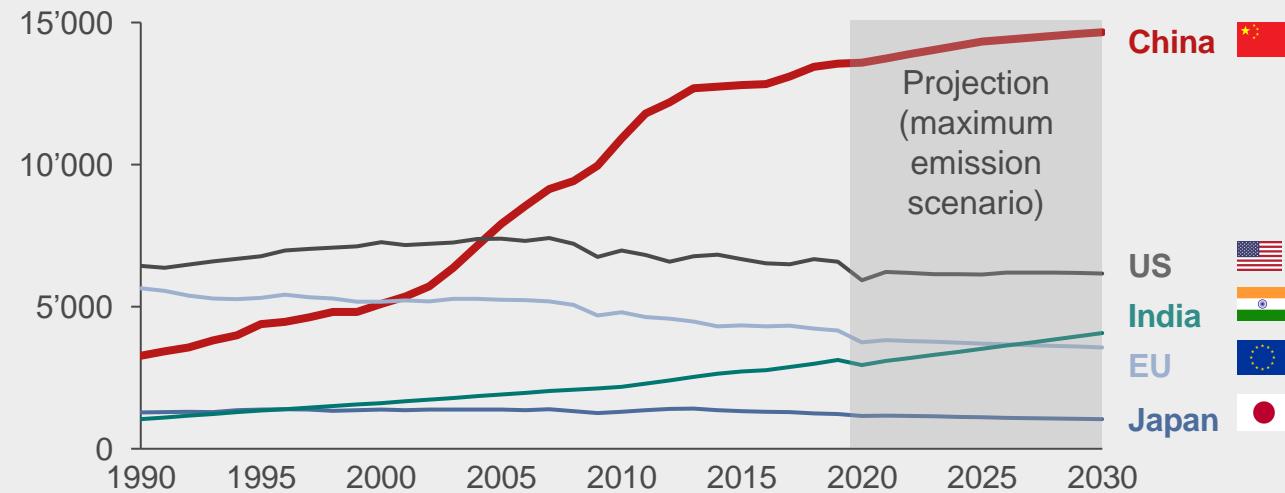
## Carbon intensity comparable with EU

CO<sub>2</sub> emission per capita in 2018 (in metric tons)



## The largest CO<sub>2</sub> emitter globally

CO<sub>2</sub> emission (in mn tons)



## Global warming scenario

If all other countries adopt same policies as the respective country, updated by Climate Action Tracker in September 2020)



<4°C



4°C+



<2°C

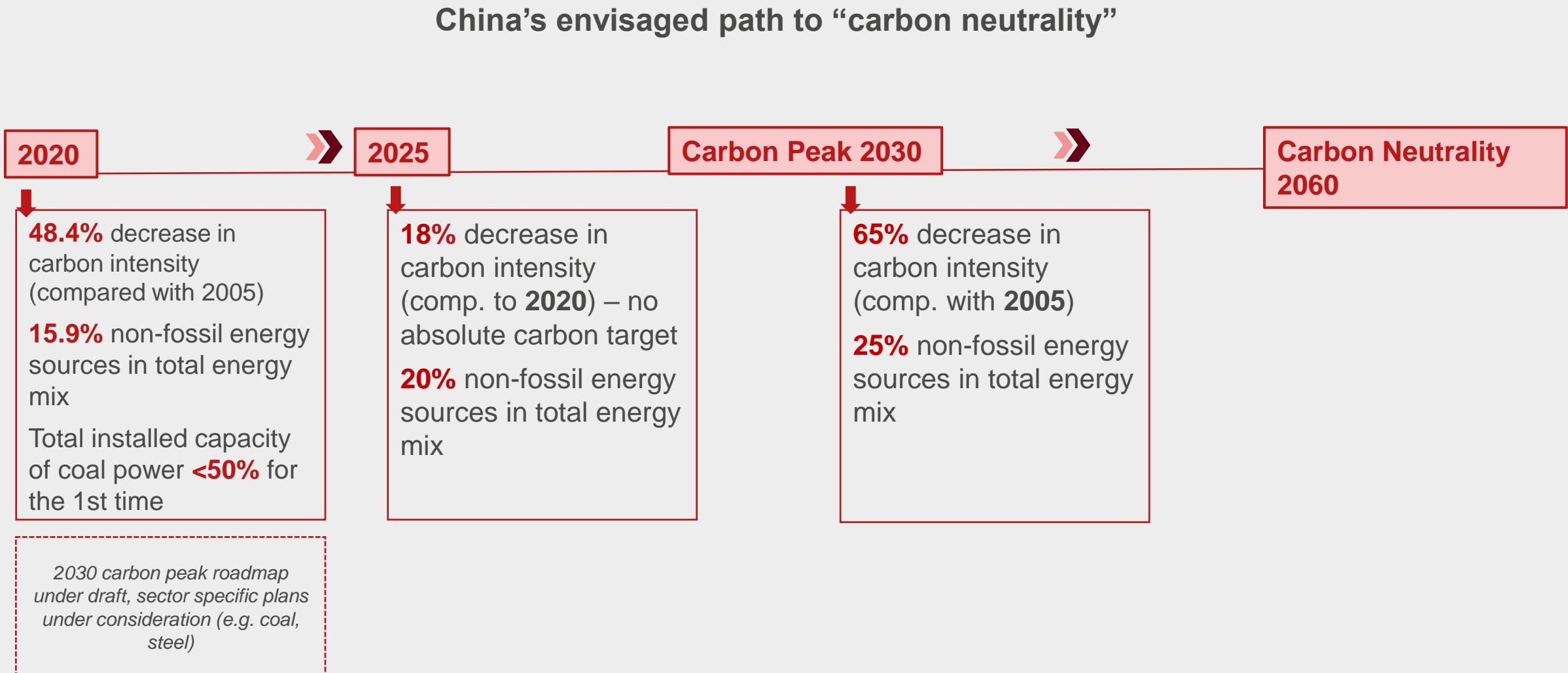


<3°C



<4°C

... with intensified climate policy to deliver on a 2060-carbon neutrality goal



# 14<sup>th</sup> FYP's key shifts: stricter environmental regulations, but more market-based governance & tools

Key shifts  
seen in  
14<sup>th</sup> FYP

## ① Stricter regulation & enforcement



- Combine multiple ministerial functions (NDRC, MOE etc.) on environment into MEE
- Dedicated environmental performance as “key” KPI in evaluating officials
- Tightening of **standards** for pollution emission, sewage and solid waste treatment
- Stronger **enforcement** of environmental regulations, with higher / expanded penalties

## ② Market-based governance & tools



- **National carbon trading, scoring** (e.g. NEV credit), **certification mechanisms** (e.g. CCER, green electricity) more used to reduce CO<sub>2</sub>
- **Subsidy schemes** phasing out (EV, wind, solar etc.)
- **Price reforms** e.g. on utility (floating coal power price etc.), or **waste treatment** to accommodate environmental costs and incentivize energy-saving behavior
- Power Purchase Agreements (**PPA**)

## ③ «Green» sectors



- New tools in stimulating **RE capacity** (Wind / solar)
- **NEV**: guidance in technical upgrading (battery, ICV, FCV etc.) and infrastructure build-up (charging facilities etc.)
- Instruments in promoting **energy-efficient solutions** (*Recommended list of industrial energy-saving equipment etc.* )
- Promoting **recycling sector**: recycling facilities / services, especially re-manufacturing

## ④ Green Finance



- Establishment of **ESG disclosure framework**
- Internationally aligned **green finance standards**
- Policies incentivizing FIs to conduct **green finance business**
- Better **climate risk assessment** and management in finance
- Development and trading of financial instruments for **fair carbon pricing**

Environmental factors will become more important for business decisions and strategies

# Deep-dive: Companies facing integrated environmental regulations and stronger enforcement

## Environmental indicators incl. in the CSCS

江苏省企事业单位环境行为信用记分标准				
序号	扣分类别	记录分值	有效期	确认方式
1	警告	-1	6个月	
2	罚款	-3	6个月	
3	实施查封、扣押	-3	6个月	
4	责令限制生产	-3	6个月	
5	没收违法所得、没收非法财物	-3	6个月	
6	责令停止建设	-3	6个月	
7	责令停止生产或者使用	-3	6个月	
8	暂扣许可证或者其他具有许可性质的证件	-6	12个月	
9	被实施按日连续处罚	-6	12个月	
10	责令停产整治	-10	12个月	
11	责令恢复原状	-10	12个月	
12	不履行行政机关相关决定，申请强制执行	-10	12个月	
13	行政拘留的环境违法案件	-10	12个月	
14	责令停业关闭	-12	12个月	
15	吊销许可证或者其他具有许可性质的证件	-12	12个月	

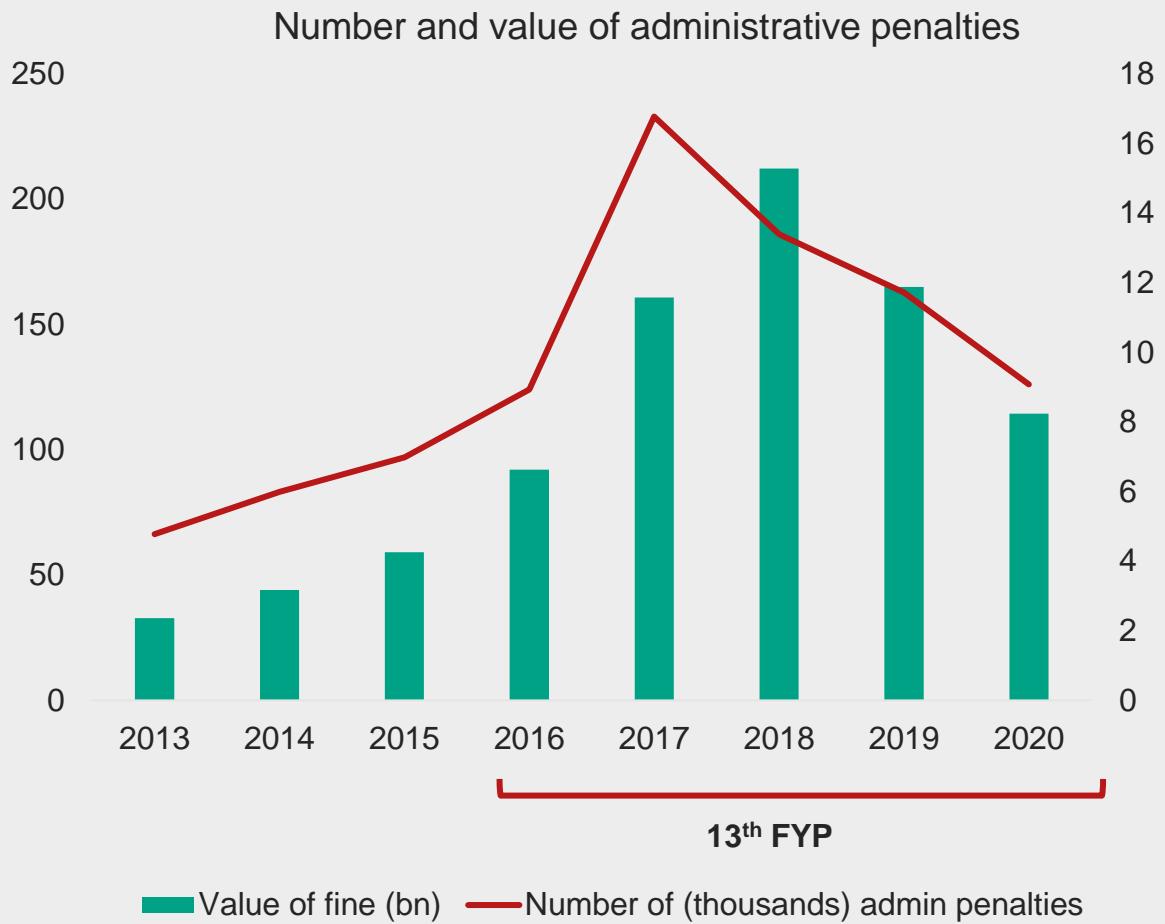
法律文书或  
政府及生态  
环境主管部  
门的正式文  
件

Credit Rating mechanism for  
environmental protection in  
Jiangsu province

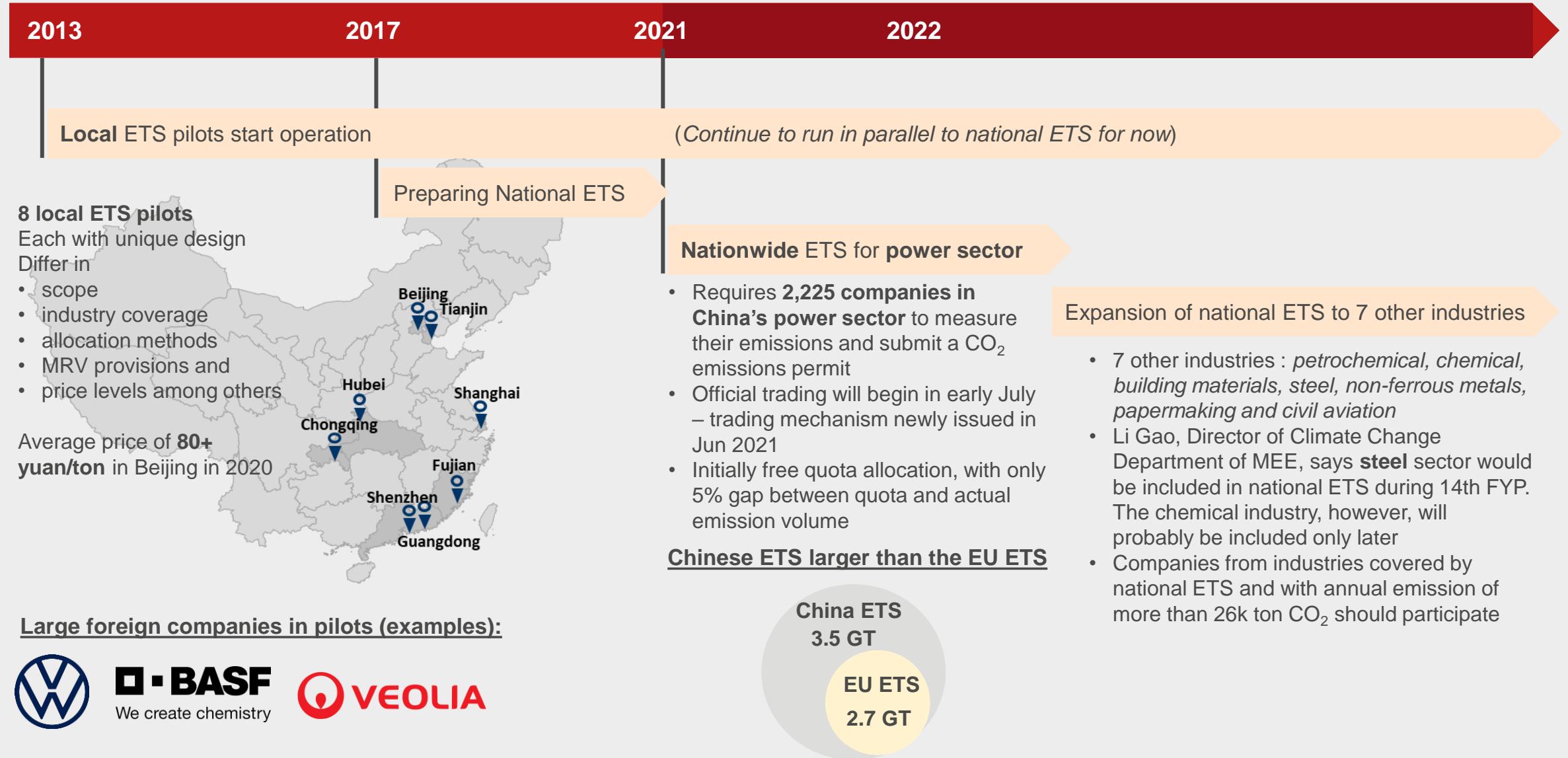
企事业单位环保信用评价结果 (评价日期: 2021-01-13)			
Company	Social Credit Code	Rating Result	Credit Promise
企事业单位名称 淮安市科南新材料有限公司	统一社会信用代码 91320826323922982E	蓝色等级	暂无承诺书
丹阳市丹北镇圣亚装饰材料加工厂	92321181MA1PB3DD9B	蓝色等级	暂无承诺书
灵谷化工集团有限公司	91320282142829332J	绿色等级	承诺书下载
江苏诺亚方舟农业科技有限公司	91320404567770735H	绿色等级	承诺书下载
江苏泗阳海峡环保有限公司	91321300066260235Y	绿色等级	承诺书下载
江苏泗阳海峡环保有限公司	91321300066260235Y	绿色等级	承诺书下载
泗阳县华海水处理有限公司	91321323772483495X	绿色等级	承诺书下载
徐州鑫奥家用纺织品有限公司	91320382MA1YHUAG9T	蓝色等级	暂无承诺书
苏州海德新材料科技股份有限公司	91320500665755715E	红色等级	承诺书下载
江阴摩尔化工新材料有限公司	91320281765897817G	黑色等级	暂无承诺书

Environmental protection rating  
results publicly available in  
Jiangsu CSCS

## Stronger enforcement by authorities



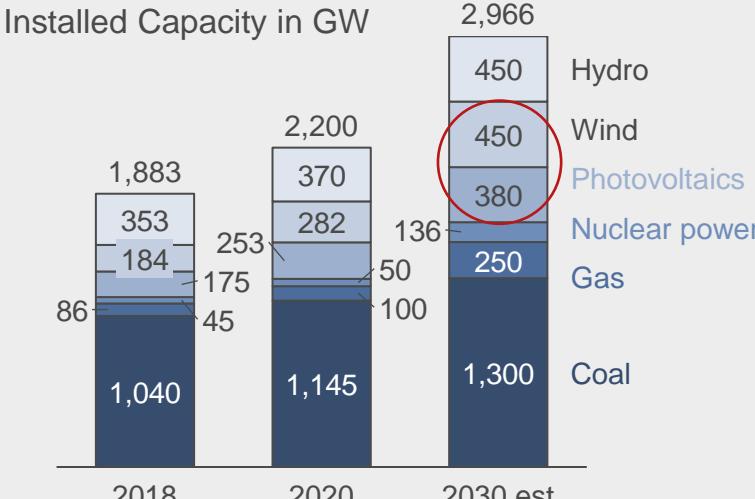
## Deep-dive: key example for market-based steering, Carbon ETS rolled-out nationwide for power sector



# Deep-dive: Persistent policies to support development of renewable energy (RE) and NEV sectors

## Renewable energy

### RE making larger portion of installed capacity in 2030 despite of Coal power's dominance



Source: CEC CEC 2030 est has gap with Xi's 1,200GW target

### Binding RE consumption target at provincial level

- Annual RE consumption quota and non-hydro RE consumption quota for each province respectively, target depending on local energy mix profile / economic importance
- Utility seller: Power grid etc., obliged to connect sufficient RE into grid
- Utility consumer: Power Purchase Agreement users, captive power plants etc., obliged to meet RE consumption targets
- Buy Green Electricity Certificate (GEC) from RE power plants
- Buy excessive fulfilled quota from grid companies

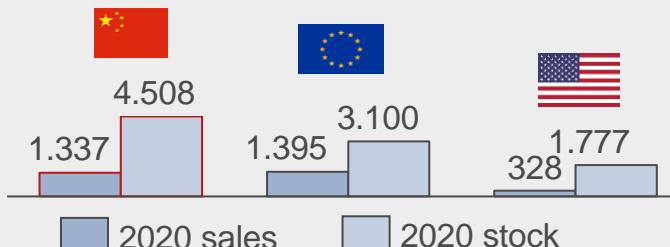
省(自治区、直辖市)	总量消纳责任权重		非水电消纳责任权重	
	最低值	激励值	最低值	激励值
北京	18.0%	19.8%	17.5%	19.3%
天津	17.0%	18.7%	16.0%	17.6%
河北	16.5%	18.2%	16.0%	17.6%
山西	20.0%	22.0%	19.0%	20.9%
山东	13.0%	14.3%	12.5%	13.8%



## New energy vehicles

### Successful domestic EV industry

EV sales volume in thousands (excl. commercial vehicles)



Source: EV-volumes, IEA

### Policy transition in FYP from purchase support to infrastructure build-up

- Phase out of purchase subsidy delayed till 2022 end
- Innovative development in fuel cell vehicles encouraged
- Autonomous vehicle technologies promoted greatly, aiming at initial L4 commercialization by 2025
- Acceleration in building up charging infrastructures to match growing EV needs
- Public budget to purchase EVs used in sectors such as transport and logistics
- Growing NEV quota for OEMs to fulfill

# Deep-dive: Huge growth potential in “Green Finance” with improving standards and stimulus

## Ambitious target: Carbon neutrality

- Carbon neutral by 2060
- Reach carbon emission peak in 2030

→ **Requires material support, including a developed green finance sector**

## Though already leading in size...

- China has world's 2nd largest outstanding green bonds (RMB 0.8 trn)
- Largest green loan (RMB 11.9 trn) as end of 2020

## ...still early stage, with substantial problems

- “Green projects” taxonomy inconsistent with international norms (“clean utilization of fossil fuel” etc.)
- Incentives not fully in place for financial institutions to provide green finance products
- Environmental info disclosure needs incomplete

## Key trends for Green Finance during the 14th FYP period

### Align standards for Green Finance projects

- “*Eligible project catalog for green bonds*” issued in Apr 2021, excluding **fossil-fuel based** projects
- China in the process of **unifying domestic green finance standards**. Currently, standards from PBOC, CBIRC and NDRC differ

### Establish environmental information disclosure framework

- Build up **compulsory environmental info disclosure** requirements for financial institutions
- Disclosure shall include information on their holdings in “green” or “brown” assets, and carbon footprint
- Assess **climate change impact** on financial institutions

### Develop innovative green finance products

- **Diversify** green finance products and develop financial instruments on carbon trading entities (carbon futures etc.)
- Develop **green insurance** and encourage listing of “green” companies
- Encourage **overseas green financing**

### Set up incentives towards Green Finance

- Multiple economic measures planned to **stimulate green finance**. e.g., Guangzhou has been providing 1% interest subsidy for green loan
- PBOC will **strengthen the weight of green finance in evaluating banks’ performance**

### Deepen international cooperation

- Joint development on green project standards
- **Joint research** in environment / climate risk analysis
- Support domestic green projects in **obtaining finance in offshore market**, mostly through HK

## Implications for companies: opportunities to achieve sustainability target and capture „green“ sector growth

1

### **Strict regulation and stronger enforcement**

- Increasing demand for energy-efficient products / services as well as clean tech (e.g. filters for SO<sub>2</sub>, sewage)

- Stricter compliance requirements of industrial players

2

### **Market based governance tools**

- «Over-performance» in ETS (or other mechanisms) can generate revenues from selling ETS certificates
- More available tools and more flexible fixed energy mix, so can reduce China operations' carbon footprint (part of global strategy)

- Industrial players / suppliers may be included in ETS or other trading mechanisms in the long-term
- Price reforms on sewage / waste treatment may increase production costs
- Risk of demand and operational disruption due to transition away from subsidies

3

### **«Green» sectors**

- Growing business opportunities in sectors like RE, NEV and recycling

- Continued dominant position of domestic players incl. government support

4

### **Development of “green finance”**

- Deep asset pool for ESG investments
- Increasing demand and supply of green financial products (decarbonization bonds etc.)

- Lack of transparency and data quality in ESG disclosure
- Expertise needed in environmental risk management

# Case study: Translating European MNC's global milestones to China – 3 strategic opportunities identified (1/2)

## Global Operations

### MNC's CO<sub>2</sub> Emissions by Scope

1	<b>Direct Emissions</b>	Manufacturing operations	3%
2	<b>Indirect emissions</b>	Purchased electricity	2.2%

94,8%	All other indirect emissions	71.4%
	Sourcing Ingredients	

3	Packaging Products	12%
	Managing Logistics	8.2%

4	Travel and Employee Commuting	0.8%
	Off-setting	

### MNC's Milestones to Net Zero

💡 Use more renewable thermal energy in manufacturing

💡 100% renewable electricity in all sites

⬆️ Source 50% of key ingredients through regenerative agricultural methods

⬆️ Carbon neutral brands

♻️ 100% recyclable/reusable packaging

♻️ Cut virgin plastic in packaging by 1/3

➡️ Switch to lower emission vehicles

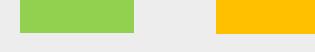
➡️ Offset all business travel

➡️ 100% deforestation free for primary supply chain

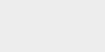
➡️ Planting 200m trees

## Greater China Operations

### CO<sub>2</sub> relevance



### Measures already taken



Sanitized case-study

### Priority Areas

**Strategic opportunities**  
high relevance,  
no measures taken

- 1) Manufacturing Operations
- 2) Purchased electricity
- 3) Managing Logistics

**2 key priority areas**  
high relevance, Strong measures

- 1) Sourcing ingredients
- 2) Packaging products

**2 nice-to-have areas**  
Medium relevance,  
No measures

- 1) Travel/ employee commuting
- 2) Remove carbon from atmosphere

Assessment China relevance and activity:

High      Medium      Low

# Case study: Translating European MNC's global milestones to China – 3 strategic opportunities identified (2/2)

Sanitized case-study

Corporate Priority Areas	Selective Government Measures	Dynamic	Description	How MNCs can leverage it
Strategic opportunities high relevance, no measures 1) Manufacturing Operations 2) Purchased electricity 3) Managing Logistics	National Emission Trading System (ETS)	↑	<ul style="list-style-type: none"> <li>To take effect in 2021 for power sector entities with &gt;26 kt annual CO2 emissions at first; gradual expansion to more sectors</li> </ul>	Long-term emission reduction of manufacturing activities via ETS (food and beverages industry not included before 2025)
	8 Pilot ETS	→	<ul style="list-style-type: none"> <li>8 pilots run in parallel to national ETS and will be integrated gradually; <b>Hubei ETS</b> covers food and beverages industry</li> </ul>	
	Direct Power Purchase Agreement (PPA)	↑	<ul style="list-style-type: none"> <li>Electricity can be purchased <b>directly from supplier</b>; initial threshold of 5 GWh energy consumption was dropped in 2020</li> </ul>	Increase renewable energy share in electricity via PPAs and buy GECs to offset CO2 emissions
	Green electricity certificates (GEC)	↑	<ul style="list-style-type: none"> <li>Pilot started in 2017; firms can buy <b>green electricity</b> certificates from suppliers directly via a platform and offset CO2 emissions</li> </ul>	
	Electrification of transport	↑	<ul style="list-style-type: none"> <li><b>Purchase subsidies</b> for NEVs, NEV quota for auto makers, local NEV privilege policies, subsidy for charging station construction</li> </ul>	Easy electrification of logistics operations
	Diesel Truck Pollution Control	→	<ul style="list-style-type: none"> <li>Incl. C6 <b>emission standards</b>, Sulfur limit in fuel, ban of bulk commodity shipment by diesel trucks in key ports</li> </ul>	Reduce emissions of logistics services
Key priority areas high relevance, Strong measures 1) Sourcing ingredients 2) Packaging products	Unified Green Product system	↑	<ul style="list-style-type: none"> <li>By end of 2020, 8 certificates to be unified in one <b>green product</b> system incl. low carbon product certificate; Pilot in Huzhou, <b>Hubei</b></li> </ul>	Certify MNC's carbon neutral brands
	Strict plastic regulation	↑	<ul style="list-style-type: none"> <li>End of 2020, nationwide system for retailers to <b>report plastic consumption</b> implemented; increasing support for alternatives</li> </ul>	Benefit from growing local initiatives/innovation
	Certification for sustainable products	→	<ul style="list-style-type: none"> <li>Increasing support for <b>RSPO certification scheme</b> by the Chinese government</li> </ul>	Review own supply chain
Nice-to-have Medium relevance, No measures	Carbon sink trading	→	<ul style="list-style-type: none"> <li>Various <b>afforestation options</b> to increase carbon sink available; e.g. firms can pay individuals via online platform to plant trees</li> </ul>	Offset travel CO2 emissions via afforestation projects

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