



# Experiences from China Development of Green Innovations

**Hongxing (Tonny) Xie, Bluetech Clean Air Alliance**

**1 Nov 2023**

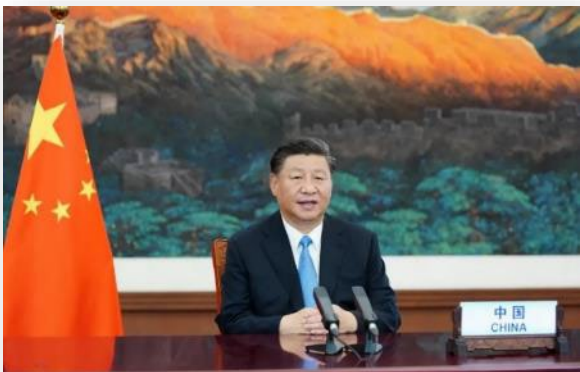


# Background

# China: Climate Commitment and Market Outlook

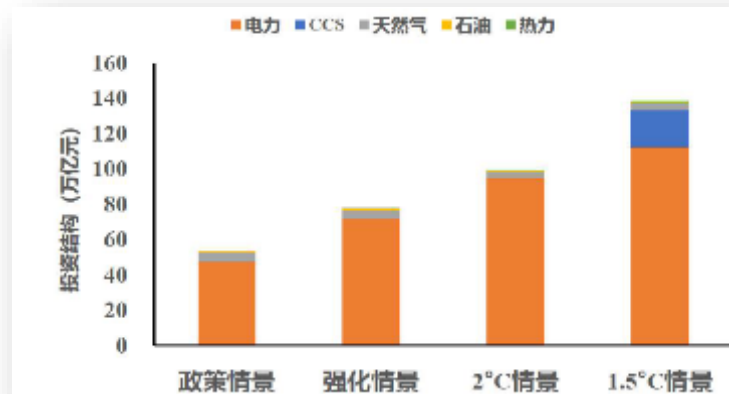
## Climate Commitment

China will peak carbon emission by 2030 and achieve carbon neutrality by 2060



Data source: 22 Sept 2020, 75 General Assembly of the United Nations

## 2050 China's Clean Energy Market Outlook



By 2050, driven by carbon neutrality, the energy sector alone will likely reach about \$150 trillion. The whole industry needs **487 trillion** yuan in investment.

Data source: Tsinghua University, China's Long-term Low-carbon Development Strategy and Transformation Path Research

Green Gold Committee of China Society of Finance and Banking, green finance roadmap research under the vision of carbon neutral

# Bluetech Acceleration Platform for Climate Technology

Technology  
selection

**Bluetech Carbon Neutrality Pioneers Award**

Investment  
empowerment

**Corporate financing Support**

System  
acceleration

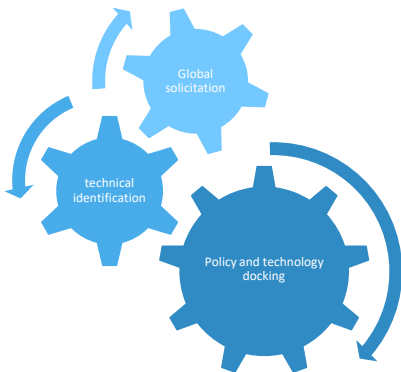
**IP enables green technology enterprises**  
**Application demonstration: United Nations pilotproject**  
**Industrial resource docking and project landing**

Achievement  
transformation

**Establish a fast track for the transformation of green  
innovation achievements**

1

# Bluetech Carbon Neutrality Pioneers Award



22 Countries

600 technologies

International Award

Professional Evaluation

System Promotion

since 2015

中国



美国



欧盟



英国



法国



德国



瑞士



韩国



丹麦



新西兰



意大利



澳大利亚



瑞典



# Bluetech Award Advisory Committee



## Chairman: Jun MA

President of Institute of Finance and Sustainability  
Director of the Green Finance Committee  
Co-chair of the G20 Sustainable Finance Study Group

## Advisory Committee Member (in Alphabetical order)



### Kejun JIANG

Professor, Energy Research Institute of Academy of Macroeconomic Research



### Guoliang LV

Consultant, WIPO Office in China  
Former Director, International Division, China National Intellectual Property Administration



### Hong LIANG

Co-Chairs, Huatai Securities Co., Ltd. Business Committee

## Executive Committee (in Alphabetical order)



### Tonny XIE

Director, Bluetech Clean Air Alliance



### Yuebing LU

Board Chairman, Air Liquide (China) Holding Co., Ltd.



### Jade LU

Executive Director,  
President of SPD Silicon Valley Bank and SVB Asia



### Lei MI

Founding partner, CASSTAR



### Hao XU

Vice President, Sustainable Social Value Organization, Tencent Group



### Shixu YANG

President, BP China



### Lijian ZHAO

China Country Director, Carbon Trust

Head, Secretariat of Greentech Financing Platform



### Zhenhua YU

Standing Vice President, China Energy Storage Alliance



### Kai ZHAO

Standing Vice President, China Association of Circular Economy



### Rongqing ZHANG

President, National Green Development Fund Co., Ltd



### Jia ZHU

Partner, Lightspeed China Partners



### Lin ZUO

Partner, Sequoia Vision Carbon Neutralization Fund

# Process and Criteria of Bluetech Award

## Award Assessment Flowchart

Initial Screen

Expert Panel

Special Assessment:  
Technology and IP

ESG Risk  
Assessment

Advisory Committee  
Assessment

20%

Tech Innovation

15%

IP Competitiveness

25%

Green Benefits

20%

Growth Potentials

20%

Team & Strategy

## Award Evaluation Criteria



## **Showcases**

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# **Innovative Technologies**



# Finalists of Award 2022 (over 50 enterprises in 11 fields)

## Carbon Capture, Use and Storage

- 霖和气候科技(北京)有限公司
- 清捕零碳(北京)科技有限公司
- 碳能科技(北京)有限公司
- 北京首钢朗泽科技股份有限公司

## Batteries and Energy Storage

- 江苏博强新能源科技股份有限公司
- 中储国能(北京)技术有限公司
- 始徒科技(杭州)有限公司
- 上海屹锂新能源科技有限公司
- 皓智控股有限公司 GRST Holdings Limited
- 深圳市中和储能科技有限公司
- 东莞大铨能源有限公司
- 磐际科技(苏州磐际智储能源科技有限公司)

## Disposal and Recycling of Wastes

- 北京中源创能工程技术有限公司
- 兰石中科纳米科技有限公司
- 上海祎祎环保科技有限公司
- 上海睿聚环保科技有限公司

## Hydrogen and Fuel Cell

- 燃料电池双极板涂层技术(团队)
- 中鼎恒盛气体设备(芜湖有限公司)
- 北京佳安氢源科技股份有限公司
- 锋源新创科技(北京)有限公司
- 盈保先进科技(香港)

## Green Transportation and Green Logistics

- 上海箱箱智能科技有限公司
- 街尾蛇科技有限公司
- 绿传(北京)汽车科技股份有限公司
- 永康市知路科技有限公司
- 地上铁租车(深圳)有限公司

## Low-carbon Biotechnology

- 河北大广生物科技有限公司
- 南京周子未来食品科技有限公司
- 西安布鲁普庭生物科技有限公司
- 烟台赛诺迈特新材料有限公司

## Energy Management

- 苏州博墨热能产品有限公司
- 金捷利工程技术(北京)有限公司
- 上海极熵数据科技有限公司

## Energy Saving Technology

- 浙江清無科技有限公司
- 北京长信万林科技有限公司
- 温岭拉瓦尔新能源科技有限责任公司
- 襄阳光热环保科技有限公司
- 广州合昕环境科技有限公司
- 天津奥展兴达化工技术有限公司
- 洛阳维达石化工程有限公司

## Green Materials

- 宁波糖聚新材料有限责任公司
- 江苏中科金龙环保新材料有限公司
- 北京蓝晶微生物科技有限公司
- 宁波坚锋新材料有限公司

## Renewable Energy

- 中稷绿探(河南)能源集团有限公司
- 烟台尚美丽家新能源有限公司
- 内蒙古华蒙科创环保科技工程有限公司
- 北京市天火新能源技术研究院有限公司

## Carbon Management and Evaluation

- 北京绿普惠网络科技有限公司
- 上海易碳数字科技有限公司

**Company Name: Linhe Climate Science & Technology (Beijing) Co.,Ltd.**

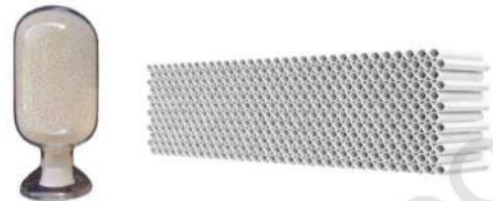
**Technology Category: CCUS**

The team developed a Moisture Swing Carbon Capture Material (MSCCM), which can directly capture CO<sub>2</sub> in the air when it is dry, and desorb CO<sub>2</sub> when it is wet.

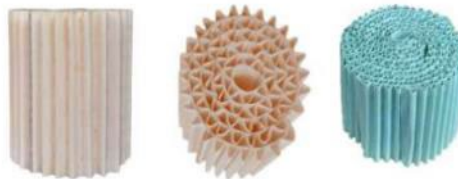
Its capture performance has been verified by a third-party testing organization. Captured carbon can be used for agriculture or the production of construction materials



CA型：空气捕集与农业应用



CP型：针对集中碳排放源（如15%浓度）捕集



CN型：天然气脱碳材料



CS型：特殊环境捕集

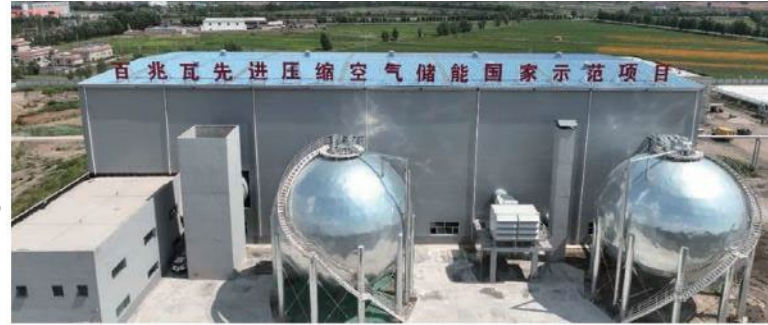
## B. Compressed-air Energy Storage Technology

**Name:** Zhong-Chu-Guo-Neng (Beijing) Technology CO.,Ltd.

**Technology Category:** Energy Storage

World leader in the field of long-term and large-scale compressed air energy storage. The company has a complete set of capabilities in research and development, design, core equipment manufacturing, engineering implementation and energy storage station investment.

Successfully launched the 100 MW advanced compressed air energy storage system in Zhangjiakou in the end of 2021



## C. Cell Cultured Meat Technology

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**Name:** Nanjing Joes Future Food Technology Co., Ltd.

**Technology Category:** Low Carbon Biotechnology

The company focuses on the innovative research and development of future food, mainly engaged in the development and large-scale production of cell cultured meat.

The team has made breakthroughs in seed cell extraction and dryness maintenance, cell suspension amplification production, serum-free medium development and product development.

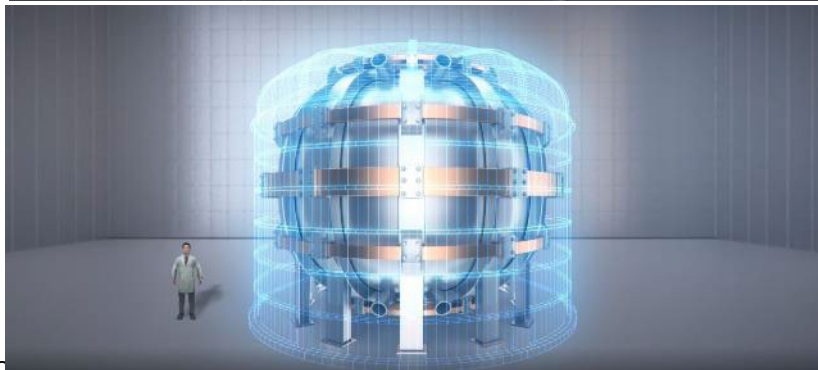
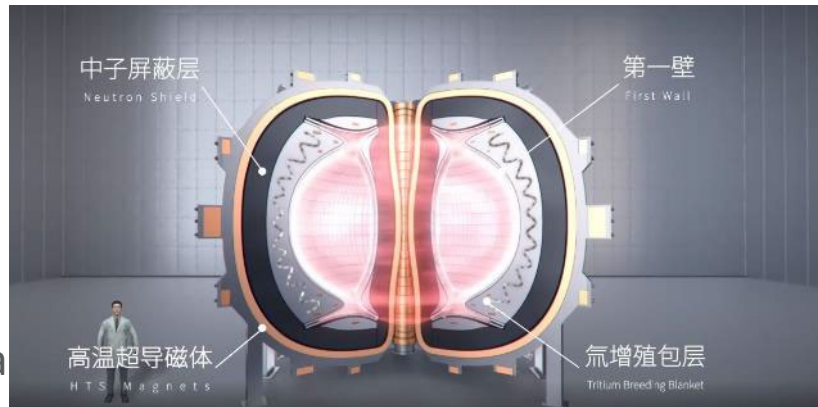


**Name:** Beijing Startorus Fusion Co., Ltd.

**Technology Category:** Renewable Energy

The company adopted a compact controlled fusion approach of repeated magnetic reconnection distinguished by multi-stroke repeated operation and heating by magnetic reconnection of the plasma current's fields, on the basis of high-field spherical tokamaks with high-temperature superconductivity.

Stable fusion power output is expected to be generated within the relatively compact size efficiently and economically.





## **Bridging the Gap**

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### **What We Do**

# Connections with Green Investors in China

BCAA has established contacts and cooperation with more than **200** investors concerned about dual-carbon. We organize technology display and matchmaking activities between technology owners and investors.

	Investors (Market-Based)		Investors (state-owned )		Investors (Industrial)		Investors (Early VC)
1	Hillhouse Capital, Hillhouse Venture Capital	16	Guoxin central enterprise operation fund, Guoxin Science and Technology Innovation	31	Jiangxia Xintai	46	Zhongke Chuangxing
2	Sequoia capital, Sequoia seeds	17	CDB Science and Technology Innovation	32	China building materials new materials fund	47	Enlightenment Star Venture Capital
3	Kai hui capital	18	Huaneng international	33	CNPC climate	48	PNP
4	IDG capital	19	Guoke investment	34	Tencent investment	49	Infinite fund
5	Speed of light in China	20	China nuclear capital	35	Huichuan production investment	50	Lihe Venture Capital
6	Xiangfeng Investment	21	AvIC Capital	36	Suzhou East venture capital	51	The peak is evergreen
7	Thick park investment	22	Bank of China Investment Corporation, Bank of China International	37	Beautiful peak	52	Linear capital
8	Cornerstone capital	23	CCB International	38	Good beauty fund	53	JunSheng capital
9	Gundam fund	24	Everbright Belt and Road Green Fund	39	Beijing's industrial development and investment	54	Qi high capital
10	Source code capital	25	Sinopec capital	40	Nio Capital	55	Jiuhe Venture Capital
11	Shun for capital	26	Sinopec Enze Fund	41	Xiaomi production investment	56	Hong Yi venture capital
12	Cloud hui capital	27	Cicc Capital	42	Liuhe fund	57	Flying fan venture capital
13	Yuntai capital	28	Citic capital	43	Shun for capital	58	Harbin Industry Raytheon Capital
14	Fresh capital	29	Guodian investment	44	Green capital	59	De load thick capital
15	Hongtai fund	30	Cnooc Capital	45	At the beginning of the capital	60	Tsinghua China Holding Cornerstone Fund



## "Innovation for a Green Future" Green Technology IP Strategy Training

In order to encourage green innovation and accelerate the achievement of the SDGs of the UN, WIPO has designated "Green Innovation" as the theme of World Intellectual Property Day 2020. BCAA cooperated with WIPO China Office and the Beijing Intellectual Property Office, carried out four IP training activities entitled "**Innovation for a Green Future**" from 2020-2023 with the support of many partners.

More than **1000** entrepreneurs, investors, R&D personnel and other relevant representatives of the green technology industry have been trained.



**Event I:** April 26, 2020

**Event II:** July 30, 2020

**Event III:** April 27, 2021

**Event IV:** April 25, 2022

**Event V:** Aug 17, 2023

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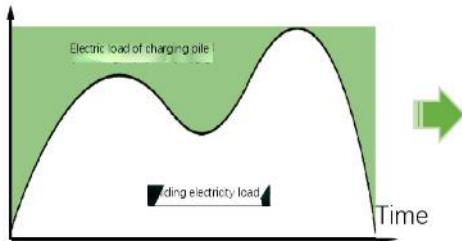
# Acceleration Project in China: Enabling Super Accelerators in Cities



## Community Flexible Charging

Beijing Century City Property Management Co., Ltd. manages 14 residential districts in Beijing with 13000 households, facing the challenges of limited charging pile resources, insufficient capacitance and difficult charging for residents.

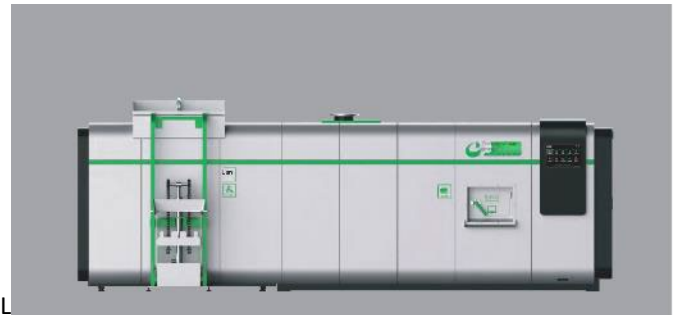
In the Beijing pilot, it successfully matched with the a technology that conveniently, safely and economically charges EVs at home platform provided by Beijing ShijiYunan New Energy Co., Ltd. Now it has been demonstrated in three districts under its management.



## On-site treatment of kitchen waste

The Lake View Hotel Beijing is a five star hotel, often hosting large events which inevitably produce a significant amount of kitchen waste. Hope to find the technology that can realize the stable treatment of kitchen waste on site.

In the pilot project in Beijing, the organic waste integrated treatment technology provided by Beijing Zhongyuan Chuangneng Engineering Technology Co., Ltd. was successfully matched.





# Thank you !

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