

Wholly-Owned Companies and Offices

- ◆ **Jinmen GEM New Materials Co., Ltd.**
Address: High-tech Industrial Development Zone, Jingmen City, Hubei Province, China
- ◆ **Jiangxi GEM Resources Circulation Co., Ltd.**
Address: Industrial Base of Resources Recycling and Utilization, Fengcheng City, Jiangxi Province
- ◆ **Jiangxi GEM Scraped Automobile Recycling and Utilization Co., Ltd.**
Address: Fengyuan Avenue, Industrial Park, Fengcheng City, Jiangxi Province, China
- ◆ **Wuhan Hannengtong New Energy Service Co., Ltd.**
Address: Floor 15, Building A3, Guanggu Financial Port, No.77 Guanggu Avenue, Donghu High-tech Development Zone, Wuhan
- ◆ **GEM (Wuhan) City Mineral Resources Circulation Industrial Park Development Co., Ltd.**
Address: Yangluo Economic Development Zone, Xinzhou District, Wuhan City, Hubei Province
- ◆ **GEM (Tianjin) City Mineral Resources Circulation Industrial Development Co., Ltd.**
Address: No. 9, No. 10 Road, Tianjin Ziya Circular Economy Industrial Park, Jinghai County, Tianjin
- ◆ **Wuhan City Circle (Xiantao) City Mineral Resources Big Market Co., Ltd.**
Address: No. 1 Changqing Road, Changtangkou Town, Xiantao City, Hubei Province
- ◆ **GEM (Jiangsu) Cobalt Industry Co., Ltd.**
Address: No. 8, North Binjiang Road, Taixing City, Jiangsu Province, China
- ◆ **GEM (Wuxi) Energy Material Co., Ltd.**
Address: No. 235, Shuofang Zhenfa Road, Xinwu District, Wuxi City, Jiangsu Province
- ◆ **GEM Supply Chain Management (Shanghai) Co., Ltd.**
Address: Block C, Floor 28, Wumao Building, No.2550 North Zhongshan Road, Putuo District, Shanghai
- ◆ **Yuyao Xingyou Metal Material Co., Ltd**
Address: No. 20 Cao'e Road, Binhai New Town, Yuyao Economic Development Zone, Zhejiang Province, China
- ◆ **Jingmen Dewei GEM Tungsten Resources Circulation and Utilization Co., Ltd.**
Address: High-tech Industrial Development Zone, Jingmen City, Hubei Province, China
- ◆ **Jingmen Chengnan Sewage Treatment Co., Ltd.**
Address: North to Yingbin Avenue, Happy Community, Duodao Street, Duodao District, Jingmen City, China
- ◆ **GEM (Beijing) Strategic Research Center for Environmental Industry / (Beijing) International Business Center**
Address: Room 1910, New Century Rihang Hotel, No.6 South Capital Gymnasium Road, Haidian District, Beijing
- ◆ **Changsha Office**
Address: Room 702,703, Building A, Hengsheng Commercial Building, No.22 North Jinxing Road, Yuelu District, Changsha City, Hunan Province
- ◆ **The South Korean Office**
Address: No. 99, East Centaum Road, Haiyuntai District, Busan City
- ◆ **Tokyo Office**
Address: Room 801, No. 14, No. 7 Fan, No.2 Dingmu, Jingqiao, Central District, Tokyo

Holding Companies

- ◆ **Zhejiang Dewei Cemented Carbide Manufacturing Co., Ltd.**
Address: Furong Industrial Zone, Yueqing City, Wenzhou City, Zhejiang Province, China
- ◆ **Yangzhou Ningda Precious Metal Co., Ltd.**
Address: No. 1 Road, Industrial Concentration District, Yiling Town, Jiangdu District, Yangzhou City, China
- ◆ **Yangzhou Jiejia Industrial Solid Waste Disposal Co., Ltd.**
Address: Longan Road, Qingshan Town, Yizheng City, Jiangsu Province, China
- ◆ **Central Hubei Renewable Resources Big Market Development Co., Ltd.**
Address: Pailou Industrial Park, Dongbao District, Jingmen City, Hubei Province, China
- ◆ **Wuhan GEM City Mineral Equipment Co., Ltd.**
Address: Huayuan Village, Yangluo Economic Development Zone, Xinzhou District, Wuhan City, Hubei Province
- ◆ **GEM (Wuhan) New Energy Automobile Service Co., Ltd.**
Address: Yangluo Economic Development Zone, Xinzhou District, Wuhan City, Hubei Province
- ◆ **Jinmen Lvuyan Waste Residue Waste Sludge Environmental Protection Treatment Co., Ltd.**
Address: High-tech Industrial Development Zone, Jingmen City, Hubei Province, China
- ◆ **Shanxi Hongyang Haiou Waste Electrical and Electronic Products Recycling and Processing Co., Ltd.**
Address: No. 5, Northeast Road, Changbeqiao, Changzhi City, Shanxi Province
- ◆ **Inner Mongolia Xinchuang Resource Regeneration Co., Ltd.**
Address: Weiye Road, Sanshangliang Industrial Park, Dalat Qi, Ordos City, Inner Mongolia
- ◆ **Hubei Jianghe Ecological Management Co., Ltd.**
Address: Yingchun Avenue, High-tech Industrial Development Zone, Jingmen City, China
- ◆ **GEM (Chenzhou) Solid Waste Treatment Co., Ltd.**
Address: Bolin Industrial Park, Tianliping, Bolin Town, Yongxing County, Chenzhou City, Hunan Province
- ◆ **Huaian Fanyang Enterprise Management Co., Ltd.**
Address: Building 6, No. 266 South Chengde Road (Huaian Software Park), Huaian Economic and Technological Development Zone
- ◆ **Shu Metals Co.,Ltd.**
Address: Floor 54 , Hehe Centre, No.183 East Queen's Road, Hong Kong
- ◆ **Hunan GEM Yinghong Resource Circulation Co., Ltd.**
Address: Xianghong Industrial Park, Xinhua County Economic Development Zone, Loudi City, Hunan Province
- ◆ **Wuhan Sanyong GEM Auto Parts Remanufacturing Co., Ltd.**
Address: Huayuan Village, Yangluo Economic Development Zone, Xinzhou District, Wuhan City, Hubei Province

Joint-Stock Companies

- ◆ **Henan Mutong Environmental Protection Industry Co., Ltd.**
Address: North to the Road, One Kilometer East to the Jiao Yulu Roundabout, Industrial Cluster Zone, Lankao County, Kaifeng City, Henan Province
- ◆ **Huishouge (Wuhan) Internet Co., Ltd.**
Address: Floor 14, Building A3, Guanggu Financial Port, No.77 Guanggu Avenue, Donghu New Technology Development Zone, Wuhan
- ◆ **Energy Storage Power Station (Hubei) Co., Ltd.**
Address: Yingchun Avenue, High-tech Industrial Development Zone, Jingmen City, China
- ◆ **Zhuzhou OKE PRECISION CUTTING TOOLS CO.,LTD.**
Address: Yanjia Village, Xiayang Town, Yanling County, Zhuzhou City, China
- ◆ **Shenzhen EIGEN EQUATION Graphene Technology Co., Ltd.**
Address: Floor 4, No.2 West Jinxiu Road, Pingshan New District, Shenzhen, China



2017

Annual Report on Enterprise Social Responsibility and Environmental Management

--As a dedication to those who love the environment



GEM Co., Ltd

Printed by 100% regenerated paper



GEM Co., Ltd

The Way of Cycle, the Way to a Better Future!

Company wishes

A great power needs a kind of national spirit and a big enterprise needs a kind of enterprise spirit. The real social responsibility of listed companies should integrate the spirit of an era with the development of industry and become the leader of the construction of spiritual wealth and material wealth in an era.

Compilation Illustration

This report adheres to the GEM's concept of social responsibility of "recycling is high-tech, circular and economic, realizing the unity of social responsibility and enterprise benefit," and expounds the concrete practical work of social responsibility and environmental management from January 1, 2017 to December 31, 2017.

All the contents and data disclosed in this report have been reviewed and approved by the Board of Directors of GEM Co., Ltd. The disclosures of this report are as follows:

(I) Scope of the report

Organization scope of the report: This report covers GEM Co., Ltd. and its branches. For the convenience of presentation and reading, "GEM Co., Ltd." is referred to as "GEM" in the report.

Time range of the report: From January 1, 2017 to December 31, 2017, considering the continuity and comparability of the disclosure information, part of the information content extends forward and backward in the disclosure time.

The release cycle of the report: From 2009 onwards, it will be published regularly in the annual report mode.

(II) Principles and reference standards for the preparation of reports

This report is prepared based on Shenzhen Stock Exchange "Guidelines for the Standardized Operation of Listed Companies in Shenzhen Stock Exchange with SME Edition (revised in 2015)" and Chinese Academy of Social Sciences "Guidelines for the Compilation of Chinese Corporate Social Responsibility Report (CASS-CSR4.0)," "China Enterprise Social Responsibility Report Rating Standard (2018)", the State Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and Standardization Administration of China "Guidance for the Preparation of Social Responsibility Report" (GB / T 36001-2015) and other relevant regulations and standards.

(III) Report data description

The data cited in this report are mainly obtained according to the statistical analysis of relevant materials, and the operating data mainly come from the 2017 Audit Report and the Enterprise Annual Report audited by GEM Co., Ltd.

(IV) The form of the report

At present, the report provides simplified Chinese version, English version, Japanese version and Korean version, including two forms of paper version and PDF electronic document. The PDF electronic document can be downloaded from the official website of GEM (www.gem.com.cn). For paper version, please call: (86) 0755-33386666.



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I

The Way of Cycle

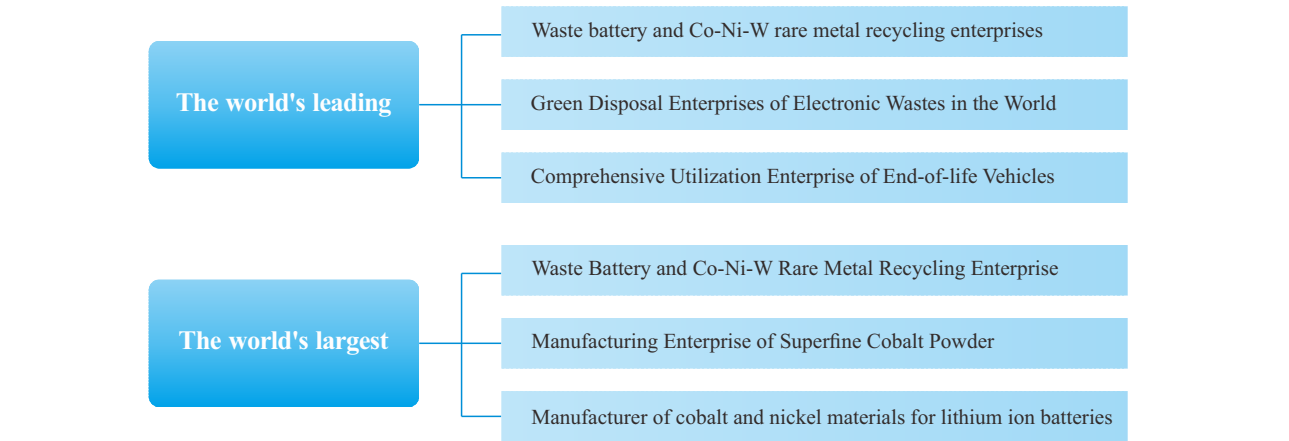
Make the Leading Enterprise of the World
Recycle Economy with Entrust,
Initial Heart and Passion



Changing Waste into Treasure, Recycling and Writing the Industrial Legend of World Waste Regeneration

Recycle the garbage as resource; turn the foul into a miracle!
GEM's practice proved that: China's mainstream allocation of resources can rely on recycling!

Electronic waste recycling Account for 15% of the total scrap of China	Recycling of scrap battery Account for 10% of the total scrap of China	Scrap PCB processing Account for more than 20% of China
Recovery of cobalt resources More than China's original cobalt exploitation	Recovery of nickel resources Account for 6% of China's exploitation	Recovery of tungsten resources Accounting for 8% of China's exploitation
Recovery of germanium resources Account for 6% of the world's production	Ultrafine cobalt nickel powder rebuilding Account for 60% of the Chinese market	Rebuilding of cobalt nickel battery Account for 30% of the Chinese market



GEM: Originated from a Green Dream

- ◆ On December 28, 2001, Professor Xu Kaihua founded GEM in Shenzhen.
- ◆ In 2003, the industrial concept of "limited resources and unlimited circulation" was put forward for the first time.
- ◆ On January 22, 2010, A shares were listed in Shenzhen Stock Exchange (stock code: 002340). China mined the first stock of "urban mines," renewable resources industry and electronic waste recycling industry.
- ◆ GEM owns total share capital of 3.816 billion shares, net assets of more than 7 billion yuan, waste reproduction value of more than 12 billion yuan, employees of more than 5,000 people.

Green Eco Manufacture

绿色 环保 制造

Through green manufacturing
Develop environmental-friendly industry
Save limited resources
Improve the human survival space quality

资源有限 循环无限

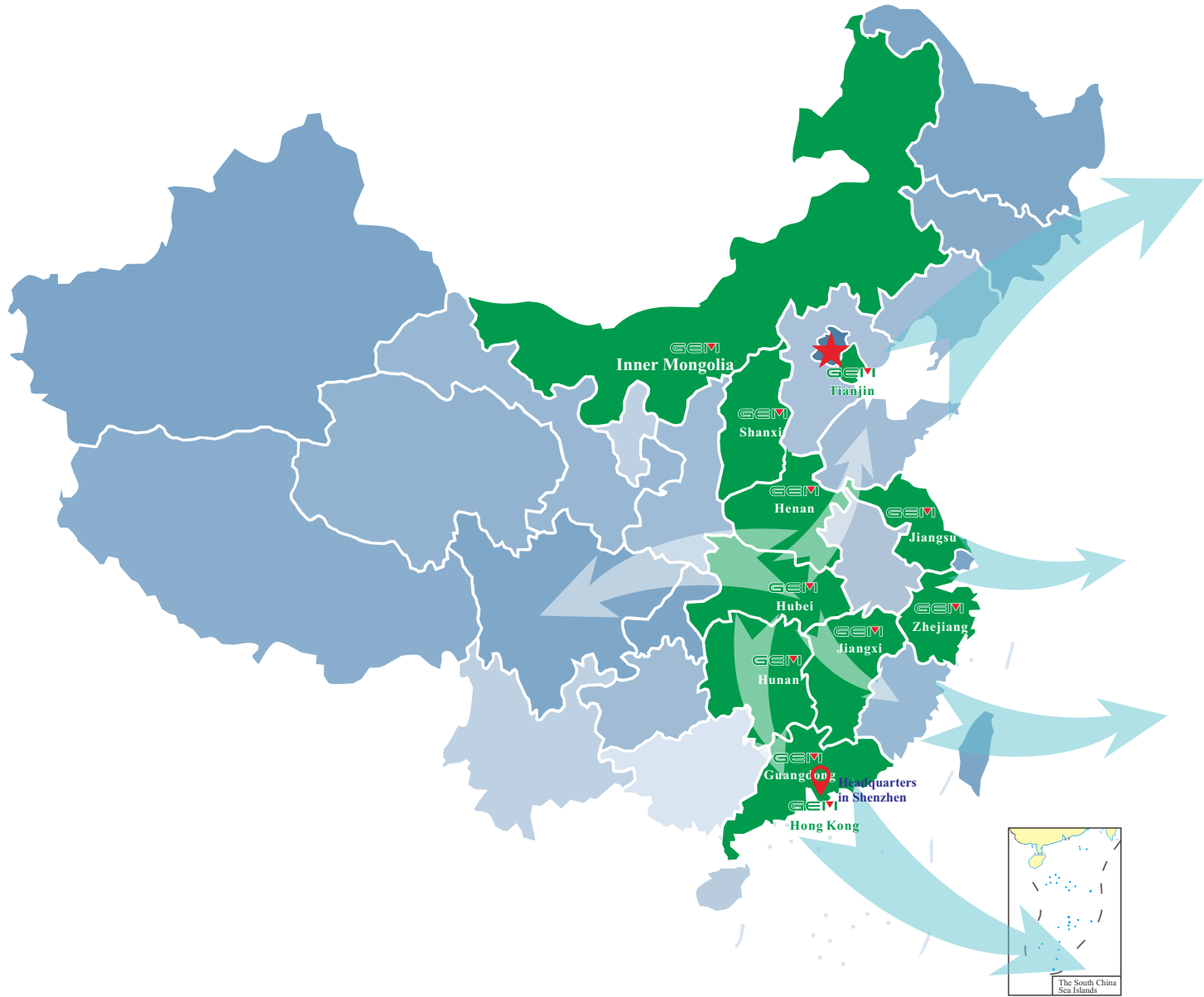
LIMITED RESOURCES UNLIMITED RECYCLING

Only With Great Ambition And Hard Work Can You Achieve a Lot In Your Life,
Circulation Industry Helps Beautiful China Dream

For 16 years, GEM has been working hard to "eliminate pollution and rebuild resources."With a total investment of more than 10 billion yuan, the Company has completed the Sixteenth National Congress Industrial Parks covering ten provinces, including Hubei, Guangdong, Henan, Jiangxi, Jiangsu, Tianjin, Zhejiang, Hunan, Shanxi, and Inner Mongolia, with the layout of South Africa, Europe, Japan and South Korea, forming a circular industry pattern linking China and the radiation world.

The waste recycling radius covers more than 50% of China's land area, establishes waste treatment cooperation relations with more than 500 million people, and promotes the smooth connection between China's green waste treatment model and the world's advanced level.

GEM actively promotes the concept of green development and recycling technology in China. More than one million people have visited the green waste treatment process. Nearly ten thousand people from more than 50 countries in the world have visited the waste treatment process and spread the concept of recycling economy greatly.



Win-win cooperation, open sharing, a new journey of green development along the way

Cross-border mining of urban mines, with the green industry butt "along the road" national strategy, all along the road green development of the new journey. Merger and acquisition of Shu metals, join hands with South Africa KwaZulu-Natal Province to become the world's top cobalt powder industry producers, sharing the new model of green development in China and Africa; Invested in Korea, Ecopro-GEM green battery material joint venture factory formally put into production to enhance the global core competitiveness of the ternary battery material industry chain.



Join hands with South Africa's KwaZulu-Natal Province to build the world's top producers of cobalt powder



GEM Signs Investment Memorandum with Pohang Municipal Government of Korea

Two-wheel Drive of "Urban Mines + New Energy Materials" Contribution to the Global Green Development of China

In 2017, GEM dealt with over 3 million tons of waste resources, recovered 37 kinds of resources and rebuilt 58 kinds of products, which could save 403 million tons of standard coal, reduce water pollution by 1024 million tons, reduce deforestation by 1959 hectares, and reduce 1058 million tons of CO₂ emissions. The practice of GEM's resources circulation provides a model for the development of China's green industry, contributes a great force to the development of green economy, and reflects the responsibility of the company to carry out green development.

Use leading cycle technology to configure power material "core" for global new energy vehicles

In that past decade, the product meet the demand of the world's largest green battery factory, such as CATL and SAMSUNG, etc., and become one of the world's largest manufacturers of power battery material, making every effort to promote the development of global green energy.

Jingmen, Taixing and Yuyao are the largest intelligent manufacturing bases of lithium ion battery precursor in the world. The annual sales volume of ternary precursor exceeds 20000 tons, and the annual sales volume of battery-grade cobalt oxide precursor exceeds 11000 tons, the annual shipment ranks the top of the industry!

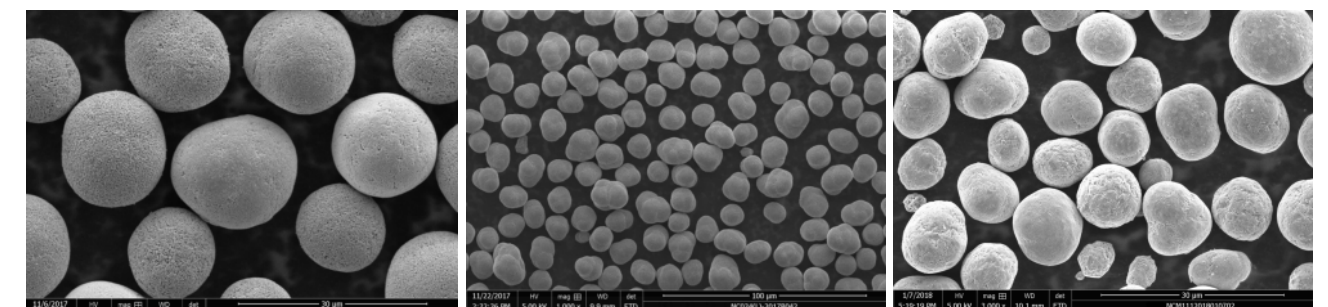
Jingmen and Wuxi Park strive to create the world's advanced automotive power lithium ion battery materials intelligent manufacturing base. Wuxi Park achieves the positive electrode material shipment of 8000 tons, entering the top of the Chinese industry. Wuxi Park lithium cobalt oxide cathode materials to become Samsung SDI qualified suppliers and successfully obtained S-Partner certificate, successfully into the international new energy industry mainstream supply chain.

Jingmen Park and Bangpu Cycle signed a cooperation agreement for the construction of 20,000t / a ternary positive material production line, further tamping the industrial chain of ternary materials between GEM and CATL, the world's largest power battery enterprise, and ensuring the strategic market for the development of GEM ternary battery materials.



GEM Joins with CATL Holding Company to Build Power Battery Ternary Positive Electrode Material Strategic Production Base

GEM established the world's most complete materials and materials manufacturing system for lithium ion batteries



Large Particle Cobalt Tetroxide Materials for High Voltage Lithium Ion Batteries

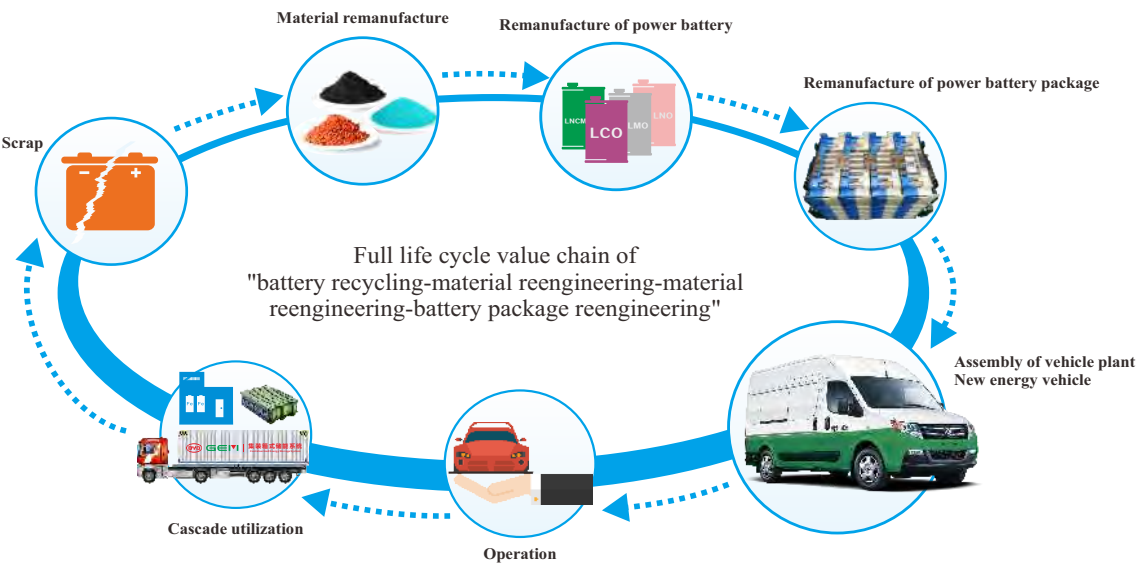
NCA three element nickel cobalt material

NCM three yuan material

Initial Formation of New Energy Life Cycle Value Chain

In 2017, the Company comprehensively promoted the construction of "battery recycling - material reengineering - battery package reengineering" new energy life cycle value chain, actively constructed "1 + N" waste battery recycling network, and jointly performed the social responsibility of power battery recycling.

Taking Wuhan Park and Wuxi Park as the power battery cascade utilization center and Jingmen Park as the waste battery comprehensive utilization center, the whole life cycle value chain of new energy is preliminarily formed.



GEM: Constructing New Energy Life Cycle Value Chain

Solve the Difficult Problem of Tungsten Recovery, Reduce the Exploitation of Strategic Resources and Prolong the Exploitation Life of Strategic Resources in China

Through technological innovation, GEM solved the difficult problem of tungsten resource recycling, formed the core industry chain of "resource recycling, powder recycling and hard alloy device recycling," and built the world's largest green treatment base of tungsten resource. In 2017, GEM recovered more than 3000 tons of tungsten resources, reducing the exploitation of China's strategic tungsten resources, and extending the mining life of China's strategic materials.



Cemented carbide workshop

Tips for a strategic tungsten resource:

Tungsten, atomic number 74, widely used in superalloys, numerical control tools, military industries and other key industries, is the arms and industry 4.0 strategic resources.

China is the world tungsten capital, accounting for 84% of the world's reserves, and together with the "rare earth" has become a key strategic resource restricting the world.

It is an effective way to maintain the global strategic position of tungsten resources in China by implementing quota mining system, saving tungsten resources and prolonging the mining life of tungsten resources.



Intelligent Disassembly Line of Retired Power Battery Pack in Wuxi Park



Full Automatic Production Line for Global Utilization of the First Waste Battery in Jingmen Park



Container-type Energy Storage Power Station as a Product of Stepped Utilization of Decommissioned Power Battery



High quality cemented carbide

Exploring the Operation Mode, Transformation and Value-added of Renewable Resources Field and Green Mining of Urban Mines

In 2017, GEM test water field mode, operation has taken shape.The resources with scrap hardware, scrap steel and scrap plastics as the main categories are greatly improved. The mode of material yard focuses on the renewable resources of over 300,000 tons, and each park explores resource aggregation and material yard management according to local conditions.

Jiangxi Company has cultivated the scrap hardware business deeply, created a two-level copper recycling system, eliminated the secondary pollution to the environment caused by the backward dismantling mode, recovered the copper resources efficiently, formed a new resource supply mode, and provided an advanced mode for the traditional renewable resource gathering place to scale, standardize and benefit.Tianjin Park scrap hardware recycling system is also emerging.

Wuhan Park and Tianjin Park, active in the conversion of scrap steel and scrap car business value-added, for large-scale scrap cars and scrap iron and steel standardized treatment and reconstruction of resources to provide an advanced demonstration.



Green treatment workshop for electronic waste Green processing line of waste PCB



Waste liquid crystal screen processing fully automatic production line

Tianjin Park successfully applied the recycling mode of Internet to scrap car, opened up a new mode of scrap car recycling, and provided a demonstration for the standardization, informatization and traceability management of scrap car.Wuhan Park has built the world-leading non-ferrous metal fine material separation line selection, and further refined and refined the waste materials, forming the advanced practical experience of fine separation of non-ferrous metals.The germanium recycling business of Ningda Company has reached a record high, with the recycling volume exceeding 8 tons, saving a lot of scattered metal strategic resources, and providing industrial practical experience for the recycling of scattered metals.The amount of resources in Xiantao Park exceeds 50,000 tons, which has successfully opened the industrial chain of scrap cars and second-hand cars and realized the maximum resource utilization of scrap cars.



Dismantling and Parts Remanufacturing Products of End-of-Life Automobiles in Auto Parts Reengineering Experimental Center Remanufactured products by scrapped car dismantling and parts

The industrial chain of "waste circulation + ecological management" showed its effect, and the environmental service capability has been greatly improved

Ecological management will be deepened in an all-round way, two sewage treatment plants and three solid waste disposal centers will be operated, the means of environmental pollution control will be improved, and the level and capacity of social environmental services will be greatly improved.

Jingmen Park successfully BOT won the bid of Jingmen Hi-tech Industrial Sewage Treatment Plant, carried out the upgrading of Jingmen Chengnan Sewage Treatment Plant, formed a wastewater treatment industrial chain of Jingmen Park and municipal wastewater treatment plant, with a sewage treatment capacity of 100,000 tons per day, and provided wastewater treatment services for Jingmen Hi-tech Industrial Enterprises,which ensured the discharge of industrial park wastewater is up to the standard; improve the environment of industrial and agricultural production and strengthened the guarantee of crop safety.

Yangzhou Jiejia Solid Waste Disposal Center operates in a standardized manner, Hubei Central Solid Waste Disposal Center operates, Chenzhou Industrial Hazardous Waste Comprehensive Disposal Service Center completes major engineering construction, and the general industrial solid waste and hazardous waste treatment capacity is over 1 million tons, thus forming a complete treatment flow of comprehensive utilization, innocuous treatment and safe treatment. To provide solid waste treatment services for industrial enterprises, industrial waste to provide legal norms and safety to eliminate the site, reduce the risk of industrial waste pollution.



Effect picture of Jingmen Industrial Sewage Treatment Plant Service Center for Comprehensive Disposal of Industrial Hazardous Wastes in Chenzhou

II

The Way of Management

The Way of Management--Standardize Governance, abide by the law and comply with the regulations and protect the legitimate rights and interests of investors and employees



Investor Research in February, 2017

The shareholder is the enterprise's investor, also is the enterprise survival lifeline; Employees are the Motive Force for the Sustainable Development of Enterprises. It is one of the most important obligations and duties of listed companies to regulate governance and protect the rights and interests of shareholders and employees.

- ★ For four consecutive years, he was evaluated by Shenzhen Stock Exchange (Grade A)
- ★ Runner-up of "Global Circular Economy Multinational Corporation Award"
- ★ Eco-civilization "Green Meritorious Service" Award for Top Ten Listed Companies;
- ★ The Best Technology Innovation Award on the 2017 Chinese Listed Companies' Word-of-mouth List
- ★ The 12th Popular Securities Cup "Best Market Value Management Listed Companies"



GEM, as the only enterprise in China, won the Global Circular Economy Award of the World Economic Forum

Standardized Management, Continuous Growth and Ensure Shareholders "Rights and Interests"

Further Strengthening Corporate Governance and Improving the Standard Operation Level of the Company

In 2017, the Company drafted and issued the Notice on Establishing the Important Major Matters and Information Linkage Mechanism of the Group and the Molecular Companies, the Emergency Notice on Strengthening the Daily Management of Related Party Transactions of the Group, and the Reporting Management System on Major Matters.

The Standardized Operation of the "Three Conferences" to Protect the Interests of Shareholders;

In 2017, the Company held a total of 7 shareholders meeting to review 41 bills, 17 board meetings to review 73 bills and 11 board meetings to review 40 bills, effectively maintaining the whole interests of the Company and the interests of small and medium-sized shareholders.

Meeting of Shareholders, Board of Directors and Board of Supervisors of the Company in 2017			
No.	Date	Meeting names	Times
1	2017.2.10	the first interim shareholders meeting in 2017	Shareholders' meeting, Seven times
2	2017.4.28	2016 annual shareholders meeting	
3	2017.5.22	2017 the Second Interim Shareholders Meeting	
4	2017.6.19	2017 the Third Interim Shareholders Meeting	
5	2017.8.22	2017 The Fourth Interim Shareholders Meeting	
6	2017.11.14	2017 The Fifth Interim Shareholders Meeting	
7	2017.12.26	2017 The Sixth Interim Shareholders Meeting	
8	2017.1.03	The Sixteenth Meeting of the Fourth Board of Directors	Board's meeting, Seventeen times
9	2017.1.06	The Seventeenth Meeting of the Fourth Board of Directors	
10	2017.1.24	The Eighteenth Meeting of the Fourth Board of Directors	
11	2017.2.05	The nineteenth meeting of the fourth board of directors	
12	2017.2.27	The 20th Meeting of the Fourth Board of Directors	
13	2017.3.24	The Twenty-first Meeting of the Fourth Board of Directors	
14	2017.4.07	The Twenty-second Meeting of the Fourth Board of Directors	
15	2017.4.24	The Twenty-third Meeting of the Fourth Board of Directors	
16	2017.5.05	The Twenty-fourth Meeting of the Fourth Board of Directors	
17	2017.5.22	The Twenty-fifth Meeting of the Fourth Board of Directors	
18	2017.6.02	The Twenty-sixth Meeting of the Fourth Board of Directors	
19	2017.8.02	The Twenty-seventh Meeting of the Fourth Board of Directors	
20	2017.8.22	The 28th Meeting of the Fourth Board of Directors	
21	2017.10.24	The 29th Meeting of the Fourth Board of Directors	
22	2017.11.14	The 30th Meeting of the Fourth Board of Directors	
23	2017.12.01	The Thirty-first Meeting of the Fourth Board of Directors	
24	2017.12.08	The thirty-second meeting of the fourth board of directors	

No.	Date	Meeting names	Times
25	2017.1.24	The tenth meeting of the fourth board of supervisors	Board of Supervisors' meeting, Eleven times
26	2017.2.05	The Eleventh Meeting of the Fourth Board of Supervisors	
27	2017.4.07	The 12th Meeting of the Fourth Board of Supervisors	
28	2017.4.24	The Thirteenth Meeting of the Fourth Board of Supervisors	
29	2017.5.05	The 14th Meeting of the Fourth Board of Supervisors	
30	2017.5.22	The 15th Meeting of the Fourth Board of Supervisors	
31	2017.6.02	The Sixteenth Meeting of the Fourth Board of Supervisors	
32	2017.8.02	The Seventeenth Meeting of the Fourth Board of Supervisors	
33	2017.8.22	The Eighteenth Meeting of the Fourth Board of Supervisors	
34	2017.10.24	The Nineteenth Meeting of the Fourth Board of Supervisors	
35	2017.12.01	The 20th Meeting of the Fourth Board of Supervisors	

Multi-level Information Disclosure and Transmission Fairness and Justice

In 2017, the Company issued 255 documents (including 182 publications and 73 online documents) to reflect the Company's operation dynamics at multiple levels, mainly including non-public issuance of shares, issuance of corporate bonds and ultra-short-term financing bonds, interest payment of corporate bonds, establishment of joint venture companies and expansion of industrial chains with industry-dominant enterprises.



Investor were investigating

Information Disclosure Categories in 2017:			
Information Disclosure	Category	Number	Subtotal
Public	Transaction category	44	182
	Refinancing	44	
	Three meeting resolution	35	
	Others	59	
Non-Public	Company system, opinion of independent director, etc	73	73
Total			255

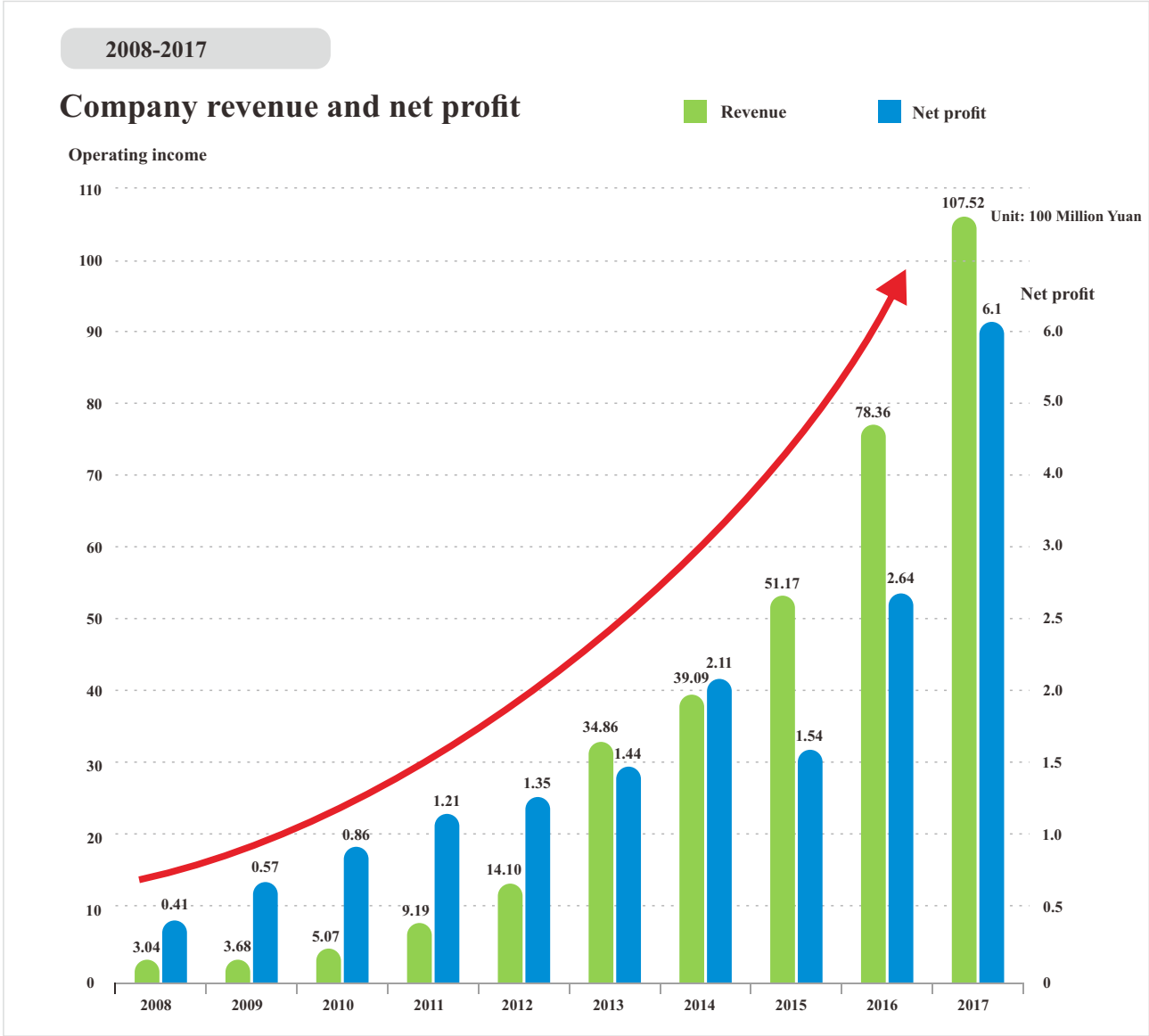
In 2017, the company held a total of 17 open investor research activities, the total number of participants more than 300.

Survey of investors in 2017:		
Time	Institutions	Number of people
2017.2.15	CGB Securities, Xingye Securities, Ping An of China	24
2017.4.14	Guotai Junan Securities,BOC International, Dongxing Securities	19
2017.4.19	Zhongtai Securities, Huaxia Fund, Jingshun Great Wall	20
2017.5.10	Allianz Investment, Great Wall International, Biyun Capital	12
2017.5.19	CITIC Securities, Merchants Securities, Founder Securities	20
2017.6.14	Shennong Investment, Bohai Trust and Ruirui Investment	18
2017.9.8morning	APS Assett Mgmt-Shanghai、 China Southern Asset Mgmt Co	11
2017.9.8afternoon	Tianfeng Securities, Minsheng Securities, Jiahuaxing Fund	12
2017.9.12	Lige Capital, Founder Securities and Everbright Assets	16
2017.9.19	Fidelity Investment, the Norwegian Central Bank, Goldman Sachs	30
2017.9.20	Morgan Stanley Asia Co., Ltd.	6
2017.9.25	France Paris Asset Management Asia Co., Ltd., Global Investment Management (Hong Kong) Co., Ltd.	25
2017.11.2	Wellington Management Company、 Tiger Pacific Capital	18
2017.11.3	China Merchants Securities, Minsheng Bank, Dongxing Securities	22
2017.11.6morning	Citigroup Global Markets Asia Limited、 Allianz Global Investors	10
2017.11.6afternoon	China Life Franklin、 Newton Investment Management	12
2017.11.8	China Asset Management and red earth Innovation Fund	35
Total		320

Table of off-line Communication in 2017	
Means	Description of main status
Telephone communication and interaction	In 2017, based on the concerns of investors, the Company responded to more than 700 questions;
The reception of investors investigation	In 2017, the Company concentrated on receiving 17 times of investor investigation, and more than 300 times of institutional investors and investment banks and securities analysts visit the Company;
Convening a performance statement meet	The annual performance explanation meeting will be held once, actively communicate with investors;
Participation in investment strategies	In 2017, the company participated in more than 20 strategic meetings planned by Guotai Jun'an, CITIC Securities, Tianfeng Securities and other organizations, and adopted a one-to-one, one-to-many way to communicate with investors.

High-growth and high-value return to investor

In 2017, the company's operating income exceeded 10 billion for the first time, with remarkable growth.The company attaches great importance to the return of investors, the performance of listed companies operating responsibilities, to ensure the sustainability and stability of profit distribution policy.



Growth chart of operating income and net profit of GEM

Company dividend			
Year of dividends	Allocation scheme	Cash dividends (including tax, yuan)	Proportion of net profit attributable to common shareholders of listed company in consolidated statement (%)
2017	All shareholders shall be given cash of RMB 0.26 yuan (including tax) per 10 shares.	99,213,668.81	16.26
2016	All shareholders shall be paid 0.1 yuan in cash (including tax) for every 10 shares; At the same time, with the capital accumulation fund to all shareholders every 10 shares increased by 3 shares,	29,353,156.46	11.13
2015	Send RMB 0.2 (including tax) to all shareholders for every 10 shares; At the same time, 10 shares will be added to every 10 shares of all shareholders by capital reserve fund;	29,108,696.46	18.88
2014	All shareholders shall be paid 0.1 yuan in cash (including tax) for every 10 shares; At the same time, with the capital accumulation fund to all shareholders every 10 shares increased by 3 shares,	9,238,401.67	4.38
2014Jan-Sep	All shareholders shall be sent RMB 0.55 yuan (including tax) in cash for every 10 shares.	50,811,209.19	24.08

The internal control mechanism is more perfect, and the shareholder's equity is more guaranteed

In 2017, the Company continued to optimize the internal environment, risk assessment, control activities, information and communication, and internal supervision on the basis of previous years of achievement, and continuously strengthened the management of accounts receivable, daily related transactions, financial regulations and hazardous waste through the convening of management meetings and issuance of standardized notices, etc. Safety, environmental protection and other aspects of control, strengthen internal control mechanism, reduce operational risks, and effectively guarantee shareholder's equity.

Main Internal Control Construction of GEM in 2017			
No	Time	Category	content
1	2017.02.12	Notice	Urgent Notice on Further Strengthening the Control of Accounts Receivable of the Group;
2	2017.03.05	Notice	Notice on Strict Control of Illegal Subcontracting and Illegal Subcontracting of Engineering Projects;
3	2017.04.11	Notice	Notice on Strengthening the Clearing and Control of Accounts Receivable of the Group;
4	2017.04.14	Notice	Urgent Notice on Strengthening the Daily Management of Related Party Transactions of the Group;
5	2017.06.16	Notice	Notice on Strengthening the Inspection and Governance of Handling and Handling Dangerous Goods;
6	2017.06.20	Notice	Notice on Carrying out Financial Management Training
7	2017.07.04	Meeting	The Company's management, marketing department, quality department and production department hold meetings to take the quality management process seriously and eliminate the quality hidden troubles;
8	2017.07.29	Notice	Notice on Strengthening the Control of Invoice Tax Risk;
9	2017.08.07	Notice	Notice on carrying out environmental inspection of various molecular companies of GEM Group;
10	2017.08.21	Notice	Notice on the Implementation of the Safety Verification of the Molecular Companies of the GEM Group;
11	2017.09.04	Notice	Notice on Carrying out Standard Inspection of Accounting Basic Work;
12	2017.09.17	Notice	Notice on Establishment of Important and Important Matters and Information Linkage Mechanism of Groups and Molecular Companies;
13	2017.10.22	Meeting	The Company's management, market department, finance department and fund department shall hold cobalt and nickel market meetings, adjust the sales system, and strengthen the management and control of accounts receivable;
14	2017.11.18	Notice	Notice on the Establishment of the Department of Receivables Management;
15	2017.12.01	Notice	Notice on Carrying out the Annual Special Inspection of Internal Control Standardization;
16	2017.12.07	Notice	Notice on Carrying out Major Inspection on Production Safety, Fire Safety and Occupational Health and Safety;

Protect Employee's Rights and Interests and Enhance Endogenous Motive Force

Open the channel of employee growth and construct the "leader-superior-skill" three-level talent system

In 2017, the Company put forward the innovative "leader-superior-skill" three-level talent system, focusing on the introduction and cultivation of a number of leading talents leading the development of the industry, the directional cultivation and cultivation of ideal, capable and responsible young talents, and the cultivation and selection of skilled technicians. The Company provides the talented person safeguard for the urban mine and the new energy industry strategy implementation.

Precisely Focus to Cultivate Leading Talents and Lead the Development of Industrial Technology

In 2017, the Company focused on training and introducing high-end talents in the industry, identified 6 leading talents, and broken the shackles of conventional R & D project management in order to realize the global technology competitiveness and high-quality development of the Company, Give the leader talents 2 million free control funds, let the leader talents self-selected topics, self-organizing teams, completely break the chain of binding the leader talents to play their talents, so that the leader talents in the broad scientific research platform free expansion, long-sleeved dance!

Leading Talent in 2017



Liu Wenzhe
General Manager of Business Department in Jingmeng GEM powder

"Insisted one thing, then created splendor!" For 13 years, we have stuck to integrate one line of technological industry, then synthesize the leader practitioners for the world's biggest superfine cobalt power and high-performance mobile phone battery used for cobalt oxide industry with craftsmanship.



Guo Miaomiao Doctor
Deputy Director of National Electronic Waste Recycling Engineering Technology Research Center

We persevere to "harden" the world's superhard material with fine grain technology, and become the leader practitioners for the world's superfine cobalt power manufacturing technology.



Qin Yufei Doctor
Director of the GEM Electronic Waste Recycling Strategy Research Center

We persevere to "harden" the world's superhard material with fine grain technology, and become the leader practitioners for the world's superfine cobalt power manufacturing technology.



Zheng Hongwei Postdoctor
Deputy Director of National Cyclic Utilization Research Center of Electronic Waste Engineering Technology

From SMTH to front-line workshop, be modest and humble, concentrate on studies in the field of high-nickel ternary precursor materials and deliver China's "ternary chip" for global energy.



Xu Shiguo Doctor
Executive Vice-president of GEM New Energy Material Research Institute

Be solid and down-to-earth, rapidly break through various key technologies concerning lithium cobalt oxide and ternary cathode materials, break into international supply chain of Samsung and make new energy materials of GEM stand out in the industry.



Ma Lin
Director of Public Detection Platform of National Urban Mineral Demonstration Base

Be sharp-eyed and perspicacious, let cyclic regeneration products of GEM going global by virtue of micro analysis and detection "glasses" and become the leader in waste cyclic detection technology in China.

leading talents of the year 2017



Award for Creative Personnel - Mercedes Benz

Focus on the construction of young talent team, strengthen the strength of the company's construction pillar

The youth managers are the mainstay of GEM 's third development strategy and the backbone of the construction of ten billion yuan recycling industry. In order to comprehensively enhance the comprehensive strength of the youth talents of the Company, in 2017, the Company conducted a talent inventory within the group, and selected more than 100 youth talents. For each talented person to develop a growth road map and personalized capacity to enhance the program, to the greatest extent to broaden the growth channel of talent, let young talent and GEM grow up together!



Elite Training Class of Training Institute in 2017

Innovating the Training Mode of Basic-level Technicians and Creating High-quality Reserve Technicians

The Company will carry out skills training for thousands of front-line employees, encourage and guide them to take up their own positions, learn technology, optimize procedures, improve skills, select a number of skilled and skilled senior technical personnel, to the greatest extent, arouse their interest in learning and enhance their own core competitiveness. Realize the transformation of the broad front-line staff from the ordinary to the mechanic.The employees have become more and more aware of the GEM culture, and they have firmly adhered to the belief of environmental protection industry, moving forward to the new era and refusing to do the latter!



Technical training scene



Technical training scene

Promote Talent Encouragement System and Share the Development Achievements of the Company

In 2017, the Company successfully implemented the first equity incentive plan to encourage 433 core management, technology and management related business backbone which have made outstanding contributions to the development of the enterprise, and the incentive target is 244.46 million restricted stocks.In addition, the company successfully developed the incentive mechanism of share dividend with the main body of GEM(Jiangsu) Co., Ltd., sharing the company's development results with the employees and increasing the cohesion of the core employees.

In that future, the company will further establish and improve the long-term incentive mechanism of the company, encourage the core management and technical (business) personnel by means of virtual share dividend, profit-sharing deferred payment and partner system, effectively combine the interests of shareholders, the company and the individual interests of the core team, Make all parties concerned about the long-term development of the company.

Standardize Internal Control and Governance, Ensure Employee s Legal Labor Rights and Interests

◆ Strengthen Internal Human Resource Management Verification and Control, Ensure Employee s Legal Labor Rights and Interests

In 2017, GEM will further establish and improve the rules and regulations on human resource management of the Company, further refine and strengthen control over the rules and regulations on labor contracts, social insurance, salary distribution, and protection of female workers, and conduct two full coverage human resource management verification and inventory for all molecular companies within the Group. We will examine the 100% coverage of social insurance purchase, the signing of labor contracts and the coverage of commercial insurance, not only guarantee the legal labor rights and interests of employees, but also fulfill the requirements of standardized management of listed companies, ensure the integration of group companies and move forward towards international enterprises.

◆ Eliminate Employment Discrimination and Maintain Employment Equity of Vulnerable Groups

GEM adhere to the principle of fair employment, has been committed to promoting fair employment, gender discrimination, national discrimination, health discrimination, in the protection of female workers, ethnic minorities, disabled employment, spare no effort.

Employee structure in 2017		
category	Number (person)	Proportion (%)
Male employees	3583	70.9%
Female employees	1468	29.1%
Total	5051	100
Note: There are 12 disabled employees and 47 minority employees;		

GEM has been actively performing social responsibilities, with the proportion of disabled employees rising from 0.12% in 2016 to 0.2%, demonstrating the concern of listed companies for vulnerable groups.

Care for the staff and enhance the cohesion of the team

◆ Popularize the group birthday party system, so that the company care covers every GEM person!

The chairman said that it is one of our biggest responsibilities to take good care of every one of our employees. In order to let all the employees feel the care and warmth of the GEM family, each of GEM's branch companies regularly hold employee birthday party, sing birthday song and share birthday cake every month.



Chairman Xu Kaihua was preparing Birthday cake for the Employees



Happy birthday party, happy to everybody

◆ Pay close attention to the spiritual needs of employees and carry out rich and colorful cultural and physical activities

The company has organized employees to carry out a series of rich and colorful cultural activities such as morning running, tug-of-war, soccer, basketball, etc., so as to ensure the employees to develop their hobbies, strengthen their physique, enrich the spiritual world, meet the same-minded teachers and benefit friends, and construct the cultural system of common development.



Park morning run, strong body



Play in basketball court, enhance the morale

◆ Strengthen Employee s Family and Work Maintaining, Build Green Dream Together

We will set up a family day event for our family members to experience GEM’s culture, working environment and atmosphere, to satisfy their families, to trust their families, and to build a green dream together with us.

◆ Help the difficult employees in many ways to provide strong backstage guarantee for the employees

In 2017, GEM Group invested hard help funds to help the difficult employees. In addition to help, it called on the employees to donate money to the employees suffering from major diseases and natural disasters, distribute subsidy supplies, work with one heart, work with one heart and work together to overcome difficulties.

Assistance to the difficult staff of the GEM			
Company	The number of assisted people	Total input (yuan)	Support coverage rate (proportion of the total number of the company,%)
Yuyao Xingyou	2	2000	5.0
(Jiangsu) Co Industry Circulation Industrial Park	9	19000	2.5
(Jiangxi)Circulation Industrial Park	6	4200	1.5
(Jingmen)Circulation Industrial Park	30	108000	1.2
(Inner Mongolia)Circulation Industrial Park	5	3200	4.0
(Shanxi)Circulation Industrial Park	2	2800	1.8
(Tianjin)Circulation Industrial Park	2	2000	3.9
(Wuhan)Circulation Industrial Park	8	24000	3.1
Yangzhou Ningda	3	1600	1.5
Hunan Yinghong	13	30722	12.1
Total	80	197522	1.6

◆ Improve the Soft and Hard Work Environment and Improve the Job Satisfaction of Employee

In 2017, the Company not only adjusts and improves the external working environment, but also promotes the improvement and optimization of the soft working environment. The Group carries out the transformation of the first-line workshops such as ventilation, exhaust and cooling, and improves and optimizes the dining hall and dormitory environment. Carry out dormitory renovation, build staff physical training facilities, and ensure staff's comfortable work, happy work and healthy work.



Family day



The union dispenses summer-heat supplies to its employees

III

The Way of Innovation

Focus on Innovation, Lean Quality and
Accomplish World High-quality Brand



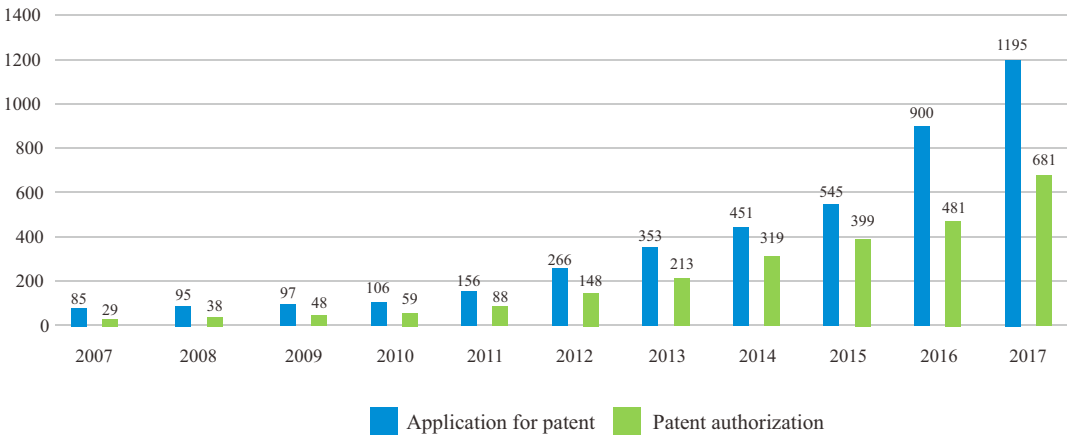
Through the key technological innovation, we have completed the brand construction road of recycling products of "waste recycling - resource regeneration - product reengineering - substitute raw mineral resource products - world brand products." The recycling products have no obstacles to use, and the core products have fully entered into the world high-quality brands to create green value for customers. The industrial concept of "limited resources, unlimited circulation," realizes general secretary Xi Jinping's entrustment: "Recycle rubbish, turn corruption into magic."

Key Technology Breakthrough and Protection of Intellectual Property Rights

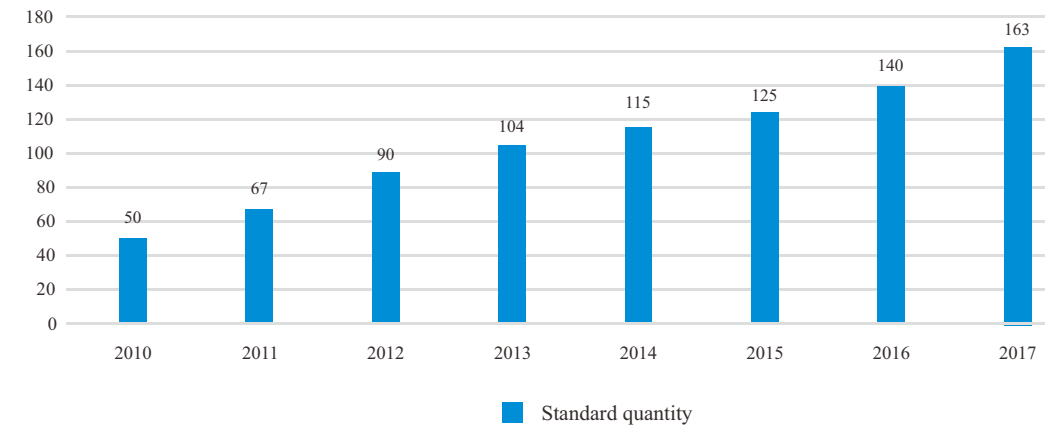
Focus on deep green recycling technology, promote the value of waste recycling products, launch key technological innovation, obtain a number of key green achievements, break through foreign technical barriers, become the first enterprise in China's renewable resources industry in Europe and the GEM and other countries have core patents.

Key Technology Breakthrough in Key Fields in 2017

No.	The key technology	Important meaning
1	Key Technology and Industrialization of Large Particle Cobalt Oxide for High Performance Mobile Phone Battery	Widely used in Samsung, ATL high-performance batteries, the annual shipment ranks the top of the industry!
2	Key Technology and Industrialization of Ternary Precursor Materials with High Nickel Content	In the same kind of Chinese products, the only stable supply control magnetic foreign matt is less than 10ppb, stable batch supplier of Samsung SDI.
3	Industrialization Technology of High Purity Superfine Cobalt Carbonate	Deliver ultra-fine grain binder for global cemented carbide, add "hardness" to ultra-hard material, crack technical bottleneck of global cemented carbide industry
4	Industrialization Technology for Comprehensive Utilization of Complex and Difficult-to-handle Strategic Metal Cobalt Resources	Solved the world's problems of complex white alloy processing
5	Intelligent Manufacturing and Quality Management of Ternary Power Battery Materials	Import SCADA system, intelligent manufacture world-class products, become qualified supplier of Samsung SDI and successfully obtain S-Partner certificate
6	Set up Three-dimensional Electronic Waste Flow, Green Disassembly and Information Management system	Realized the Green Treatment of Electronic Wastes and Improving the Level of Environmental Management. China's Electronic Wastes Treatment is in Line with the World Level;



GEM Application and Accumulative total authorized Patent Number during 2007-2017



GEM Standards Accumulative total number made during 2010-2017

Carry out Brand Construction in an All-round Way to Become the World High-quality Brand of Multiple Products

The position of the GEM core products in the market

Core product	Market position
Superfine cobalt powder Ultrafine Nickel Powder	International and domestic market share reached 20% and 50% or more respectively; One of the world's three largest brands of nickel powder; Become the leading supplier of top customers in the world, such as Rio Tinto, Kenner of the USA, and Sandvik of Sweden;
Three element precursor material of power battery	The world power battery ternary material quality key raw materials, shipments ranks first in industry, mainstream supply CATL supply chain, supplier of Samsung SDI and ECOPRO and other international mainstream customers;
Cathode materials for lithium ion batteries	Samsung SDI qualified suppliers and successfully obtained S-Partner certificate, shipments ranks the industry top five
High purity nickel sulfate	High quality brand of the global battery industry
Battery grade cobalt oxide	The annual shipments ranks the toppest in the industry

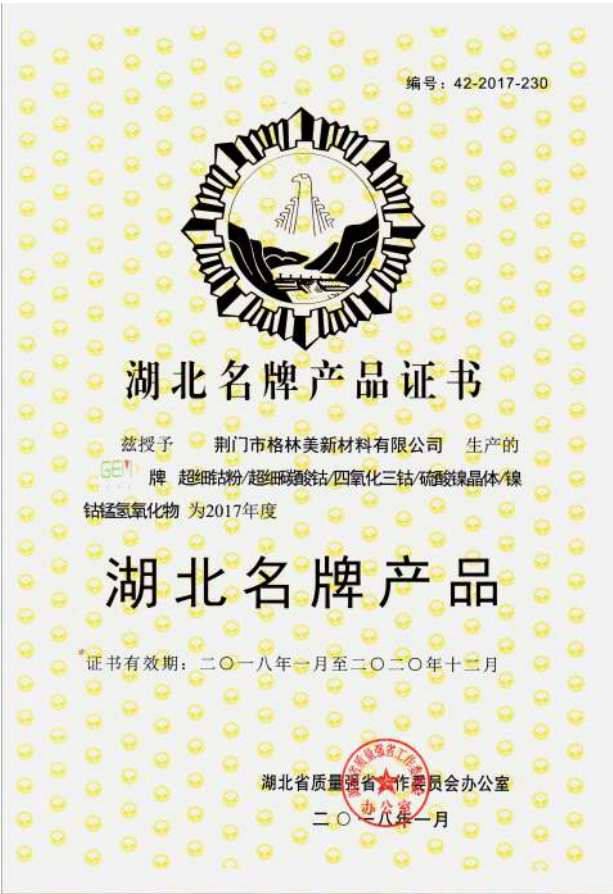
Deeply plough cycle, achieved innumerable great achievements, won the world's grand prize

Major awards / honors received by GEM in 2017

Award-winning unit	Awards / honors	Awarding unit
GEM	Runner-up of "Global Circular Economy Multinational Corporation Award"	World Economic Forum
	Pioneer Enterprise of Circular Utilization of Annual Lithium Power Industry	High-tech lithium power & electric vehicle golden ball award
	One of the Ten Brands of Cathode Materials for Power Lithium Batteries in China in 2017;	The golden tripod award of the third starting point
	Best-selling Products in 2017 - Material Award	The golden tripod award of the third starting point
	Excellent supplier	Samsung STM
(Jingmen) Circulation Industrial Park	National green factory	Ministry of industry and information technology
(Wuhan) Circulation Industrial Park		
(Wuxi) Circulation Industrial Park		
(Jiangxi) Circulation Industrial Park		
(Jingmen) Circulation Industrial Park	First Prize for Science and Technology Progress in Hubei Province in 2017	Hubei Provincial Government
	First Prize for Science and Technology (2017)	China Circular Economy Association
	National excellent Park of renewable resources	China material regeneration Association
	Famous Brand Products of Hubei Province in 2017	Office of Work Committee of Hubei Province with Strong Quality
	The tenth Hubei patent gold medal	Hubei Intellectual Property Office
	The sixth Jingmen mayor Quality Award	People's Government of Jingmen City
GEM (Wuhan) New Energy Co., Ltd.	Outstanding Suppliers in the Year 2017	Dongfeng Xiangyang Passenger Car Co., Ltd.

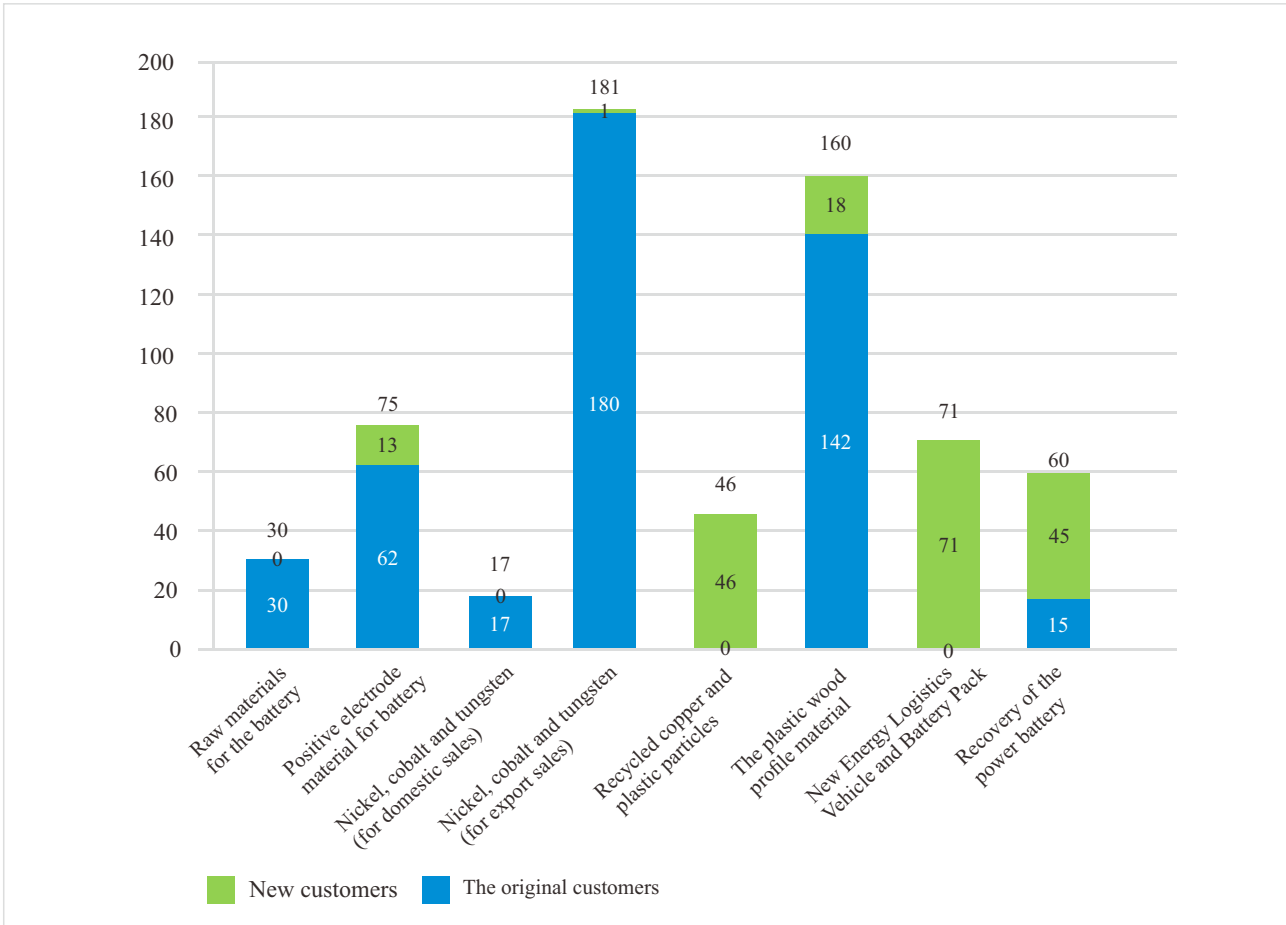


Jingmen GEM Won the First Prize of Science and Technology Progress in Hubei Province in 2017



Ultra-fine cobalt powder and other five products won the title of Hubei Province famous brand products

High-quality customers have increased significantly, and the brand reputation of the Company has been growing



Number of main business customers of GEM

The customer satisfaction is further advanced, and the cooperative relationship is more stable

Survey on Customer Satisfaction of GEM in 2017			
Customer service	Cobalt nickel tungsten powder	Battery material	Plastic and wooden products
Satisfaction rate	99.7%	98%	100%
Product qualification rate	100%	100%	99.3%
Return rate	0	0	0



Outstanding supplier of Samsung STM



The pioneer enterprise of the annual lithium power industry recycle uses



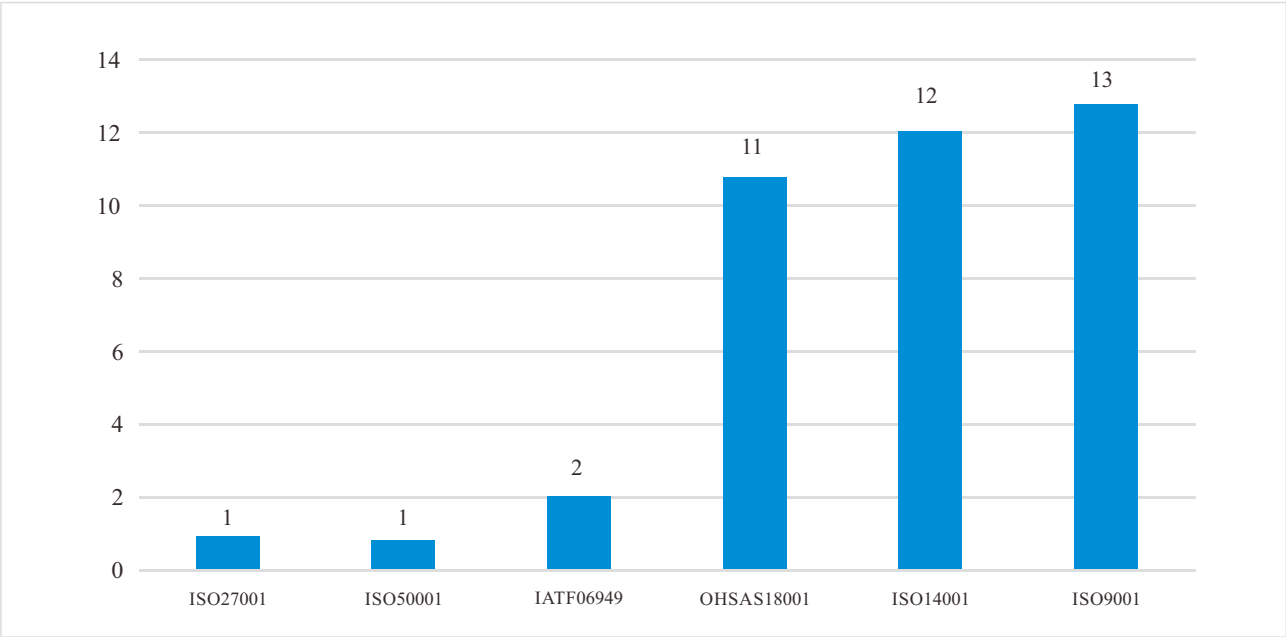
Dongfeng Xianglv outstanding supplier of year 2017

In 2017, there were 5 customer complaints of the Company. The Company resolutely handled the complaints according to the complaint process, which not only protected the interests of the customers but also the rights and interests of the Company. At present, all the complaints have been completed.

GEM Customer Complaints in 2017					
No.	Time	Product	Complaint Content	Cause Analysis	Treatment Measures
1	2017.08.30	Nickel sulfate crystal	Nickel sulfate crystals caked slightly when they arrived	The crystal has more small particles and the storage time is too long;	1.Reduction of small particles of nickel sulfate crystals 2.Reduce the inventory time of products as much as possible
2	2017.09.11	ternary precursor	Packing problem: 1. sign is not clear 2. there is foreign matters in the outside packing bag 3. flatulence of inside packing bag	1. wrapper over wrapping is unclean 2. ton bag surface with foreign matter 3. the flatulence of the inner bag is exhausted	1. reduce the number of wrapping times 2.Clean up ton bags when packing 3.Seal the inner bag after exhausting the air
3	2017.10.11	ternary precursor	When the goods are delivered, the packing is tilted.	Improper handling during the transfer process, resulting in material tilting;	1.Regularly spot check its OQC process every week, and supervise and urge the logistics to take protective measures (binding / supporting) for the products. 2.Carry out monthly shipment flow inspection, training and assessment;
4	2017.11.21	binary precursor	Check the breakage of the bag	Improper operation of Forwarding Forklift during transfer, resulting in damage of packaging bag;	1.The freight forwarder shall check the transportation, and keep the photos and certificates every time; 2.The Company shall formulate operation instructions for warehouse-out and warehouse-in inspection, and conduct training and regular assessment on the employees;
5	2017.12.08	Cobalt oxide	Product BET fluctuates greatly	Fluctuation of BET during sintering due to temperature variation of products	The key indexes of products shall be managed by SPC, and the early warning treatment of indexes that do not conform to the principle of discrimination shall be carried out;Improve that stability of BET indexes by adjust the parameters of rotary kiln according to seasons;

Standardize audit and certification, and standardize quality management by multi-department linkage

A number of branch companies passed through ISO9001, ISO14001, OHSAS18001, IATF16949, ISO27001, ISO50001 system certification.



A Study on the status of passing System Certification of GEM’s branch Companies

Part of the Quality Conference of GEM in 2017		
No.	Items	Quality conference content
1	Monthly quality work conference	Monthly report of customer VOC sound, finished product CPK, quality improvement, system construction, supplier management, analysis and test situation;
2	Customer complaint	Monthly customer VOC list, organize to analyze the cause, propose improvement and corrective and preventive measures;
3	Internal quality accident	List of internal quality accidents, organize to analyze the causes, propose improvement and corrective and preventive measures;
4	Quality QPA Review Conference	Statistics and analysis of quality rectification (problems, improvement measures, improvement effect evaluation)
5	On-site inspection of hidden danger	Report the site quality hidden trouble, issue the rectification list to eliminate the hidden trouble on schedule and improve the quality;
6	Order completion	Monthly order completion table (customer name, delivery date, actual delivery time, delay or not, delivery timeliness rate, delay reason analysis and improvement)
7	Quality training work	Implementation of this month's quality training and next month's training plan;
8	Achievement in the quality assessment	Monthly assessment and evaluation results of each division are announced;

Introduce Green Supply Chain Management and Globalize Green Procurement

Jingmen GEM and Jiangsu GEM respectively entered the 2017 apple cobalt supply chain, the global 10 enterprises entered its cobalt supply chain, GEM green products entered the international high-end supply chain.

The Company has formulated and strictly followed the Supplier Management System and established a complete supplier management system.

Supplier management system		
Items	Content	Requirements
Review of the new supplier	Price, technical quality, delivery capability, quality assurance, compensation system, etc.;	Form the audit form and decide whether to carry out cooperation according to the final audit result;
The rating of the supplier	Quality, price, delivery date, service, etc.;	Evaluate the suppliers with excellent, good, qualified, tutoring and unqualified levels, and deal with them accordingly;
Maintenance of the supplier relationship	A Perfect System of Supplier Management	Strengthen the communication with the suppliers;
Risk control of the supplier	Principle of co-supply of bulk raw materials by multiple suppliers; Take samples and check, sign contract terms and agree installment payment;	Reduce the Risk of Funds and Guarantee the Stability of Goods Sources
Information management system of the supplier	The supplier's detailed information is entered into ERP management system;	Realized Information Management of Supplier Information and Its Raw Materials Supply;

Arouse the Vitality of Green Innovation and Strive for a Great New Era

Innovate performance management and incentive mechanism, forge and implement the "leading talent-superior talent-skilled talent" three-level talent system to provide talent guarantee for urban mines and new energy industry strategy implementation, drive the high-quality development of recycling industry.

Hold hands with the world's first-class universities and integrat with international green innovation tide

In July 2017, Jingmen GEM , together with Oxford University and Oxford University Innovation Co., Ltd., signed "Oxford Sustainable Fuels Limited Terms Sheet" to marry the Oxford University of the world. Jointly develop the municipal waste bio-low-carbon fuel technology, open the channel of technical cooperation with the world-class universities, greatly enhance the company's ability to develop international first-class waste regeneration and new material preparation technology, and promote the company's innovation capability towards internationalization.



GEM's cooperation with the University of Oxford

Invest great Money in R & D, Reward Innovation with great investment

Summary of Technology Innovation Reward System of GEM Co., Ltd.

N0.	project Category	Definition of project category	Achievement of the project (in current phases)	Amount of reward	Reward standard
1	new product development	According to customer demand, develop brand-new products, open up new market and customers for the company, and produce important economic benefits.	The product is inspected and certified by the customer, and an order is formed;	20-300 thousand yuan	Depending on the order and market prospect, determine reward I, II, III, etc., upon review;
			Significant economic benefits have been produced by opening up important customers;	Based on the benefits of three years to give a certain percentage of the commission;	In that stage progressive system, the gross profit generate in the current year is 1-5 million yuan, and the extraction proportion is 5%; In that range of 5-10 million yuan, the extract proportion is 3%; More than 10 million yuan, the extraction proportion is 1%; Gross profit accumulated in three years exceeds 60 million yuan, 2% of which is extracted;
2	Development of new process, new method and new equipment	Develop and introduce new complete process or important key equipment, innovate new methods, improve production efficiency or reduce cost;	Stable application time effect is over three months, and achieves the expected achievement;	Increase the benefit or save the cost within one year according to a certain proportion;	In the year, the extraction proportion of total added benefit or saved total cost (unit added benefit or saved cost per unit × total annual output of new process) is 5% -10%
3	Process and equipment improvement	Improve that production efficiency, reduce the cost, construct the discharge or increase the safety according to the exist process or equipment;	Stable application time effect is over three months, and achieves the expected achievement;	Reward according to the improvement effect of process or equipment;	Improvement of efficiency, expansion of production and emission reduction result in cost reduction or efficiency improvement; Upon review, grant 5-10% of the annual cost reduction of one-time reward or RMB 10,000,000.00 Yuan according to the amount of the benefit;

Principles: Guided by results and benefits, promote exploration and encourage innovation. Give reasonable reward to the important exploration and innovation behavior of exploiting the market and enhancing the benefit.

(1) Significant impact on the development of the Company's main business, major technical and industrial innovation projects or new management modes and business models that promote the transformation and upgrading of the Company's main business, with the bonus mode of cash + bonus right of the project entered by the Group for a maximum of 10 years. In principle, the proportion of dividend rights can enjoy the highest 10% of the profit generated by the project. In particular, to promote the Company's technical lead industry and projects that have a significant impact on the Company's operating performance. After approval by the Group Board of Directors, the Company can enjoy the bonus of up to 20% of the project profit.

(2) Other types of innovation reward principles are as follows

Professor Xu Kaihua, chairman of the board, issued the guidelines for key R & D projects in 2018 to the world at the GEM Innovation Conference, and plans to invest 300 million yuan in innovative R & D to break through key technologies in five fields, such as power battery materials.



Chairman Xu Kaihua issued 2018 R & D Project Guide

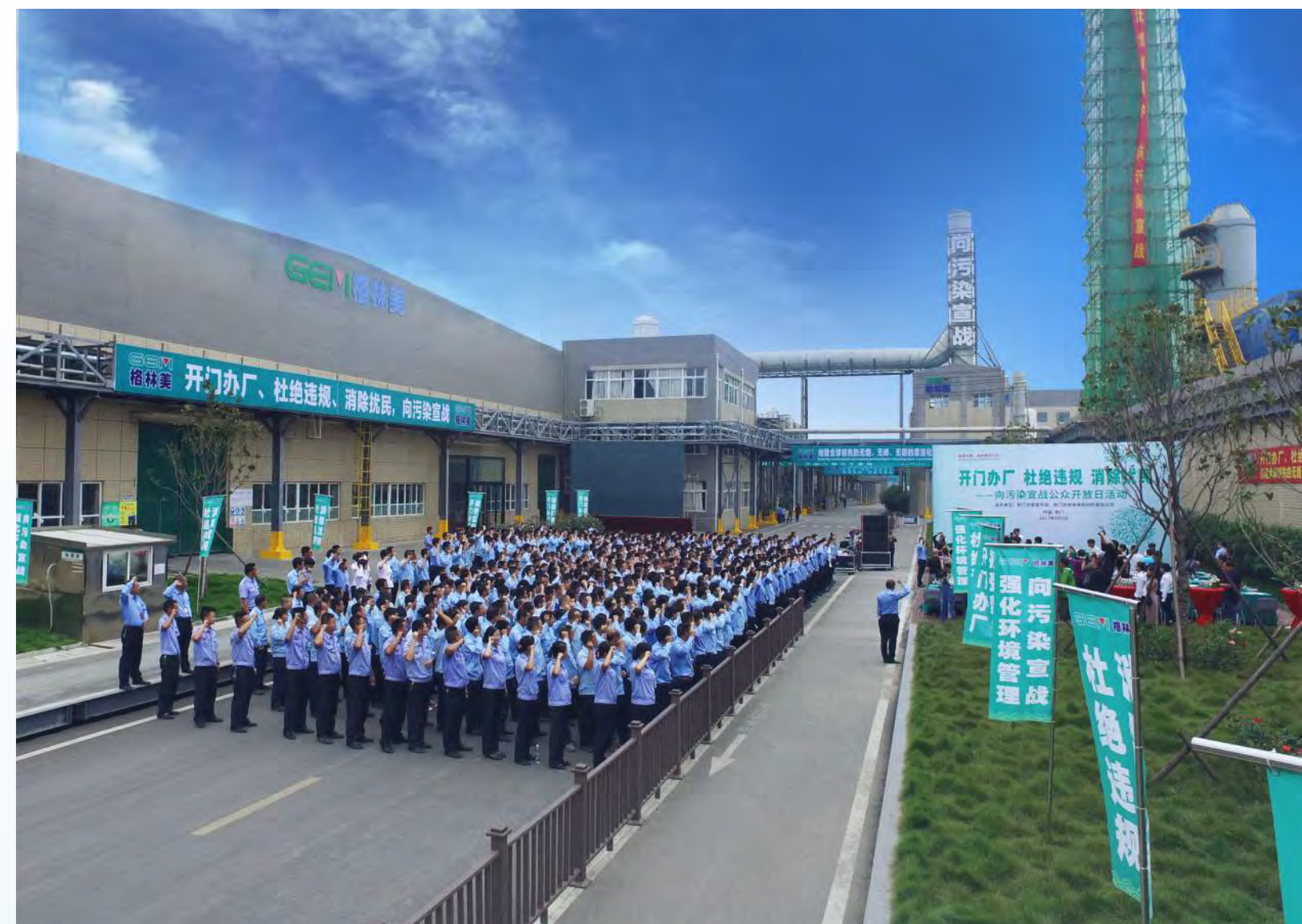


Academician Sun Chuanyao, Academician Zhang Wenhui and other guests to award prizes for innovation projects

IV

The Way of Green

Environmental Protection First, Safety Escort and Build Green Smart Factory



Environmental protection is the lifeline of GEM. With firm will, iron hand and powerful measures, GEM sets off environmental management storm in the whole group. With revolutionary mentality and historical responsibility, GEM can achieve "no environmental protection, no production," "no safety and no operation," adhere to the bottom line of environmental protection and safety red line, and implement "green + wisdom" comprehensively. "Make, make the company truly become the world's leading green intelligence factory.

美丽中国，格林美在行动！
Beautiful China, GEM is in Action!



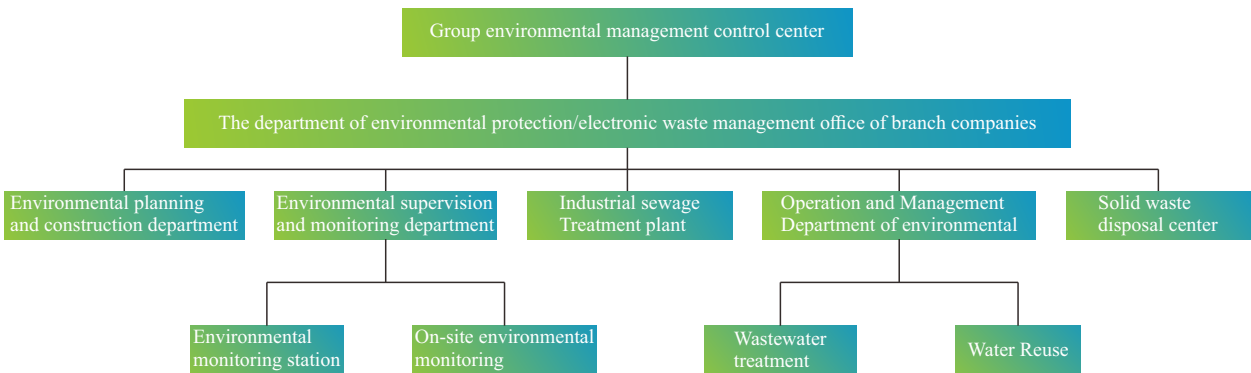
GEM's Concept of Environmental Protection: No Environmental Protection, No Production

Eliminate Pollution, Meet the Standard Emission and Reduce Emission

[interpretation of the view of the environment]

1. Strictly implement relevant national laws and regulations on environmental management;
2. Establish an environmental protection management organization and designate and improve the management system;
3. Invest in environmental protection and improve environmental treatment facilities;
4. Everyone is the main body of environmental management, everyone is responsible for environmental safety and pollution;
5. Follow the principle of "recycling garbage and turning it into magic."
6. Follow "Cleaner production, discharge up to standard";
7. Follow the "cyclic utilization, energy-saving emission";
8. Put an end to all acts of maliciously discharging pollutants, and put an end to the occurrence of pollution accidents caused by crisis society and residents' safety;
9. Strengthen occupational environmental facilities and measures to protect the physical and mental health of employees;
10. Consciously participate in waste classification and recycling, and popularize environmental education.

The Company has set up the Group Environmental Management Control Center, with the GEM (Jingmen) Circular Industrial Park as the permanent office place. A total of 68 full-time environmental management personnel are allocated, of which 58 are majoring in environmental engineering or above, accounting for 85.29%, realizing the unified command and dispatching of the Group's environmental management.



Organization chart of environmental management

Establish and improve the environmental management system, formulate and improve 24 environmental management systems, such as Environmental Responsibility System, Environmental Protection Facilities Operation Management System, Hazardous Waste Management System, etc., and compile them into a book to realize the Group's environmental management.

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Double the investment in environmental protection and treat the ecological environment as if it were life

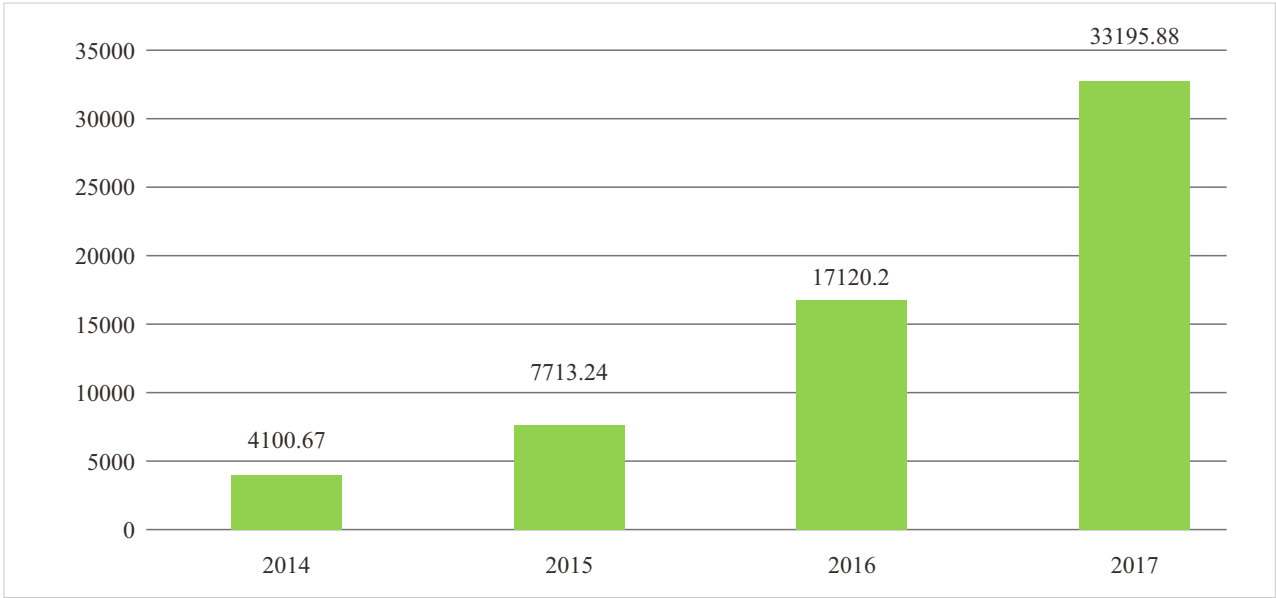
Development of green insurance and escort industry development

In order to strengthen the environmental risk control of the Group, reduce the environmental risk and guarantee the environmental safety, some parks of the Group have purchased green insurance, which is beneficial to protect the rights and interests of the victims after the environmental pollution accident, to play the social management function of the insurance, and to improve the environmental management level of the Company.

The Insurance Purchase of GEM in 2017					
Park name	Insurance unit	Insurance time	Guarantee content	premium (ten thousand yuan)	Compensation limit (ten thousand yuan)
(Jingmen) Circulation Industrial Park	Jingmen City GEM New Materials Co., Ltd.	2017.05.01-2018.04.30	Environmental pollution and personal property losses caused by sudden accidents within 10 kilometers of the periphery of the business site;	18	800
	Jingmen City Ivyuan Waste Residue Waste Sludge Environmental Treatment Co., Ltd.	2017.06.14-2018.06.13		6.09	675
	Jingmen DEWEI GEM TUNGSTEN RESOURCES RECYCLING UTILIZATION CO., LTD.;	2017.06.14-2018.06.13		7	825
	GEM Chengnan Sewage Treatment Co., Ltd.	2017.06.21-2018.06.20		17	1500
(Wuhan) Circulation Industrial Park	(Wuhan) Industrial Park of Mineral Resources Circulation;	2017.01.01-2017.12.31	Environmental pollution and personal property losses caused by sudden accidents within 10 kilometers of the periphery of the business site;	16.38	1800
Total	/	/	/	64.47	5600

Enhance and Upgrade Environmental Governance and Pollution Prevention and Control Facilities

The new expansion and expansion project shall strictly implement "three-simultaneous" environmental protection. The facilities for pollution prevention and control shall be designed, constructed and put into operation simultaneously with the main project. At the same time, through the implementation of "three reengineering (process reengineering, process reengineering and facility reengineering)," the upgrading of some environmental protection facilities has been completed, and the environmental quality of each park has been continuously improved and the emission of pollutants has been reduced.In 2017, the Group completed 128 environmental protection facilities construction and upgrading projects, with a total investment of 33,195,888 million yuan, realizing substantial emission reduction of pollutants on the basis of meeting the discharge standards.



GEM Environmental Protection Investment in Recent Four Years (ten thousand yuan)

GEM Input of Environmental Treatment and Pollution Control Facilities in 2017					
No.	Park name	project quantity (item)	Funds input (ten thousand yuan)	Major projects	Environmental protection effect
1	(Jingmen) Circulation Industrial Park	111	29603.6	Ammonia nitrogen wastewater treatment project of 5000m ³ / d (reclaimed water reuse project), heavy metal wastewater treatment project of 5000m ³ / d, high concentrated mother liquor recovery project of 600t / d, ammonia sodium replacement project of 3000t / d, wastewater MVR evaporation desalination project of 2500t / d, 2500m ³ / d ammonia recovery project, waste gas and wastewater transformation project and facility operation of each workshop in the park, etc.;	Through the implementation of "three reconstructions," adopting the domestic leading "stripping + film + MVR" combination technology, the near "zero discharge" of the production wastewater from the precursor of three-element power battery materials is realized, and the output of the production wastewater from the whole plant is not increased. Annual ammonia reduction of 1962. 8 tons, heavy metal reduction of 179. 4 kg, recovery of 19. 9 million tons of sodium sulfate salt, recovery of 12. 5 million tons of ammonium chloride salt;
2	(Wuhan) Circulation Industrial Park	1	40.00	Waste Gas Treatment in Workshop and Operation of Environmental Protection Facilities	Ensure the normal and stable operation of environmental protection facilities and ensure the emission of exhaust gas up to standard;
3	(Jiangxi) Circulation Industrial Park	5	321.82	Waste water and waste gas monitoring construction, waste water treatment technology transformation; Daily maintenance of environmental protection facilities	Improve that removal efficiency of wastewater pollutants, improve the sludge dehydration rate, and optimizing the quality of circulating water; Maintain the normal and stable operation of environmental protection facilities and ensure the discharge of pollutants up to the standard;
4	(Jiangsu) Circulation Industrial Park	5	326.40	Water seal in the extraction workshop; Environmental protection online monitoring equipment; Ground anticorrosion and hardening; Operating costs of environmental protection facilities	The non-organization source management, improves the workshop working environment, reduces the odor generation and the diffusion; Prevent the influence of drip leakage in each area on the surrounding environment, and monitor the stable discharge of pollutants in real time;
5	(Wuxi) Energy and Materials Industrial Park	3	1216	Cooling and dust removal system, central dust collection system,	Reduce the dust concentration in the production area; Reduce the temperature of the workshop, reduce the water content of the product, and ensure the product quality;
6	(Chenzhou) Circulation Industrial Park	3	1688.06	Transformation of sewage station, reconstruction of reservoir area, etc.	Improve that treatment capacity of waste water and solid waste;
Total		128	33195.88	/	



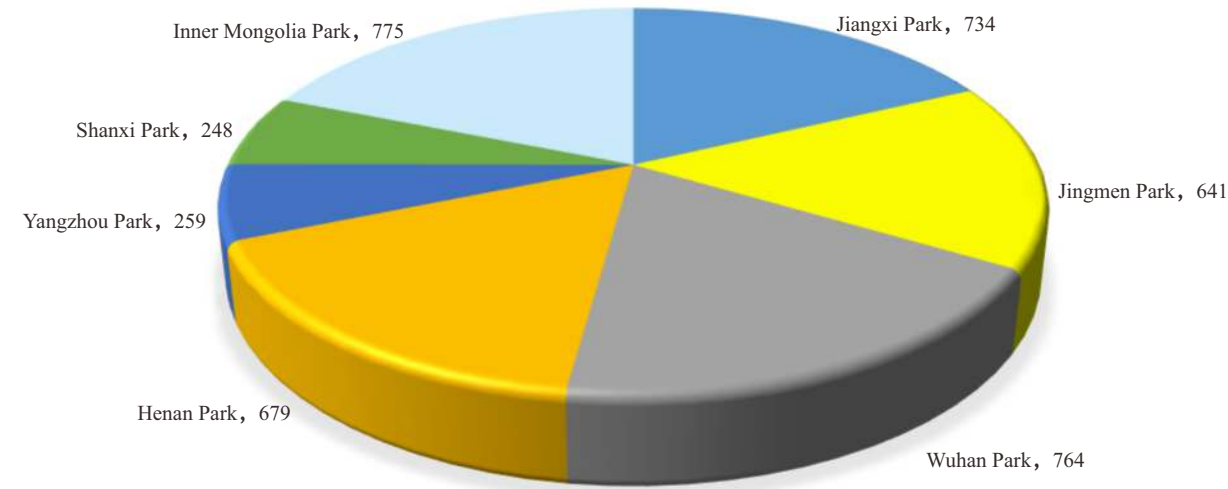
Reclaimed water reuse project



Evaporation and Desalination System of 2500t / d Sodium Sulfate MVR

Train all members and strengthen the awareness of environmental protection

In 2017, GEM molecular companies regularly organized 159 meetings on environmental training, learning and environmental protection, with a cumulative participation of 11326 persons.Organize and hold electronic waste fund management policy training and study 72 times, with a total of 3421 persons participating in the assessment of important post personnel, and analyze and rectify the self-examination and the verification situation of the superior management department and the audit key points.



GEM Training of E-waste Management in 2017



GEM Workshop on Electronic Waste Management

GEM environmental protection training

GEM organized e-waste management personnel to participate in 8 training courses and seminars organized by national ministries, related associations, etc., to exchange excellent experience in e-waste disposal with the industry in the field of electronic waste management.



Environmental Management Training Class of the Ministry of Environmental Protection of year 2017

Strengthen inspection, focus on environmental violations

GEM takes the lead in carrying out self-correcting work of internal environmental protection, declaring war on pollution, forcing production management and technological innovation by environmental protection, fulfilling the environmental protection view of "no environmental protection, no production," and revolutionary promoting environmental management.

In 2017, GEM set up an environmental inspection team to conduct environmental inspection on that whole group, with the leader of Wang Qi, former director of the institute of solid waste pollution control technology of China environmental science institute, former deputy chief engineer of Hubei environmental monitoring station, Luo Jun, chief engineer of atmospheric institute and former chief engineer of Hubei solid waste and chemical center. Promoting Environmental Protection Management by Professional and Professional Supervision.Refer to the measures of environmental supervision and inspection of the Ministry of Environment of the People's Republic of China, strictly examine relevant national laws and regulations, thoroughly check the environmental hidden troubles of all bases of the Group, and put forward professional rectification opinions for upgrading the environmental protection management of GEM.



The inspection team listen to the report, go to the site, check the records, check the archives checking the environmental management status of the Company comprehensively

Identify Hidden danger and leave no pollution angle

In 2017, each park of the Group carried out 21 environmental self-inspections, found 52 environmental hidden troubles and completed 50 rectification, with the rectification completion rate of 96.15%, including 1 major environmental hidden trouble shutdown rectification, and the rectification completion rate of 100%.In 2017, 98 cases of environmental violations were investigated and dealt with within the Group, with a fine of RMB 98400.

Rectification of GEM's Environmental Hidden Troubles in 2017				
No.	Park name	Rectification item (item)	production stop Rectification (times)	Summary of typical rectification content
1	(Jingmen) Circulation Industrial Park	42	1	The waste water pipe network shall be rectified within a time limit, the tail gas of Dewei acid mist absorption tower shall be treated, the hidden danger of environmental protection of extraction system shall be rectified, the ammonia source point in the production area shall be investigated and rectified, and the workshop shall be rectified within a time limit, and environmental protection facilities shall be improved;
2	(Jiangxi) Circulation Industrial Park	8	0	Waste oil of end-of-life automobile company is not stored in special hazardous waste warehouse, and hazardous waste is not standardized management; Rectification of rain and pollution diversion on site of broken house, requiring rectification within time limit;
3	(Chenzhou) Circulation Industrial Park	1	0	After the installation of new ammonia absorption tower is completed, the workshop is not sprayed with acid as required, and the workshop is required to complete the rectification within a time limit;
4	(Wuxi) Circulation Industrial Park	1	0	The production line increases the ammonia absorption treatment device, further reduces the ammonia discharge;
Total		52	1	

Meticulous Inspection on Electronic Waste Fund Rules and Regulations

In order to ensure the standardized management and operation of electronic waste in each park, implement vertical management of electronic waste business and put an end to non-standardized management, in October-November 2017, the GEM Electronic Waste Specification Operation Center invited Qiu Qi, the former Deputy Director of the Solid Control Center of the Environmental Protection Department. Li Jing, Special Committee on Hazardous Waste of China Renewable Resources Recovery and Utilization Association, etc., to organize a inspection team to conduct strict inspection and correction supervision on the GEM Electronic Waste Treatment Park in accordance with the requirements of national third party inspection, in order to improve the standard management level in an all-round way.



The group carries out third party self-examination work



Rectified warehouse

In 2017, the "four machines and one brain" of the six major electronic waste treatment bases in GEM completed the disassembly of 4486506 sets, 110,400 tons, resulting in 109,400 tons of disassembly products and 111,200 tons of disposal and disassembly products.Deduction for 2017 is 16210 sets.

GEM Rectification of Non-standard Disposal of Electronic Wastes in 2017		
No.	Reasons for deduction	Rectification status
1	CRT TV set breakage	1.The quality inspection standard shall be strictly controlled in the recycling and quality inspection link, and be handled carefully in the storage and transfer process to avoid damage.If the shell has been damaged, it shall be transferred to the non-fund management system for separate management; 2.Strengthen the standardized operation training of the processing staff for the damage caused by the processing process, such as failure of CRT to perform cone screen separation,
2	Incomplete recovery of refrigerator / air conditioning refrigerant	1.The existing refrigerant recycling machine has been reformed or new equipment has been purchased; 2.Strengthen staff training and increase refrigerant extraction time to ensure complete recovery of refrigerant; 3.For the incomplete leakage of refrigerant recovery, make self-checking deduction;
3	Case of suspected imitation of spent liquid crystal	1.Strengthened the strength of quality inspection of recycling links 2.Strengthen self-checking, and make self-checking deduction for the situation of suspected imitation waste liquid crystal that is disassembled;
4	Difference of material coefficient	Contact the superior management department to carry out the adjustment of the material coefficient of the washing machine;

Perfect environmental emergency rescue system

Establish and improve the emergency rescue system for environmental emergencies, improve the emergency response and treatment capability for environmental emergencies in each park, and reduce the pollution hazards and effects of environmental emergencies.In 2017, there are 35 emergency drills organized in each GEM park, and the full coverage of all the emergency drills is basically realized.



Summary after the rehearsal

Continuously release the accounting statements of environmental management to truly reflect the environmental benefits

GEM Environmental Management Accounting Statement of 2017	
Content	Amount / million yuan
I . Environmental assets	51548
II. Environmental costs	/
purchase fee of environmental protection equipment	18246.1
Maintenance fee for operation of environmental protection facilities (consumption of auxiliary materials such as water, electricity, acid and alkali)	11357.5
Depreciation fee for environmental protection equipment	2736.9
Manpower cost	175.69
Monitoring fee	47.61
Expenses for environmental protection formalities and certificate handling of the project;	126
Discharge fee	67
Greening, environmental publicity and other expenses	180
Others	259.08
Subtotal	33195.88
III. Environmental benefits	
Part of the income generated by new capacity	34860
New output value of recycled by-products	857
Energy saving and consumption reducing cost	1932
Subtotal	37649
IV. Environmental profit	4453.12

Lucid waters and lush mountains
are invaluable assets

Strictly enforce the law, put an end to pollution and resolutely fight against pollution

Complete environmental protection procedures, operating in compliance with the law

In 2017, there are 24 new, reform and expansion projects in GEM . 100% of the projects have implemented the environmental impact assessment and the "three simultaneous" acceptance system of the completed environmental protection.

Environmental Impact Assessment and "Three Simultaneously" Acceptance of New Expansion and Extension Projects of the Group

No.	Park	Project name	Reply number
1	(Jingmen) Circulation Industrial Park	Expansion and Transformation Project of End-of-life Electrical and Electronic Products	JingHuanShen no.[2017]3 JingHuanYan No. 2017 [20]
2		Dewei 3000 ton tungsten carbide powder project	JingHuanShen no.[2017]4
3		Production Project of Ultra-fine Nickel Powder by Cyclic Technology	JingHuanYan No. 2017 [9]
4		Recovery and utilization project of rare earth and scattered metals	JingHuanYan No. 2017 [10]
5		Production of battery-grade high-purity nickel-cobalt-manganese salt by cyclic technology	JingHuanYan No. 2017 [11]
6		Large market project of regenerated resources in central Hubei	JingHuanYan No. 2017 [12]
7		Ternary material project for recycled power battery (30,000 tons / year)	JingHuanShen no.2017 [12]
8		Raw material project of precursor for recycling dynamic ternary materials (60,000 tons / year)	JingHuanShen no.2017 [13]
9		Vehicle Power Battery Package Project of Green Dismantling and Recycle Reengineering	JingHuanShen no. [2017] 14
10		Change of annual treatment of 12000 tons of general industrial solid waste construction project of Green Source Company	JingHuanShen no. [2017] 67
11		Logistics park construction project	JingDuoHuanShen no. [2017] 54
12		Production Project of Precursor for 30,000t / a Ternary Power Battery Materials	JingHuanShen no. [2017] 115
13		Recycling Project of Pyrolysis Products of Waste Printed Circuit Board of Lvyuan Co., Ltd.	JingHuanShen no. [2017] 118
14		Upgrading Project of Yangyang Port Sewage Treatment Plant	JingDuoHuanShen no. [2017] 86
15		Discussion on the Setting of Sewage Outlet in Chengnan Sewage Treatment Plant	JingShuiHan no. [2018] 1
16		Discussion on the setting of sewage outlet of industrial sewage plant in high-tech zone	JingShenPiZi no. [2018] 8
17	(Jiangxi) Circulation Industrial Park	Project of Comprehensive Utilization of Waste Fluorescent Lamp and Phosphor	GanHuanPingHan No. [2017]7
18	(Wuhan) New Energy Automobile Service Co., Ltd.	Vehicle power battery package project	WuHuanYan No. [2017]35
19	Jingmen GEM New Materials Co., Ltd. Wuhan Branch	Vehicle Power Battery Package Project of Green Dismantling and Recycle Reengineering	WuHuanGuan No. [2017]35
20	(Wuhan) Circulation Industrial Park	Hazardous waste disposal items HW15 (Undetonated Airbags collected after disassembly of scrapped motor vehicles) and HW50 (Waste Automobile Exhaust Purification Catalyst)	EHuanShen No. [2017]100
21		Recycling of Waste Hardware and Electrical Appliances and Waste Steel Processing Project;	WuHuanGuan No. [2017]76
22		Laboratory Center for Remanufacturing End-of-Life Automotive Parts	WuHuanShen No. [2017]21
23	(Wuxi) Circulation Industrial Park	Technical transformation project of 9000 tons lithium battery cathode material (lithium cobaltate, ternary material) per year	XiHuanBiaoXinFu No. [2017]63
24		Cathode materials for lithium ion batteries	XiHuanGuanXin No. [2017]11

Exhaust emissions

In 2017, each park of the Group carried out 86 times of self-monitoring of exhaust emissions, and received 4 times of supervised monitoring by the government environmental protection department (or its entrusted third-party detection agency), with a compliance rate of 100%.

GEM Emission of major exhaust gas pollutants in 2017			
No.	Name of pollutant	Emission (t/a)	Whether or not to reach the standard
1	SO ₂	53.02	yes
2	NO _x	54.49	yes
3	articulate matter	55.20	yes
4	Mercury and its compounds	0.045x10 ⁻³	yes
5	Lead and its compounds	0.4x10 ⁻³	yes
6	HCl	0.018	yes
7	Sulphuric acid mist	0.15	yes
8	Chromic acid mist	0.49x10 ⁻³	yes

Among them, the GEM(Jingmen) Circulation Industrial Park in 2017 vigorously implemented clean energy substitution, coal to gas, ammonia emission reduction projects, and so on, in order to achieve pollutant emission standards on the basis of substantial realization of emission reduction.

GEM Emission of Major Pollutants From Waste Gas (Jingmen) Circulation Industrial Park in 2017						
No.	Items	2016		2017		Remarks
		Emission(tons)	Emission intensity (tons / billion yuan)	Emission(tons)	Emission intensity (tons / billion yuan)	
1	SO ₂	70.47	1.53	44.30	0.67	“Coal to gas” emission reduction
2	NO _x	54.02	1.17	51.89	0.79	
3	Smoke (powder) dust	48.65	1.06	36.24	0.55	
4	ammonia	14.47	0.32	12.4	0.19	Wastewater Membrane Treatment + Stripping System Emission Reduction

Waste water discharge

In 2017, each park of GEM carried out self-monitoring of waste water discharge 347 times, and received 4 times of supervision and monitoring by the competent department of environmental protection (or the third-party testing institution entrusted by it), and reached the standard rate of 100%.

GEM Discharge Situation of Major Pollutants Wastewater in 2017			
No.	Name of pollutant	Emission (t/a)	Whether or not to reach the standard
1	PH	/	yes
2	COD _{Cr}	676.11	yes
3	ammonia nitrogen	49.25	yes
4	total phosphorus	7.5	yes
5	Total nickel	0.53	yes

Among them, through implementing "three reconstructions (process reengineering, process reengineering and facility reengineering)" and adopting the domestic leading combination technology of "stripping + film + MVR," the near zero emission of the production wastewater from precursor of three-element power battery material is realized. The production of wastewater from the whole plant can be increased without pollution.

Comparison of the GEM Discharge of Major Pollutants in the Waste Water (Jingmen) Circulation Industrial Park from 2016 to 2017					
No.	Items	2016		2017	
		Emissions (tons)	Emission intensity (tons / billion yuan)	Emissions (tons)	Emission intensity (tons / billion yuan)
1	COD _{Cr}	109.14	2.37	110.08	1.67
2	Ammonia nitrogen	12.78	0.28	10.49	0.16

Treatment of industrial solid waste

In 2017, GEMproduced 21787.37t of general solid waste and 21750.83t of general solid waste. The comprehensive treatment rate of general solid waste was 99.64%. It produces 11364.47t of hazardous waste and 12625.11t of outsourced disposal (including the settlement in 2016), with a disposal rate of 93.93%. There is no excessive storage or illegal disposal of all hazardous waste.

GEM Disposal of Industrial Solid Waste in 2017							
No.	Waste material category	Waste name	Quantity (T)				Disposal rate (%)
			Pre storage	Current production quantity	Current production quantity	Current storage stock	
1	Commonly solid waste	Insulating material	33.58	3045.51	3030.97	48.12	98.4
		Coal cinder	0	2330.9	2330.9	0	100
		tailing residue	0	9198.6	9198.96	0	100
		Coloured tailings	0	5188	5158	30	99.4
		Car cushion	8	1083	1091	0	100
		Domestic garbage	0	941	941	0	100
	Total	/	41.58	21787.37	21750.83	78.12	/
2	Hazardous waste	CRT color TV conical glass	772.51	7981.87	8442.41	311.97	96.44
3		PCB	584.5	2286.67	2474.64	396.53	86.19
4		Waste phosphor	13.13	7.78	14.53	6.38	69.48
5		Waste fluorescent lamp tube	9.15	1.56	4.51	6.20	42.14
6		Waste mineral oil	24.03	269.95	287.47	6.50	97.79
7		Waste mineral oil	0.06	17.56	12.92	4.70	73.32
8		Lead acid battery	37.47	147.58	182.09	2.96	98.40
9		Sludge containing nickel wastewater treatment	626.22	650.67	1196.14	80.75	93.68
10		Waste paint bucket	0.63	0.09	0.72	0	100
11	/	Cleaning residue	8.93	0.75	9.68	0	100
Total		/	2076.63	11364.47	12625.11	815.99	/

Run factories publicly, disclose environmental protection information and eliminate disturbing people

Set off a storm of environmental governance and resolutely declare war on pollution



Dismantling coal fired boilers

In 2017, GEM branch companies actively carry out the "open door factory" activity, open the environmental information, take the initiative to accept all employees and social supervision, demonstrate the courage and determination of environmental protection enterprises to truly grasp environmental protection. In September, that GEM Jingmen park organize a public open day to open factories, eliminate violation, eliminate disturbances and declare war on pollution. Thousands of employees solemnly swear to the world, publish the GEM environmental management report, correctly view the residents' complaints and demands, dare to admit the facts and deficiencies, dare to take responsibility, and make positive rectification. We will close backward facilities, improve the level of environmental governance, open doors and open factories, comprehensively disclose environmental information, and accept social supervision. Jiangxi and Inner Mongolia and other parks in June also opened the activities to run factories.



Representatives from all parties were visiting the GEM Wastewater Treatment Plant



Press Conference Held by Jingmen Environmental Protection Bureau in GEM Jingmen Park



Meeting with the public to exchange GEM's recycling industry and environmental protection situation

On the World Environment Day on June 5, in order to implement the concept of low-carbon manufacturing and green development, the Environmental Protection Bureau of Jingmen City held the Environmental Protection Public Open Day in conjunction with the GEM Jingmen Park. The Environmental Protection Bureau of Jingmen City held a press conference.

Eliminate the public disturbance; accept the supervision of whole society

In 2017, the GEM Jingmen Park openly recruited environmental protection social supervisors from the society, and established a three-level supervision system of "common people-social supervisor-environmental protection competent department," through which the enterprises are promoted to strengthen pollution control consciously, and to deal with environmental risks quickly and accurately.

Set up the environmental monitoring patrol station and patrol team for the boundary of the park, inspect the environmental conditions of the boundary of the park 24 hours a day, consciously accept the supervision of all circles of society, and eliminate disturbing people.



Enterprise appointed environmental protection supervisor

"Internet + Environmental Management" to disclose environmental information in real time

Adopting the mode of "Internet + environmental management," the "environmental management monitoring and control information system" was first established in China. In 2017, the GEM Jingmen Park invested 1.5 million yuan to build three sets of unorganized emission monitoring systems in the boundary of the factory to monitor the unorganized emission of the park in real time, so as to realize the monitoring of key pollution sources in 24 hours and 360 degrees. Fully control the environmental operation status of the whole park, fully publicize environmental information, control environmental risks, resolutely declare war on pollution and ensure green production.



Environmental Management and Safety Management Information Control Center

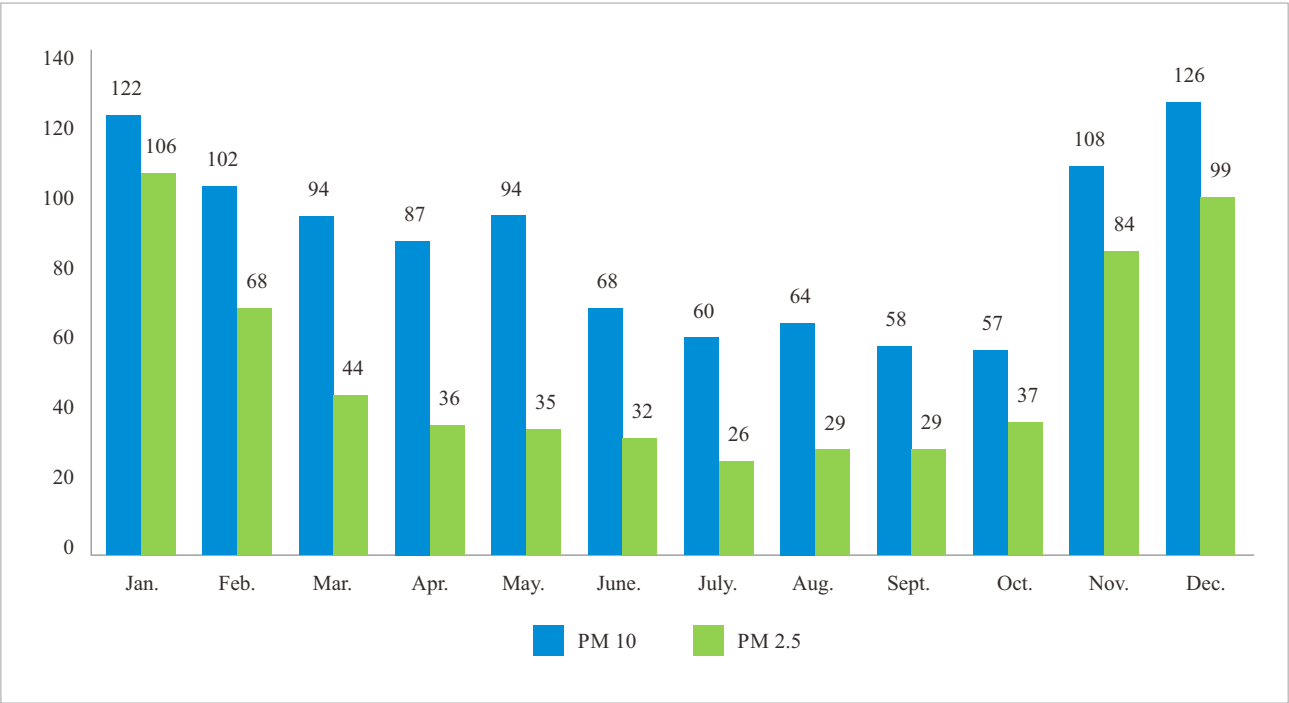


Public display of environmental information in the park



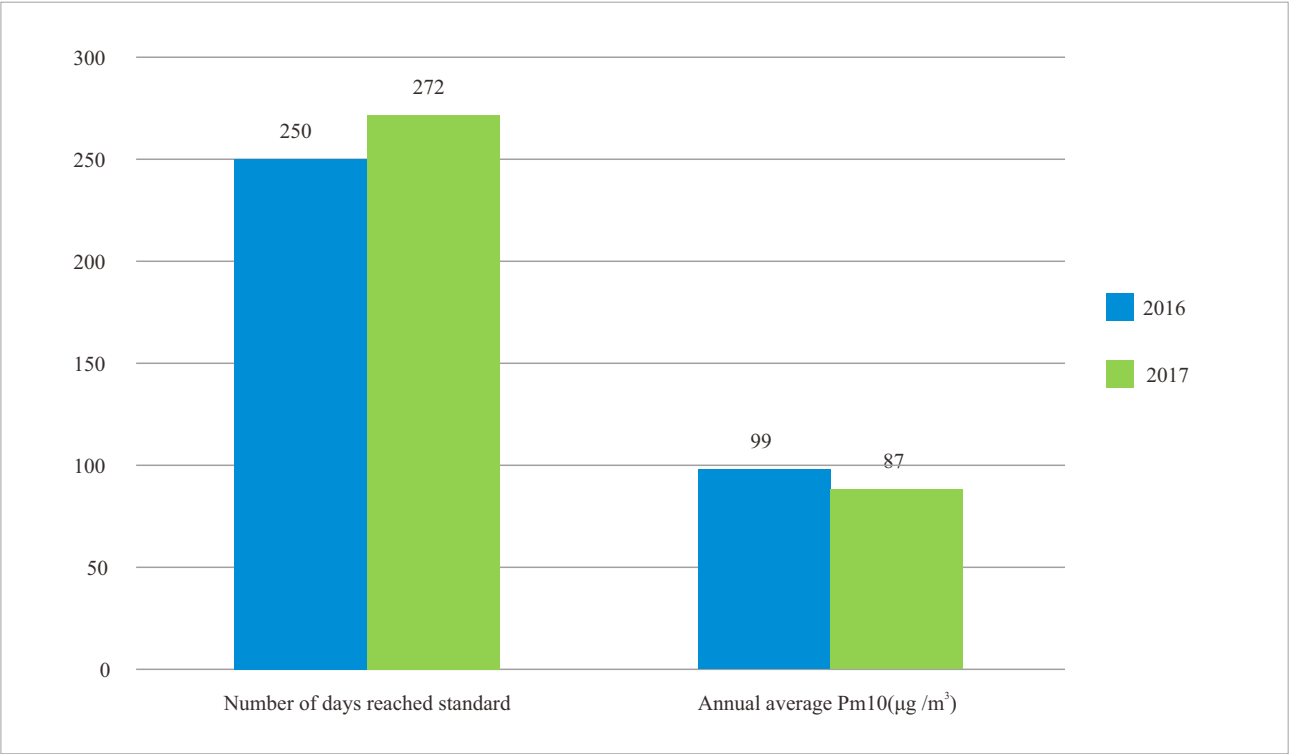
Park online monitoring station

According to the automatic monitoring data of ambient air quality in 2017, the average concentrations of PM10 and PM2.5 are 87 $\mu\text{g} / \text{m}^3$ and 52 $\mu\text{g} / \text{m}^3$, respectively, and there is no significant difference between PM10 and PM2.5, 50 $\mu\text{g} / \text{m}^3$).



Pm10 and PM2.5 concentration ($\mu\text{g} / \text{m}^3$) in GEM Jingmen Park

In 2017, the environmental air quality automatic monitoring system measured 365 days, 272 days reached the standard and rate of reaching the standard is 74.5%, which is 6% higher than that of 2016 (68.5% in 2016). The coal gas conversion and clean energy substitution project plays an active role in improving the environmental air quality of the park.



Comparison of Environmental Air Quality Changes in Jingmen Park from 2016 to 2017

In 2017, GEM Jingmen, Wuxi, Jiangxi and Wuhan Park won the title of state-level green factory, which reflects the approval of national competent department for GEM to carry out green development, indicating that green development of GEM has entered a new stage.



Production Workshop of Ternary Power Battery Materials in Jingmen Park



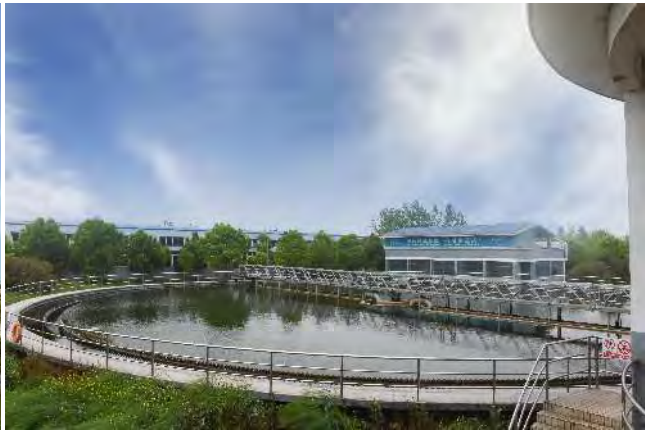
Intelligent Manufacturing Line of Power Battery Pack in Wuhan Park

Ecological Governance Deepens in an All-round Way, Improving Ecological Environment Is to Develop Productive Forces

GEM River governance, rural ecological governance work made breakthroughs, for the rural revitalization of the plan to add brick and tile.Chengnan Sewage Treatment Plant operates well, and 187.718,000 cubic meters of wastewater were treated in 2017, providing environmental protection for the industrial enterprises of Jingmen High-tech Zone.



Chengnan Sewage Treatment Plant



Secondary Sedimentation Tank of Chengnan Sewage Treatment Plant

The construction of solid waste landfill in the next city and Jingmen general solid waste landfill site was successfully put into operation, with a total of 3938.08 tons of solid waste in 2017 and 18797.24 tons of hazardous waste in the solid waste landfill center of Yangzhou Jiejia Solid Waste Disposal Co., Ltd. in 2017.



Solid waste landfill center in central Hubei



Ningda Jijia solid waste landfill in Yangzhou

Promote Clean Energy and Practice Low Carbon Environmental Protection

The energy storage power station (Hubei) Co., Ltd. established by BYD Co., Ltd. and Jingmen GEM New Materials Co., Ltd. has installed four photovoltaic power stations in Jingmen, Wuhan, Jiangxi and Xiantao Park successively. The total installed capacity is about 19MWp, and the total power generation reaches 14960343KWh in 2017.



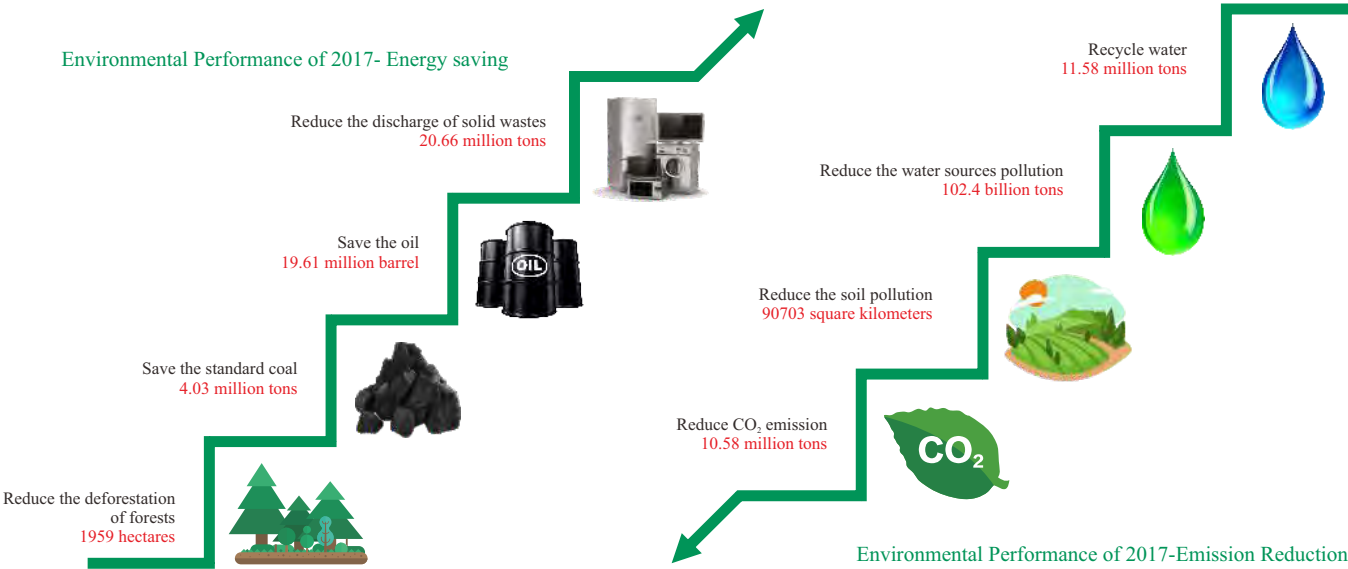
Solar photovoltaic panels in Jingmen Park

Practice energy conservation and emission reduction, protect green mountains and Clear waters

For each ton of rechargeable battery recycled by GEM , 79 tons of Co-Ni ore can be saved, and for each ton of plastic wood profile recycled, 0.08 hectares of deforestation can be reduced. For each ton of scrap car recycled, about 12 tons of solid waste can be reduced. For detailed energy saving and emission reduction, see the following table:

2017 GEM Environmental Performance Table											
	Production of 1 tons of battery materials	Production of 1 tons of plastic wood profiles	Production of 1 tons electrolytic copper	Recovery of 1 tons of waste dry batteries	Recovery of 1 tons rechargeable battery	Recycling 1 tons of waste TV set	Recycling 1 tons of Waste Refrigerators	Recycling 1 tons of waste air conditioning	Recycling 1 tons of waste washing machine	Recycling 1 tons of waste computers	Recycling 1 tons of scrap car
Recycling of water (tons)	320	3.4	20	/	/	/	/	/	/	/	/
Economize on standard coal (tons)	105	0.376	2.46	16.8	19.2	1.18	1.5	2.18	1.85	2.1	1.3
Recovery of valuable metals (tons)	1	/	1	0.69	0.79	0.15	0.6	0.78	0.4	0.42	0.78
Reducing water pollution(ten thousand cubic meters)	100	/	200	14	34	21	8.5	39	15	21	15.66
Reduction of solid waste emissions (tons)	99	1	133.32	68	78	4.77	11.11	56.03	17.91	282.83	11.98
Reducing soil pollution(square meter)	250万	/	16万	3033	8500	4893	1980.5	9087	3495	4893	3649
Reducing deforestation (hectare)	/	0.08	/	/	/	/	/	/	/	/	/
Emission reduction CO ₂ (ton)	275.1	0.9875	6.45	44.02	50.3	3.27	4.15	6.04	5.12	5.83	3.51
Calculation basis	GB8978-1996 Integrated Sewage Discharge Standard, GB15618-1995 Soil Environmental Quality Standard, GB21251-2007 Energy Consumption Limit for Unit Products of Nickel Smelting Enterprises, GB21248-2007 Energy Consumption Limit for Unit Products of Copper Smelting Enterprises, Copper concentrate energy consumption quota, waste battery pollution prevention and control technology policy, clean production standard paper industry (waste paper pulping), GB / T 2589-2008 general rule of comprehensive energy consumption calculation, current situation and prospect of recycling and comprehensive utilization of waste electric and electronic products in China - industry research white paper (2015) Table of Carbon Emission Coefficients of the United Nations Intergovernmental Panel on Climate Change (IPCC) for 2006.										

In 2017, the Company handled over 3 million tons of urban mineral resources such as discarded batteries, cobalt nickel tungsten waste, discarded electrical and electronic products, discarded hardware, scrapped automobiles and waste plastics. The data of energy saving and emission reduction are as follows:



美丽中国，格林美在行动！
Beautiful China, GEM is in Action!

GEM 格林美
资源有限 循环无限
LIMITED RESOURCES UNLIMITED RECYCLING

GEM Concept of Safety

The life is above everything else
no safety, no operation

Safety liability criteria

The enterprise is responsible for safety management
Employees are the main body of safe production
Everyone shall abide by the safety rules, and everyone shall bear the responsibility for safety
Be responsible for every safety accident and protect the legitimate rights and interests of employees

Safety Management Criteria

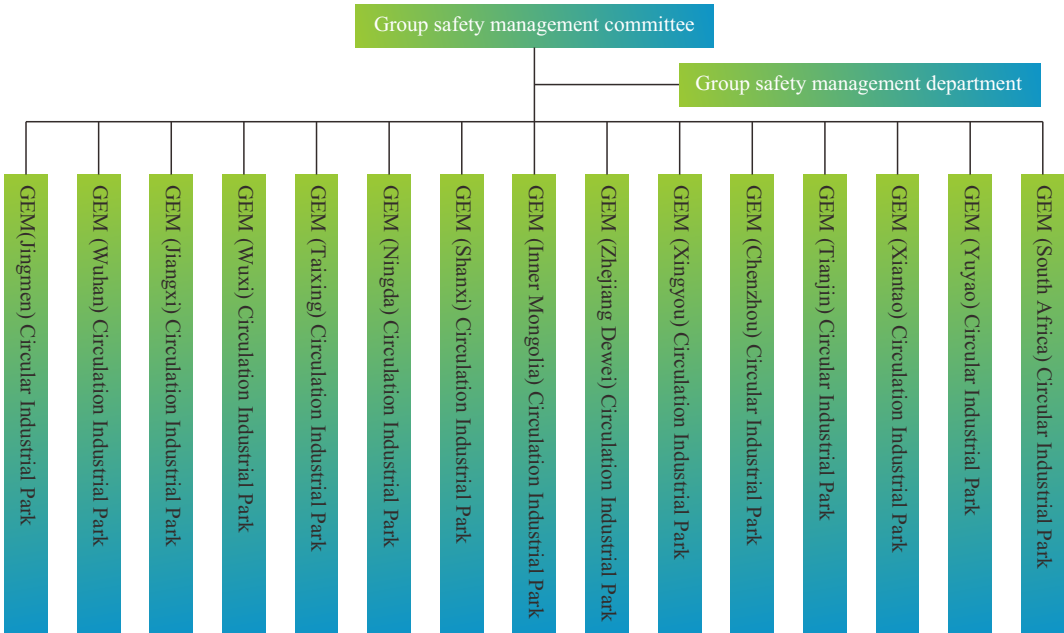
1. Establish a professional safety management organization;
2. Formulate a complete safety management system;
3. Build effective safety facilities;
4. Fully participate in safety training;
5. All members sign the letter of safety responsibility.
6. Check every day, supervise every day and correct every day;
7. The defects must be rectified and the responsibilities must be investigated;
8. Put an end to safety violation and zero tolerance for safety violation;
9. All employees shall participate in industrial injury insurance and accident injury insurance;
10. It is prohibited to operate if the safety acceptance fails.



[annotation]

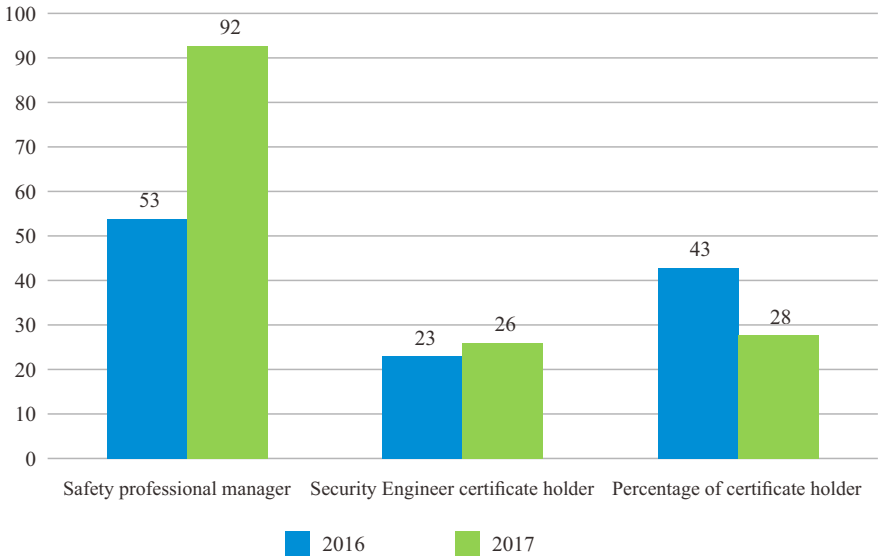
That “Life is above everything else. No safety, no operation!” includes seven aspects:

1. Enterprises pay attention to safety is to care for life, people-oriented, emphasize safety is to protect the life and legitimate rights and interests of employees; Employees attach importance to safety is to cherish their lives, is to protect the rights and interests of the company and themselves.
2. Safety is the life of enterprise. Safety is the premise of enterprise production. Safety is the key of harmonious and sustainable development of enterprise. Without safety, there is no existence and development of enterprise.
3. The construction project, production facilities and production process must be implemented in accordance with the national safety regulations, and may not be produced without safety acceptance;
4. The employees must receive occupational safety training, fail to meet the occupational safety requirements, and are not allowed to work on duty;
5. When it is found that there are unsafe factors in production, construction and operation, the operation shall be stopped immediately, rectified and corrected, and the operation may be resumed after safety acceptance;
6. The employees who violate the safety production shall be ordered to stop the incorrect operation immediately, stop the work, carry out relevant safety training and study, and conduct work after the tibial examination meets the safety operation requirements;
7. If the employees operate illegally or cause safety accidents due to work negligence, they will assume safety responsibilities and lose work opportunities;



Organizational structure of security management

In 2017, GEM improved and strengthened the organization structure and professional team of safety management, and employed 26 safety engineers. The number of safety management was 73.4% higher than that of 2016, and the proportion of certificates held reached 28.26%.The regular inspection of the molecular company by the safety experts has strengthened the safety training work, revised the safety management system, and made the company more specialized in safety management.



Strengthen Safety Education and Training to Improve All Staff's Safety Consciousness

In 2017, GEM organized a safety production conference, safety production knowledge learning and training, special lectures and emergency drills, totaling 1030 times, 17.7% more than that of 2016, and participated in 25456 safety activities in the whole year.



Safety education and training of the company



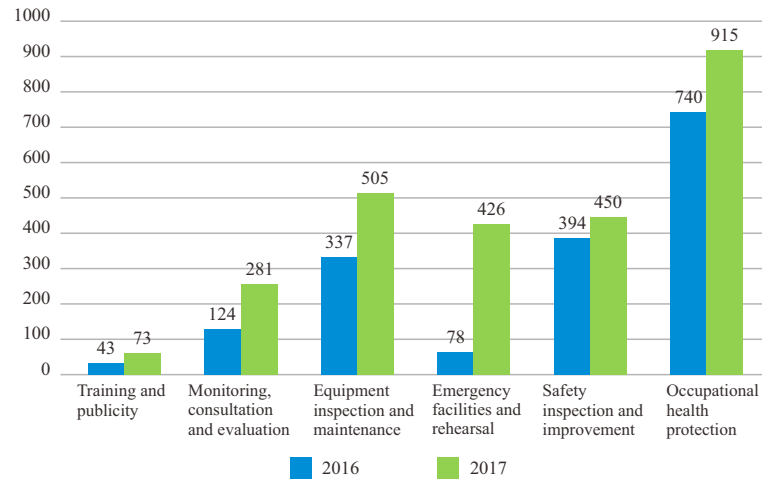
Forklift standard skills competition



Fire fighting competition

Continuously Increase Safety Investment and Promote the Construction of Safety Standardization

In 2017, the Company invested 26,500,000 yuan in safety management, an increase of 54.4% over 2016. It is mainly used for training and propaganda, safety inspection, consultation and operation evaluation, emergency facilities, equipment, emergency drill, safety inspection and hidden trouble rectification, etc.



Safety expense input of the Company (ten thousand Yuan)



Standardization certificate for safety production



Fire safety training and rehearsal

Safety is the cornerstone of the survival of enterprises, safety production bell long ring, must constantly grasp. GEM irregularly carries out fire fighting skill drill contest, and rewards the outstanding employees, carries out fire fighting education and training in rich forms and contents, arouses all employees' participation, greatly enhances the employees' safety production awareness and accident emergency rescue ability, and forms the atmosphere of safety work and everyone's responsibility.

Improve the Level of Emergency Management Automation and Build a Stable and Safe Production Environment

The safety automation system has been set up for the dangerous operation, such as liquid ammonia storage tank, hydrogen preparation boiler room, etc. By reducing the direct contact of personnel to reduce the occurrence of accidents, high and low level alarm and combustible gas alarm can be set to automatically alarm or automatically handle emergencies in case of emergency.



Liquid Ammonia Tank Automatic Control Interface

Liquid Ammonia Tank Alarm Interface



Emergency equipment warehouse

Automatic control office of hydrogen production station



Liquid Level Alarm of Fire Water Gun

Liquid level alarm



Eyewash equipment

Emergency shut-off valve

Strengthen the safe production and eliminate the hidden danger

From August 24 to September 5, 2017, in order to improve the standard, standardization and information level of the safety management of the Company, the safety production experts of Hubei Provincial Safety Supervision Bureau were engaged to form a safety inspection leading group, and all molecular companies were comprehensively inspected for potential safety hazards. Each molecular company strictly implemented the responsibility for correcting the potential safety hazards. Measures, funds, time limits and plans shall be taken to ensure that the problems are "zero legacy," "zero tolerance" and "zero tolerance" are rectified, and the overall safety management level of GEM shall be effectively improved with practical measures.



The safety check group was checking the scrap metal dismantling workshop

The safety check group was holding a feedback meeting

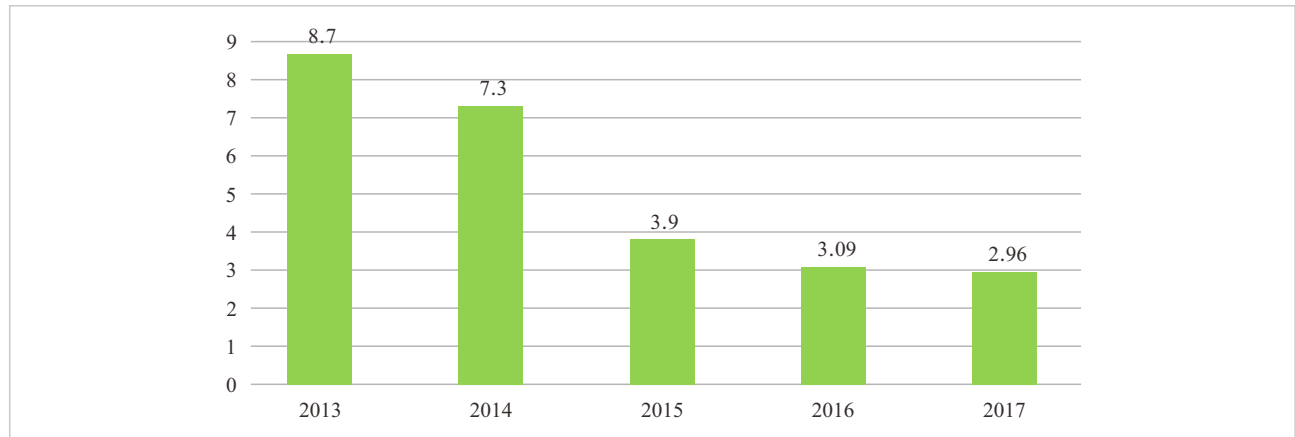
The company employs provincial-level safety experts as safety consultants to carry out safety inspection in each park of GEM every month, thoroughly check the safety hazards of each base, take the lead in conducting self-checking and self-correcting work within the enterprise, and create a stable and safe production environment.



Safety experts lead teams to conduct safety self-inspection in the park

Safety regulation, standard walking is the basis

Strengthen Safety Hidden Troubleshooting and Reduce the Incidence of Accidents



Accident incidence rate of the Company's million-man-hour safety in the past five years (%)

In 2017, GEM's high-voltage safety management and safety work have made great progress, and the concept of "life is higher than everything, unsafe and not working" has been deeply rooted in the people's hearts. There was no one major and above safety accident in 2017. There was no one occupational disease or fire accident. There were 28 general safety accidents in 2017. The accident incidence rate of millions of working hours was 2.96%. The accident starting rate and the accident incidence rate of millions of working hours were again low.

Statistics of Industrial Injury Accidents of GEM Member Enterprises in 2017					
No.	Park name	Number of accidents	Time of accident	Loss of work hours (days)	Disability grade
1	(Jingmen) Circulation Industrial Park	15	2017.1—2017. 12	142	10 level
2	(Wuhan) Circulation Industrial Park	2	2017.9.9	140	No
			2017.11.27	216	10 level
3	(Jiangxi) Circulation Industrial Park	5	2017.5—2017. 12	158	No
4	(Tianjin) Circulation Industrial Park	0	/	0	/
5	(Shanxi) Circulation Industrial Park	1	2017.4.8	30	No
6	(Taixing) Circulation Industrial Park	2	2017.4.18	50	No
			2017.7.31	40	No
7	GEM (Inner Mongolia) Circulation Industrial Park	3	2017.2—2017—12	230	8 level
8	GEM (Dewei) Circulation Industrial Park	0	/	0	/
9	GEM (Ningda) Circulation Industrial Park	0	/	0	/
10	GEM (Jiejia) Circulation Industrial Park	0	/	0	/
11	Total	28	/	1006	/

In 2017, the whole group organized 305 safety inspections, with 8862 hidden troubles investigated and dealt with.

Safety Hidden Troubles and Violation Handling of GEM in 2017				
Industrial Park name	Number of safety hidden troubles inspection	Number of hidden trouble settlement items	Potential rectification rate	Complete rate of rectification and rectification for the whole year
(Jingmen) Circulation Industrial Park	20	5124	98.1%	100%
(Wuhan) Circulation Industrial Park	38	311	100%	100%
(Jiangxi) Circulation Industrial Park	31	1871	99.9%	100%
(Tianjin) Circulation Industrial Park	12	80	100%	100%
(Wuxi) Circulation Industrial Park	38	546	100%	100%
(Shanxi) Circulation Industrial Park	12	87	97%	100%
(Taixing) Circulation Industrial Park	71	208	100%	100%
(Inner Mongolia) Circulation Industrial Park	12	246	100%	100%
(Dewei) Circulation Industrial Park	24	17	100%	100%
(Ningda) Circulation Industrial Park	29	300	100%	100%
(Jiejia) Circulation Industrial Park	18	72	100%	100%
Total	305	8862	99.5%	100%



The Way of Responsibility

Precision Poverty Alleviation, Industry Help
and Play the Song of Common Prosperity

In response to that call of the Party and the state, to fulfill social responsibility, to participate in accurate poverty alleviation, adhere to "active participation, active action, do what you can," take industry poverty alleviation, trade poverty alleviation, donation poverty alleviation, employment poverty alleviation, intelligence poverty alleviation and other poverty alleviation ways, Industrial poverty alleviation through investment in shares 316.25 million yuan. Donation and intellectually help-the-poor accumulative total 13.18 million yuan, employment help-the-poor solution employment of more than 600 people, adopting a variety of combined measures, the implementation of precision poverty-alleviation national strategy, reflect the responsibility of listed companies.

Industry Helping-Promot Regional Economic Development and Solve Local People’s Employment

GEM Accurate Poverty Alleviation: Industrial Poverty Alleviation				
Investment area	Investment object	Investment amount / ten thousand yuan	Drive employment / people	The background of poverty alleviation
Henan Lankao	Environmental protection of Mu Tung	18990	310	To create the pillar industry of sustainable development for Lankao, promote Lankao to get rich from poverty, realize the unification of economic benefit and social responsibility.
Hunan Xinhua	Yinghong	2172.6	120	Xinhua County is a state poor county, Wulingshan District regional development and poverty alleviation county, the development of recycling economy industry with waste plastics as the main body, in line with the current industrial poverty alleviation policy.
Hunan Yanling	Oukeyi	10462.37	206	Yanjia Village, Xiayang Town, Yanling County, Zhuzhou City (County Small and Medium Enterprises Pioneering Park), promotes Yanling to get rid of poverty and become rich, and creates high-tech poverty alleviation industry.
Total		31624.97	636	/

Henan Mutong Environmental Protection Industry Co., Ltd. focuses on the construction of scrap car comprehensive utilization center and waste tire green treatment projects, to create a well-to-do pillar industry in Lankao, to achieve a good GEM to make outstanding contributions to Lankao poverty, and recycling industry to carry forward the social responsibility of the spirit of Jiao Yulu.



Henan Mutong Environmental Protection Industry Co., Ltd.



Effect Picture of Phase II of Mutong Environmental Protection Project

Zhuzhou Ou Keyi CNC Precision Tool Co., Ltd., develops the industrial 4.0 NC tool industry in the hometown of Yan Di, promotes Yan Ling to get rich from poverty, creates the high-tech poverty alleviation industry.



Zhuzhou Ouke Yi CNC Precision Cutting Tool Co., Ltd.



In order to realize the complementary advantages and develop the recycling economy industry with waste plastics as the main body, we can provide capital, market and technology support for Xinhua County to get rid of poverty and become rich.



Sign the strategic cooperation agreement of GEM (Xinghua) Circular Industrial Park



GEM Circular Industrial Park (Xinghua)

Counterpart Assistance-Assist and Support the New Countryside Construction Showing the Responsibility of Enterprises

GEM positively responds to the country "thousands of enterprises help thousands of villages" precise poverty alleviation strategy, helps the new countryside counterpart.

GEM Accurate Poverty Alleviation: "One Enterprise Helps One Village"			
subject	village	The content of poverty alleviation work	Poverty alleviation funds / yuan
GEM (Jingmen) Circulation Industrial Park	Jinniu village, Jingzhou	Help infrastructure construction of Jingzhou Jinniu Village.	10064913
	Dongshan village, Jingshan County	Gave sympathy for the poor households, issued aid and sympathy funds.Talk to the local government and continue to support local projects,	11500
	Gao Jian village, Chongyang County, Gao Jian Village	Depend on the local government, to determine the object of help, sympathy for the poor households and the elderly lonely difficulties	22000
GEM (Jiangxi) Circulation Industrial Park	Xiao Keng Village, Chong Yi County, Jiangxi	Projects such as environmental renovation,infrastructure construction for convenience people, tourism facilities construction and ancient cultural restoration will be carried out to assist the construction of new countryside in Xiaokeng Village, Chongyi County, Jiangxi Province	800000
Total			10898413



Wan Fu Plaza Centre



Multimedia Culture Auditorium



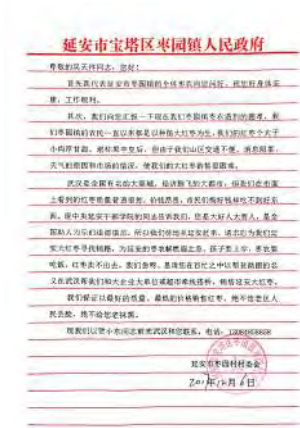
Help Dongshan Village, Lvlin Town, Jingshan County



help Gao Jian Village, Chongyang County

Commercial help-purchasing through-train drive farmers to increase their income

GEM's Accurate Poverty Alleviation - - Business Assistance	
The content of poverty alleviation	The International Cooperation Center of the National Development and Reform Commission actively supports the poverty alleviation project of the Fifth Southern Xinjiang Public Welfare and Poverty Alleviation Travel Industry, encourages employees to subscribe for walnuts, and helps realize the goal of purchasing and selling high quality walnuts in 12 administrative villages in Langru Township
	Encourage employees to actively subscribe for apples, and help disabled fruit farmers out of the difficult situation of unsalable apples
	Encourage employees to subscribe for jujube in Yanan Zaoyuan Town to solve the problem of jujube sales



Subscribe for jujube in Yanan Zaoyuan Town to solve the sales difficulties of jujube farmers and subscribe for farmers' apples

Donation and Helping – Help the Crisis, advocate the Core Values of Socialism

GEM carries forward that traditional virtues of the Chinese nation, carries forward the core values of socialism, actively organizes and participate in various forms of social public welfare and charity activities, and assumes the responsibility for the benefit of the society. Through donation, student aid, assistance to the elderly, assistance to the disabled, medical aid and other forms, continue to the poverty-stricken masses, patients, left-behind young, sanitation workers to help work, charitable donations more than 921383.9 yuan.

GEM's Accurate Poverty Alleviation: Donation and Assistance		
Subject	Main contents of donation work	Amount / yuan
GEM (Jingmen) Circulation Industrial Park	Donation to Jingmen Red Cross for the rescue of severe patients;	200000
GEM (Wuxi) Circulation Industrial Park	Set up the help and support relationship with new brocade garden community in Wuxi street, to donate materials (rice, noodles and oil), and express sympathy to the difficult families;	10000
GEM (Taixing) Circulation Industrial Park	Help the sick villagers of Binjiang Town, Xiao Liu	5000
	Funding to the Taixing Charity Fund	350000
GEM (Xinhua) Circulation Industrial Park	Launch the charity activity of "GEM Yinghong Love One Hour" to donate 30,000 yuan of charity money for leukemia patients in Youjia Town, Xinhua County "	30000
	The Joint Volunteer Service Team set up 15 love donation points in Xinhua County City to hold charity and public welfare parties and call on all the people in the city to raise money for You Liang!	102861.9
	Many visits are made to help two families solve their employment problems and help poverty-stricken families to lift themselves out of poverty,	5000
GEM (Inner Mongolia) Circulation Industrial Park	Donate materials for the local poor	21000
	Help the Poor People in Baolihushu Village, Ordos;	
GEM	Helping the company's internal hard workers	197522
Total		921383.9



Jingmen Park Donates 200,000 Yuan to Jingmen Red Cross Society for the Rescue of Severe Patients



Care for Rural "elderly and child" Public Welfare Activities in Jiangxi Park, Organize Physical Examination for Poor Elderly



Jiangxi Park condoled the sanitation workers



The Company donated money to the family members of the employees



Express sympathy to the needy families



Activity of "GEM Yinghong's Love Hour" - - the Fund-raising Scene for Leukemia Patients



Hunan Yinghong GEM helped the local poor households, specially enforced the factory to realize the employment and extricated the poor



Community co-construction, the neighborhood committee awarded Wuxi Park "help poor people with deep love and friendship" silk banner

Support education to cultivate Wisdom-Block the Inter-generational Transmission of Poverty

It is better to give fishing skills than to give fish. Getting good education for children in poor areas is an important task for poverty alleviation and development,as well as an important way to block the inter general transmission of poverty. We invested 1365000 yuan to help children in poor areas to support their intelligence.

GEM's Accurate Poverty Alleviation: Support education		
Subject	The main contents of the work of helping the intellect	Amount / yuan
GEM (Jiangxi) Circulation Industrial Park	We have carried out the social public welfare activity of "one old and one small" to care for the left-behind old people in the countryside and provide free physical examination for the old people.	350000.00
	For the villages and towns around Fengcheng City: The left-behind children in the villages and towns of Lishan Village, Checao Village, Yunxi Village, and the remote poor villages of Ganzhou City to donate books, schoolbags and other learning supplies for education and poverty alleviation; Carry out public welfare activities to distribute daily necessities in poor villages and towns.	
GEM (Xinhua) Circulation Industrial Park	Hunan GEM donated love reading material for local primary school.	15000.00
GEM	In Central South University, the establishment of "GEM Innovation Practice" Scholarship;	1000000.00
Total		1365000.00

VI

The Way of Culture

Party Construction Take Lead, Consolidate
Heart and power, Green Circular Culture
Known at Home and Abroad



In 2017, GEM comprehensively promoted the Party construction, strengthened the sense of mission of national green development, shaped the spirit of entrepreneur, played the role of entrepreneur, steadfastly followed the Party and gathered strength, and promoted the construction of the core competitiveness of GEM .The construction of culture has been steadily carried out, and the green circular culture has been deeply rooted in the hearts of the people. The concept of circular development has been widely praised and has once again been put on the international stage to represent the circular industry as the vocal world.

Steadfastly follow the Party and work hard for development

In 2017, we plan to push forward the party building in each park from a strategic height, take the leadership of party building, play the vanguard role of party members, promote the construction of anti-corruption and self-discipline, resolutely oppose commercial bribery, create a "close" and "pure" political and commercial relationship, and make the party building work a new step.

Improve the Structure of Party Affairs Work and Select the Party Committee Team

On December 5, 2017, with the official reply of the Organization Department of Jingmen Municipal Committee, the Party Committee of GEM was formally established. There are 12 Party branches in the Party committee.



On December 29, GEM Party Committee held the first meeting of all the Party members, a total of 263 Party members attended the meeting. The congress elected seven members, such as Xu Kaihua, Li Xianfu, Zhang Yuping, Xu Shiguo, Lu Xijin, Guo Miao-miao and Feng Hao, to be members of the GEM Party Committee. At the following meeting, Xu Kaihua and Li Xiefu were respectively elected Secretary and Deputy Secretary of GEM Party Committee.



The First Session of the Group Party Committee in Election and Voting



The First Session of the Group Party Committee

Carry Forward the Spirit of Excellent Entrepreneurs and Carry out the Responsibility of Listed Companies

On the morning of September 29, 2017, centering on "carrying forward the outstanding entrepreneur spirit, in order to fulfill the responsibility of the listed company – to present a big gift to the party's 19!" Theme, GEM organized to hold a forum to study and implement" The views of the CPC Central Committee and the State Council on building a healthy environment for entrepreneurs to grow up and carrying forward the spirit of excellent entrepreneurs to better play the role of entrepreneurs."



Secretary Xu Kaihua takes the lead in studying and interpreting the document of carrying forward the spirit of entrepreneur



Strengthen Ideological Construction and Study the Spirit of the Central Committee

After the 19 th National Congress of the Communist Party of China, all the members of GEM immediately raised the climax of studying the 19 th National Congress and Xi Jinping's socialism with Chinese characteristics in the new era. Secretary Xu Kaihua takes the lead in studying and gives coaching reports to party members of the company. Through constant learning and educational activities, we will ensure that the thinking of the broad masses of Party members remains in high agreement with the Central Committee of the Party.



GEM Launched the 19th CPC Congress Report Conference



Media Focus, Green Circulation Culture goes into the People's Heart

In 2017, GEM frequently appeared in the state-level mainstream media, the national "five years" large-scale achievement exhibition, CCTV Finance, People's Daily, Xinhua News Agency, China New Website, China Securities News and other media have reported GEM green development achievements.

In 2017, the great practice of ruling the country by the Communist Party of China raised energy for the recycling industry of GEM, and the recycling culture of GEM is deeply rooted in people's hearts. On the eve of the 19th National Congress, CCTV-1 series of propaganda films of "carrying out the reform to the end" and "moving forward without forgetting the beginning" reviewed the precious pictures of General Secretary Xi's inspection of GEM, and CCTV-2 economic information co-broadcast the five years of vigorous development and enterprise innovation. GEM becomes the new leading role of national ecological civilization reform and development.



CCTV Propaganda Film "Going to the End of Reform" Focuses on GEM



CCTV's Special Report on "Five Years of Encouraging and Striving, Enterprise Innovation Start a new marching Again"

In the second unit of the sixth exhibition area of the "Five-year Endeavour Exhibition" sponsored by the Central Propaganda Department, the National Development and Reform Commission, the Political Department of the Central Military Commission and the Beijing Municipal Party Committee, "Developing Circular Economy," the photo shows the dismantling line for scrapped cars and the recycling production line for waste power battery. On behalf of China's circular economy and the construction of urban mineral model bases, general secretary Xi and other party and state leaders visited the site.



Promote the Construction of "Urban Mineral Resources" Demonstration Base. The construction of demonstration bases for "urban minerals" has been carried out in 44 base parks nationwide, saving over 40 million tons of standard coal annually, reducing more than 97 million tons of carbon dioxide emissions, reducing 910,000 tons of sulfur dioxide emissions and reducing 2.6 billion tons of waste water emissions. The left figure shows the scrap car disassembly line, and the right figure shows the power battery resource utilization.

GEM Materials was selected in "Encouraging Five Years" Large-scale Achievement Exhibition



On June 5, the project officials of the United Nations Development Programme (UNDP) and the Foreign Cooperation Center of the Ministry of Environmental Protection of China came to the demonstration enterprise Jingmen GEM New Materials Co., Ltd., the full demonstration project for reducing the emission of persistent organic pollutants and persistent toxic chemicals from electrical and electronic products through environmentally sound management. "The Correct Posture of Disassembling Waste Electrical Appliances" Live Broadcast.

Live report site of Jingmen Park

The Concept of Cultural Self-confidence and Circular Development Received Appreciation

Each park insists on opening doors to run factories, making environmental protection transparent, opening to all levels of government, enterprises and institutions, media, students, social groups, foreign friends and so on, and actively assuming the social responsibility of circular economy education. In 2017, the number of visitors and the number of people receiving environmental education in GEM reached 28710, which has attracted the attention of all circles of the society.

An Overview of GEM's Visit and Reception in 2017

No.	Company	The total number of visitors
1	GEM Shenzhen headquarters	857
2	GEM (Jingmen) Circulation Industrial Park	18636
3	GEM Circulation Industrial Park (Jiangxi)	1429
4	GEM (Wuhan) Circulation Industrial Park	1582
5	GEM (Jiangsu) Circulation Industrial Park	572
6	GEM (Yangzhou Ningda) Circulation Industrial Park	851
7	GEM (Wuxi) Circulation Industrial Park	893
8	GEM (Tianjin) Circulation Industrial Park	1076
9	GEM Circulation Industrial Park (Shanxi)	455
10	GEM Circulation Industrial Park (Inner Mongolia)	2359
Total		28710

On July 13, Chen Changzhi, the vice chairman of the npc at that time, led the law enforcement inspection team of the npc standing committee on the prevention and control of the environmental pollution of solid wastes, visited and inspected the recycling industrial park of GEM(Tianjin). The inspection team expressed appreciation for its tremendous contribution to the recycling economy. We should firmly establish and implement the new concept of development, and enhance the sense of responsibility and mission of environmental protection and pollution control.

From November 20 to 22, 2017, as a leading enterprise in the practice of recycling industry, GEM participated in the 2nd China International Circular Economy Exhibition sponsored by China Circular Economy Association. Gu Xiulian, vice chairman of the 10th NPC Standing Committee, and other leading experts visited the booth. CCTV's "point of finance" also broadcast live on the GEM exhibition area.



Chen Changzhi, Vice Chairman of the National People's Congress (first from right) and his party visited the GEM City Mine Museum



Gu Xiulian, Vice Chairman of the 10th National People's Congress Standing Committee (NPC) visited the GEM stand

On March 30, Professor Yamaguchi Yamamoto, Life-long Technical Consultant of GEM, Honorary Professor of Tokyo University, World-famous Material Scientist and Founder of Environmental Materials Science, attended the tour of GEM(Wuhan) Circular Industrial Park.

On April 24, under the organization of the International Cooperation Center of the National Development and Reform Commission, a group of 65 members from Sierra Leone, Sri Lanka, South Africa and other countries visited the GEM(Wuhan) Circular Industrial Park.

The company holds important positions in more than 50 industry-related public organizations and trade associations, setting a benchmark for the development of the industry and giving full play to the influence of the industry.



Professor Yamamoto Liang Yi is an inscription on "GEM "



Economic and trade exchanges, cooperation and visiting groups visit Wuhan Park for exchanges

Build the Foundation firmly; Develop the Circular Culture Construction Steadily

To further strengthen the propaganda of circular culture, Inner Mongolia Park was completed in January, including 147 collections / exhibits, covering an area of 110 square meters; Jingmen Park in March and December of the urban mine museum re-transformation, improve the internal planning and content display. At present, GEM has completed 6 urban mines museum, for the dissemination of circular culture to add brick and tile.



The Newly Built Urban Mine Museum of Inner Mongolia Park



The Reconstructed Jingmen Park City Mine Museum

In April, that new circular culture promenade in Jingmen park, which is divide into common sense section and practice section, popularizes the garbage classification, heavy metal pollution and other environmental protection small knowledge to the employee through the form of hand-drawn cartoon, so that the circular culture can be more easily understood and deeply rooted in the hearts of the people.



Jingmen Park circular culture corridor

Stand out and on behalf of the recycling industry voice in the world

From April 24 to May 5, GEM participated in the Basel Convention, the Rotterdam Convention and the Conference of the Parties to the Stockholm Convention and jointly launched the Global Alliance for the Recovery and Disposal of Waste Power Batteries with the Asia-Pacific Regional Centre of the Basel Convention.As the only Chinese environmental protection enterprise to be invited to participate in the conference technology exhibition, GEM has been highly concerned by the parties and representatives of various countries.



Rolph Payet, Executive Secretary of the Basel, Rotterdam and Stockholm Convention, Visited the GEM Booth



On-site meeting of the Parties to the Basel Convention, the Rotterdam Convention, the Stockholm Convention

Carry out fine management and refuse classification continuously

GEM advocates the implementation of waste classification and disposal in each park, promoting waste reduction and resource utilization, maximizing waste recovery rate and minimizing waste consumption.The promotion culture of each park is shaped, the infrastructure is perfect, and the garbage classification in the production area is being carried out in an orderly way.



Waste classification and recovery area of production area in Jingmen Park

VII

Prospect

Step steadily, fine innovate, stride toward
a new journey of hundreds of billions of
green industries

In 2018, the GEM people will not forget the initial heart, make great efforts, to "hoof rapid pace, fine innovation, high quality into the new era of 10 billion industries!"To work motto, adhere to the lifeline of environmental protection, build green intelligent factories in an all-round way, transform from speed development to high-quality green development, actively create the leading enterprise of world green industry, and contribute to China's winning the blue sky defense battle.

How to make the thousand billion industry in the GEM



Big investment, big scale, big cycle,
Construct Green Value Chain of New Energy
in Whole Life Cycle; Share persistent core
competitiveness

Join the world:
Promote the construction of "circular chain - value
chain - responsibility chain" and establish the value
chain model of global green development.

Deduce the waste reengineering process of "waste-product-substitute original mineral product-world brand," and continuing the core competitiveness;

★ China's largest scarce resource recovery enterprise, recovery of cobalt, nickel, tungsten, germanium, gallium, indium and rare earth 25 kinds of scarce resources, single account for more than 10% of China

★ The World's Largest Superfine Cobalt Powder Manufacturing Enterprise

★ The world's largest power battery recycling and Co-Ni material manufacturing enterprises

★ The world's largest manufacturer of ternary precursor materials

In 2018, we will do our best to do the following eight aspects:

- ◆ Focus on the core business and core objectives, and comprehensively consolidate the global core competitiveness of each business sector;
- ◆ Implement that strategy of quality and brand construction in an all-round way, stepping into the era of high-quality development;
- ◆ Stick to the lifeline of environmental protection and the red line of safety, comprehensively implement the green workshop, green factory and green park construction of "green + wisdom," and firmly build green intelligent enterprises;
- ◆ Optimize the market strategy in an all-round way, break through the raw material channel, construct the circulation value chain and the green supply chain system;
- ◆ Adhere to the two basic principles of "financial regulation as the center and benefit management as the center," reduce the debt ratio, control and control the operational risks, improve the standard governance level of the company, and enhance the anti-risk capability of the company;
- ◆ Fully implement innovation-driven strategy, focus on core business, focus on key technologies, focus on development strategy, and build global technology competitiveness;
- ◆ Revolutionarily implement talent cultivation strategy, comprehensively promote circular culture construction, temper the management of strategic management control ability;
- ◆ Promote the construction of party building and the sense of mission of national green development in an all-round way, mold the spirit of enterpriser and play the role of enterpriser.