



**GCL-Poly Energy Holdings Limited**

**保利協鑫能源控股有限公司**

(incorporated in the Cayman Islands with limited liability)

(Stock Code : 3800)

2018

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Bringing **GREEN POWER**  
To Life







# CONTENT

|  |           |   |           |
|--|-----------|---|-----------|
| <b>ABOUT THE REPORT</b>  | <b>2</b>  | <b>UNITE THE STRENGTH OF THE STAFF<br/>TO BUILD AN EFFICIENT TEAM</b> | <b>46</b> |
| <b>CHAIRMAN'S STATEMENT</b>  | <b>4</b>  | Employee Overview   | 48        |
| <b>HIGHLIGHTS IN 2018</b>  | <b>6</b>  | Compensation and Benefits   | 50        |
| <b>COMPANY PROFILE</b>   | <b>8</b>  | Talent Development  | 52        |
| About Us   | 10        | Occupational Health and Safety  | 55        |
| Corporate Governance   | 14        | Employee Care   | 60        |
| ESG Governance   | 18        | <b>WORK TOGETHER WITH PARTNERS TO<br/>BUILD A BETTER SOCIETY</b>      | <b>64</b> |
| Social Recognition   | 22        | Supply Chain Management   | 66        |
| <b>FULFILL RESPONSIBILITIES AND<br/>SUPPLY HIGH-QUALITY ENERGY</b> | <b>24</b> | Industry Progress   | 69        |
| Product Quality Control  | 26        | Benefit the Society   | 72        |
| Innovation and R&D   | 29        | <b>OUTLOOK</b>  | <b>74</b> |
| Customer Service   | 34        | <b>KEY STATISTICS</b>   | <b>75</b> |
| <b>VALUE THE SOURCE OF LIFE AND<br/>ACHIEVE GREEN DEVELOPMENT</b>  | <b>36</b> | Business Performance  | 75        |
| Environmental Management   | 38        | Environmental Performance   | 75        |
| Green Production   | 40        | Employee Performance  | 75        |
| Low-carbon and Environmental Conservation                          | 44        | Corporate Governance Performance                                      | 75        |
|  |           | <b>APPENDIX 1:</b>  |           |
|  |           | List of Laws and Regulations and<br>Internal Policies                 | <b>76</b> |
|  |           | <b>APPENDIX 2:</b>  |           |
|  |           | SEHK ESG Reporting Guide Content Index                                | <b>79</b> |
|  |           | <b>APPENDIX 3:</b>  |           |
|  |           | GRI Content Index   | <b>83</b> |
|  |           | <b>APPENDIX 4:</b>  |           |
|  |           | Reader Feedback Form  | <b>89</b> |

# ABOUT THE REPORT

## Overview

This report is the sixth Environmental, Social and Governance Report of GCL-Poly Energy Holdings Limited delivered to all stakeholders of the Company, focusing mainly on the Company's management, practice, and performance in business, environmental protection, society, and governance.

## Scope of the Report

This report covers the period between 1 January 2018 and 31 December 2018, with part of the content following that of previous years.

## Release Cycle of the Report

Since 2013, GCL-Poly Energy Holdings Limited has been publishing its annual Environmental, Social and Governance report, with the last one being released in July 2018.

## Coverage and Boundary of the Report

The report covers GCL-Poly Energy Holdings Limited and its subsidiaries. For ease of reading, the report uses "GCL-Poly", "the Company" or "we" to represent GCL-Poly Energy Holdings Limited and its subsidiaries<sup>1</sup>.

## Basis of Preparation of the Report

The report has been prepared in accordance with Appendix 27 in the Listing Rules (Environmental, Social, and Governance Reporting Guide) issued by the Stock Exchange of Hong Kong Limited (SEHK). This report has been prepared in accordance with the GRI Standards: Core option. The report has successfully completed GRI Materiality Disclosures Service.

## Source of Information and Reliability Assurance

The information and data disclosed in this report originate from statistic reports and formal documents of GCL-Poly Energy Holdings Limited and have been validated by related departments. The Company adopts consistent disclosure approach for statistics to quantify key performance indices and ensure meaningful comparisons among them. This year, after a comprehensive review on the past data, the Company amended and unified the methodology and scope of the statistics measured. Data being recalculated has been restated in relevant part of this report<sup>2</sup>.

The Company undertakes that the report does not contain any false representation or misleading statement and takes responsibility for the truthfulness, accuracy, and completeness of the contents of the report.

<sup>1</sup> GRI 102-46

<sup>2</sup> GRI 102-48



## ABOUT THE REPORT

### Language and Form of the Report

There are Traditional Chinese and English versions for this report, both electronic editions. For more details about the background, business development and sustainability vision of GCL-Poly, please refer to our website ([www.gcl-poly.com.hk](http://www.gcl-poly.com.hk)).

### Preparation Procedure of the Report

The report is prepared following the sequence of forming the working group, collecting information, communicating with stakeholders, confirming the framework; redacting, designing and validating the report by related departments and the management.

### Confirmation and Approval

Confirmed by management, this report was approved by the Board of Directors on 17 July 2019.

## CHAIRMAN'S STATEMENT

2018 was a year of revolution for PV companies.

The "531 PV New Policy"<sup>1</sup> and fluctuations in the global market economy brought great uncertainty to the PV industry. As a leading industrial-grade manufacturer, a world-class developer and manufacturer of high-efficiency photovoltaic materials, and a major technology driver and leading supplier of photovoltaic products such as polysilicon and silicon wafers, GCL-Poly is committed to "providing high-quality energy and services for a better living environment". Adhering to the core value of "innovation-driven development", we have made dedicated efforts to industrialize cutting-edge technologies such as monocrystalline ingot wafer and black silicon, promoting clean energy development with solar power. In 2018, GCL-Poly remained a leading player of the industry thanks to its own technological advantages, presenting 70,000 tonnes of polysilicon production capacity and 30 GW of wafer production capacity. GCL-Poly operates 7 GW solar projects globally with a total installed capacity of 7,309 MW, a gratifying 22% increase compared to 2017.

<sup>1</sup> On 31 May 2018, the National Development and Reform Commission, the Ministry of Finance and the National Energy Administration jointly issued the Notice on Matters Related to Photovoltaic Power Generation 2018, which is called the "531 PV New Policy" by the photovoltaic industry.

## CHAIRMAN'S STATEMENT

The Chinese PV industry has been transforming from high-speed development to high-quality development, as a responsible Chinese enterprise, GCL-Poly is facing the opportunities and challenges of the world economic environment and policies and aligning its business development and operation with national strategies. We make timely adjustments to industry situation and grasp the opportunities brought by national strategies through analyzing and controlling potential risks of the industry, and fulfill our social responsibility as we develop. The three main businesses of GCL-Poly are Solar Farms, PV Materials, and New Energy. The Company promotes grid parity through cost reduction, provides employees with broad opportunities through its own development and advancement, and contribute value for society through contributing to society.

In terms of product quality, GCL-Poly adheres to standardized production and adopts delicacy management for procurement and production processes. The Company explores and develops intelligent manufacturing, and continuously improves production efficiency and product quality. In terms of customer service, committed to building harmonious and friendly relationships with customers, GCL-Poly always believes in "embracing customers". Based on the needs of customers, we constantly enhance the professional skills of customer service personnel, optimize customer communication channels, listen to customers' opinions and grasp their needs as soon as possible, develop solutions in a timely manner and then get back to customers. In terms of environmental protection, GCL-Poly implements "responsible environmental protection" and acts in strict accordance with laws and regulations of the country and project locations. We perform green production management for all aspects including design, production, and operation, and continuously reduce the negative impact of our products on the environment. In terms of team building, GCL-Poly creates a fair talent management mechanism through "borderless" cooperation and strives to provide employees with a safe, healthy and diversified working environment, ensuring that each employee can achieve his or her career aspirations. In terms of public welfare, GCL-Poly joins hand with stakeholders including suppliers, midstream and downstream enterprises, governments, research institutes, and charitable organizations to create an innovation ecosystem for the photovoltaic industry and build a harmonious and beautiful society.

In 2019, the Chinese PV industry will enter an era that requires improved quality and efficiency. At a new starting point, GCL-Poly will endeavor to make progress, actively implement national policies, play a leading role in the PV industry, and continuously explore sustainable development paths for environmental protection, technological innovation, team building, and industry development. Together with stakeholders, we will make greater contributions to "bringing green energy to life".





## HIGHLIGHTS IN 2018

### Business Performance

- Polysilicon production capacity reached **70,000** tonnes
- Silicon wafer capacity reached **30** GW
- Operated **7** GW solar projects in the world

### Technological Innovation

- Invested RMB**945.53** million in technological advancement and research
- Applied for a total of **97** patents and was granted **103** patents
- As of 31 December 2018, the Company has applied for **1,146** patents worldwide and was granted **646** patents



## HIGHLIGHTS IN 2018




### Environmental Protection

- Provided training for **23,726** employees
- Training on environmental protection covered **85%** of employees
- Recycle and reuse of water increased by **286.76%** compared to 2017



### Health and Safety

- Provided **95,373.50** hours of Environment, Health and Safety (EHS) related training
- Provided **44,051** employees with EHS-related training
- Work-related injury rate of **0.26%** per 200,000 working hours.
- **0** work-related fatality



### Community and Charity

- Evaluated the environmental and social impact of **100%** of suppliers at supplier approval
- Participated in the development of **11** industry standards
- Donated RMB**7,491,901** for various projects from 2016 to 2018





# COMPANY PROFILE

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GCL-Poly was registered in Cayman Islands on July 12, 2006. It was listed on the Hong Kong Stock Exchange in 2007 (stock code: 3800.HK). GCL-Poly has been included in the Hang Seng Composite Index, the Hang Seng Mainland China 100 index, MSCI Emerging Markets Index and Hang Seng Sustainability Index, gaining recognition from international capital markets. GCL-Poly has also been included in the trading list of Shenzhen-Hong Kong Stock Connect and Hang Seng Stock Connect Hong Kong Index, gaining recognition from China's capital markets. GCL-Poly headquarters in Hong Kong, with management centers distributed in Xuzhou, Suzhou. In addition, the Company has representative offices or subsidiaries in Beijing and Taipei.

The mission of GCL-Poly is "Bringing Green Power to Life". The Company is the world's leading polysilicon producer and the largest wafer supplier globally. The Company has ramped up the polysilicon production capacity to 70,000 MT at the end of 2018, and the wafer production capacity achieved 30 GW at the end of 2018. Regarding the new energy business, the Company operates around 7 GW solar projects in the world mainly through its subsidiary, GCL New Energy.







## COMPANY PROFILE

### About Us

GCL-Poly was incorporated in the Cayman Islands on 12 July 2006 and was listed on the Hong Kong Stock Exchange in November 2007 (stock code: 3800.HK). The Company headquarters in Hong Kong, with management centers distributed in Xuzhou, Suzhou. In addition, the Company has representative offices or subsidiaries in Beijing, Taipei, etc.

As a leading industrial-grade manufacturer, a world-class developer and manufacturer of high-efficiency photovoltaic materials, and a major technology driver and leading supplier of photovoltaic products such as polysilicon and silicon wafers, GCL-Poly has been adhering to the core value of “innovation-driven development” and made dedicated efforts to industrialize cutting-edge technologies such as monocrystalline ingot wafer and black silicon, promoting clean energy development with solar power. During the reporting period, the polysilicon production capacity of GCL-Poly reached 70,000 tonnes, and wafer production capacity 30 GW. The Company operates 7 GW solar projects globally.



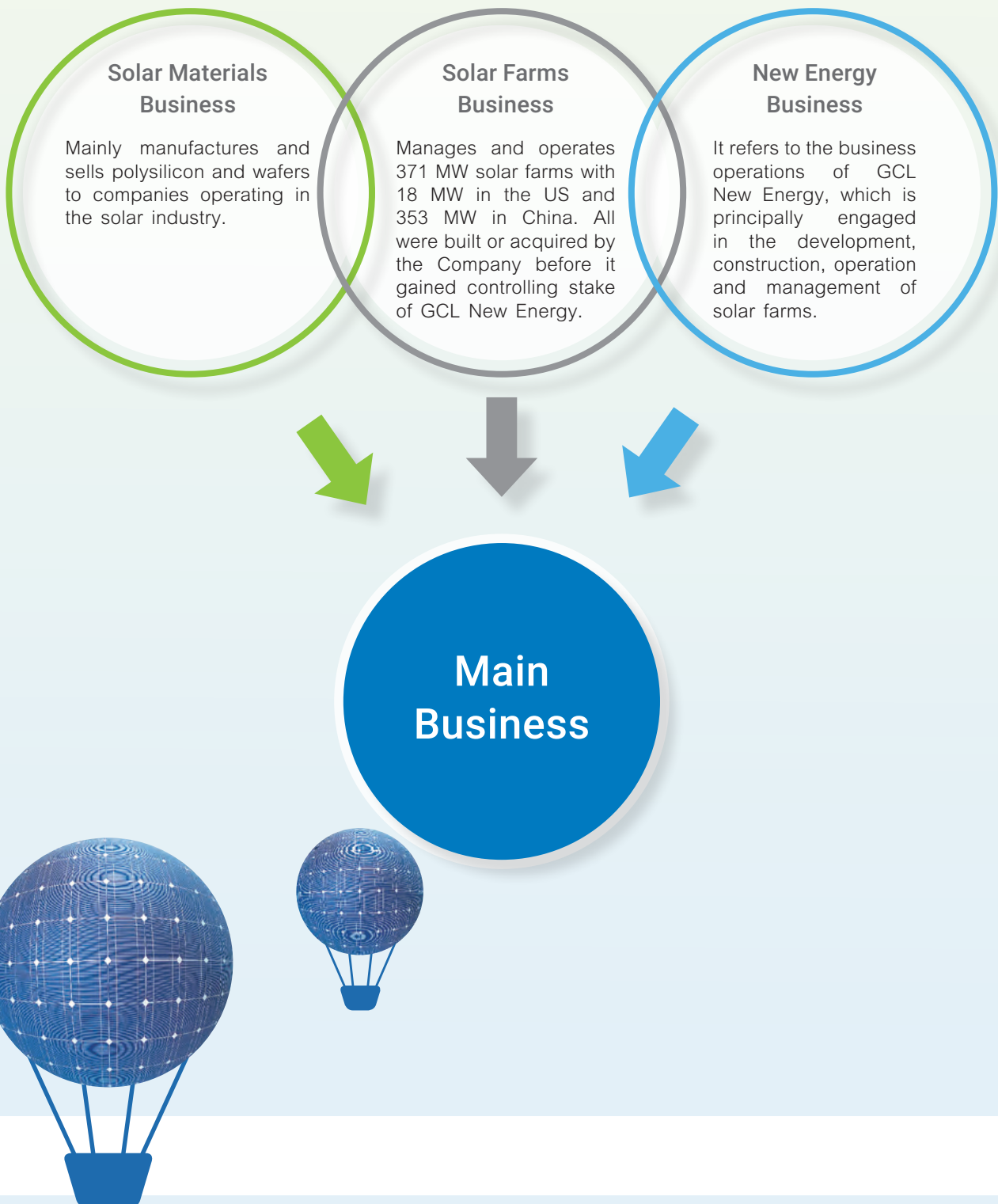
### Our Philosophy



## COMPANY PROFILE

### Our Business

As a responsible Chinese enterprise, GCL-Poly aligns its business development and operation with national strategies and grasp the opportunities brought by national strategies to fulfill its social responsibility as it develops. Our main businesses include Solar Farms, Solar Materials, and New Energy.





## COMPANY PROFILE

The Company provides services for upstream and downstream companies in the industry with its three major businesses. The Company supplies polysilicon and silicon wafers for the upstream with its solar materials business, while produces silicon wafers from polysilicon and supplies materials to photovoltaic cell and module manufacturers in the downstream. During the reporting period, the Company's wafer production increased by 1.20% compared to 2017.

| Business                 | Item                       | Unit        | 2017    | 2018           |
|--------------------------|----------------------------|-------------|---------|----------------|
| Solar Materials Business | Polysilicon output         | Tonnes      | 74,818  | <b>61,785</b>  |
|                          | Polysilicon sales          | Tonnes      | 7,316   | <b>20,041</b>  |
|                          | Wafer output               | MW          | 23,902  | <b>24,189</b>  |
|                          | Wafer sales                | MW          | 23,417  | <b>24,761</b>  |
|                          | Revenue                    | RMB'Million | 19,355  | <b>14,436</b>  |
| Solar Farms Business     | Overseas power sales       | MWh         | 29,804  | <b>30,473</b>  |
|                          | Chinese power sales        | MWh         | 495,365 | <b>492,950</b> |
|                          | Revenue                    | RMB'Million | 497     | <b>497</b>     |
| New Energy Business      | Grid-connected solar farms | /           | 162     | <b>221</b>     |
|                          | Gross installed capacity   | MW          | 5,990   | <b>7,309</b>   |
|                          | Revenue                    | RMB'Million | 3,942   | <b>5,632</b>   |

### Statuses of GCL-Poly's Subsidiaries<sup>1</sup>

| Category                 | Name of Subsidiaries   | Abbreviation   |
|--------------------------|--|--|
| 6 R&D Centers            | <ul style="list-style-type: none"> <li>Suzhou GCL-Poly Industrial Application Research Institute</li> <li>Polysilicon R&amp;D Center</li> <li>Dicing R&amp;D Center</li> <li>GCL Software Control Equipment R&amp;D Center</li> <li>Solar Energy Materials R&amp;D Center</li> <li>US Richland R&amp;D Center</li> </ul> | <ul style="list-style-type: none"> <li>Suzhou GCL-Poly Industrial Application Research Institute</li> <li>Polysilicon R&amp;D Center</li> <li>Dicing R&amp;D Center</li> <li>GCL Software Control Equipment R&amp;D Center</li> <li>Solar Energy Materials R&amp;D Center</li> <li>US Richland R&amp;D Center</li> </ul> |
| 2 Management Centers     | <ul style="list-style-type: none"> <li>GCL-Poly (Xuzhou) New Energy Operation and Management Co. Ltd.</li> <li>GCL-Poly (Suzhou) New Energy Operation and Management Co. Ltd.</li> </ul>   | <ul style="list-style-type: none"> <li>Xuzhou Management Center</li> <li>Suzhou Management Center</li> </ul>   |
| 2 Representative Offices | <ul style="list-style-type: none"> <li>Taiwan Representative Office</li> <li>South Africa Representative Office</li> </ul>   | <ul style="list-style-type: none"> <li>Taiwan Representative Office</li> <li>South Africa Representative Office</li> </ul>   |

<sup>1</sup> GRI 102-45

## COMPANY PROFILE

| Category  | Name of Subsidiaries   | Abbreviation   |
|---|--|--|
| 15 Polysilicon & Wafer Manufacturing Subsidiaries | <ul style="list-style-type: none"> <li>Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.</li> <li>Jiangsu GCL Silicon Material Technology Development Co., Ltd.</li> <li>Suzhou GCL Photovoltaic Technology Co., Ltd.</li> <li>Konca Solar Cell Co., Ltd.</li> <li>Yangzhou GCL Photovoltaic Technology Co., Ltd.</li> <li>Taichang GCL Photovoltaic Technology Co., Ltd.</li> <li>Changzhou GCL Photovoltaic Technology Co., Ltd.</li> <li>Ningxia GCL Monocrystalline Silicon Technology Development Co., Ltd.</li> <li>Funing GCL Photovoltaic Technology Co., Ltd.</li> <li>Henan GCL Photovoltaic Technology Co., Ltd.</li> <li>Suzhou GCL Technology Development Co., Ltd.</li> <li>Sichuan Golden Concord Silicon Industry Co., Ltd.</li> <li>Xinjiang GCL New Energy Materials Technology Co., Ltd.</li> <li>Jiangsu Xinhua Semiconductor Material Technology Co., Ltd.</li> <li>GCL Special Material Technology (Jiangsu) Co., Ltd.</li> </ul> | <ul style="list-style-type: none"> <li>Zhongneng Polysilicon</li> <li>Xuzhou GCL Photovoltaic</li> <li>Suzhou GCL Photovoltaic</li> <li>Wuxi Konca</li> <li>Yangzhou GCL Photovoltaic</li> <li>Taichang GCL Photovoltaic</li> <li>Changzhou GCL Photovoltaic</li> <li>Ningxia GCL Monocrystalline Silicon</li> <li>Funing GCL Photovoltaic</li> <li>Henan GCL Photovoltaic</li> <li>Suzhou GCL Technology</li> <li>Sichuan Golden Concord</li> <li>Xinjiang GCL</li> <li>Xinhua Semiconductor</li> <li>Xinhua Special Material</li> </ul>  |
| 11 Solar Farm Companies <sup>1</sup>              | <p>Solar farms established in the PRC:<br/>(Managed by GCL New Energy)</p> <ul style="list-style-type: none"> <li>Xuzhou GCL Solar Energy Co. Ltd.</li> <li>Jiangsu Guoneng Solar Technology Co. Ltd.</li> <li>Datong Xian Xinneng Solar Energy Co. Ltd.</li> <li>Datong Xian GCL Solar Energy Co. Ltd.</li> <li>Ningxia Qingyang New Energy Co. Ltd.</li> <li>Ningxia Hengyang New Energy Co. Ltd.</li> <li>Funing Xinneng Solar Energy Co. Ltd.</li> <li>Baoying Xingneng Renewable Energy Co. Ltd.</li> <li>Huocheng Xian Tukai New Energy Technology Development Co. Ltd.</li> <li>GCL-Poly (Sangri) Solar Power Co. Ltd.</li> </ul> <p>Overseas solar farm holding company:<br/>(Managed by GCL New Energy)</p> <ul style="list-style-type: none"> <li>GCL Solar Energy, Inc.</li> </ul>  | <p>Solar farms established in the PRC:<br/>(Managed by GCL New Energy)</p> <ul style="list-style-type: none"> <li>Xuzhou GCL Solar Energy</li> <li>Jiangsu Guoneng Solar Technology</li> <li>Datong Xian Xinneng Solar Energy</li> <li>Datong Xian GCL Solar Energy</li> <li>Ningxia Qingyang New Energy</li> <li>Ningxia Hengyang New Energy</li> <li>Funing Xinneng Solar Energy</li> <li>Baoying Xingneng Renewable Energy</li> <li>Huocheng Xian Tukai New Energy</li> <li>GCL-Poly (Sangri) Solar Power</li> </ul> <p>Overseas solar farm holding company:<br/>(Managed by GCL New Energy)</p> <ul style="list-style-type: none"> <li>GCL Solar Energy, Inc.</li> </ul> |

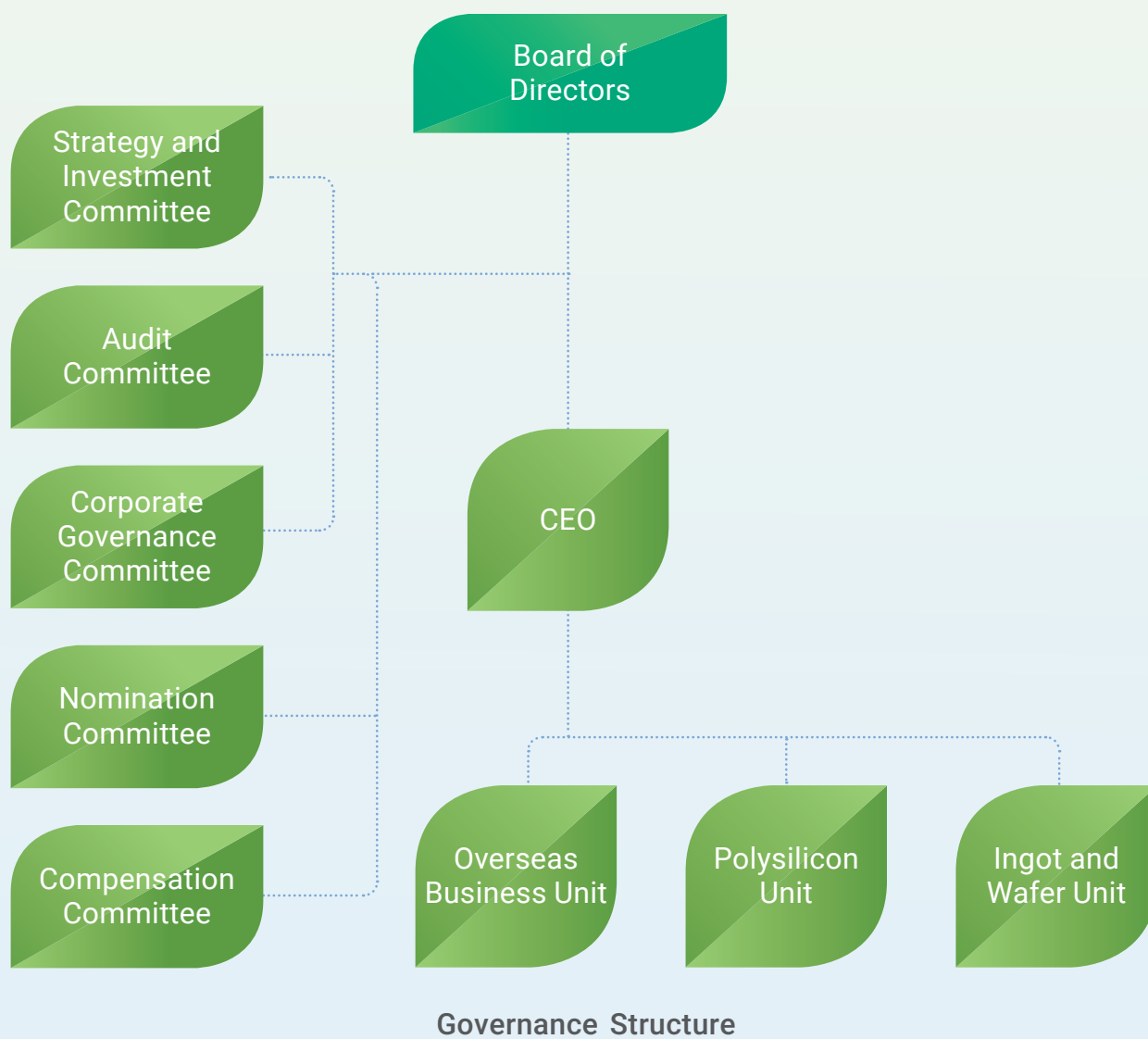
(as of 31 December 2018)

<sup>1</sup> Excluding Solar Farms under GCL New Energy's business

## COMPANY PROFILE

### Corporate Governance

The Company firmly believes that a sound corporate governance structure and policies form the basis for its healthy development in the long run. GCL-Poly has developed internal rules and systems including *the General Risk Management Guidelines, Risk Alert Management Measures, Principles and System of Internal Control Management, Authorization and Process Management Standards, Guidelines for Small Enterprise Internal Control, Guidelines for Internal Control Effectiveness Evaluation, and Guidelines for the Application of Internal Control Effectiveness Evaluation* in accordance with the code provisions set out in the *Corporate Governance Code* and *Corporate Governance Report* contained in Appendix 14 of the Listing Rules of SEHK, the *Basic Norms of Enterprise Internal Control* issued by the China Securities Regulatory Commission and other regulations. The rules and systems are developed for the Company to continuously optimize its corporate governance system and gain greater benefits for all stakeholders on the basis of legal and compliant operation.





## COMPANY PROFILE

### Risk Management and Control

The Company established and continuously improves its risk management system, and is committed to timely identifying potential risks and taking corresponding measures through risk management and the internal control architecture in daily operations. At the same time, the Company established a three-level risk management system, i.e., the Board of Directors and the Audit Committee – management and the internal control department – internal risk control departments at all levels. It defines the responsibilities of each department to enhance its risk management capabilities and requires each department to report their performance to the Audit Committee and the Board of Directors at least once half a year. In light of policy adjustments in the PV industry in Mainland China, management made analyses to develop measures from aspects such as strategy, operation, finance, and technology.

#### Board and Audit Committee

The Board and Audit Committee is the highest leading organization for internal control. They monitor and control GCL-Poly's operation indicators and risks in various businesses, who have the ultimate responsibility on the effectiveness of the internal control of GCL-Poly and the businesses.

#### Risk Management Committee and Management

The Risk Management Committee is responsible for instructing risk management and internal control under the Board and Audit Committee that it reports to GCL-Poly and the main management of the businesses are the members. Its primary responsibility is to maintain the effectiveness of the internal controls.

#### Internal Control and Risk Control Departments at Each Level

The internal control and risk control departments at each level are responsible for executing risk control, internal control and internal audits reporting to the Risk Management Committee and management.

### Risk Management System

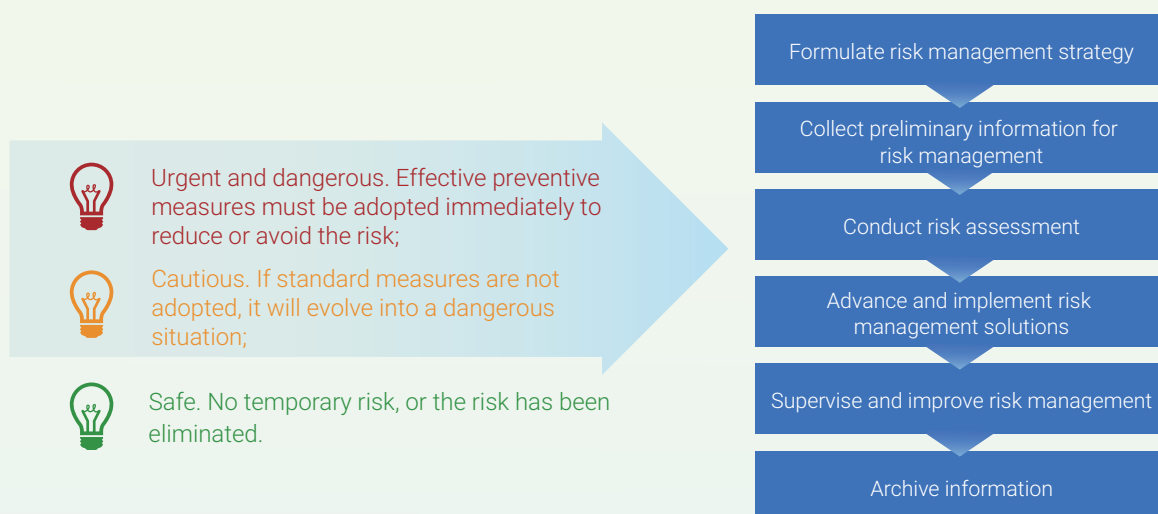
## COMPANY PROFILE

During the reporting period, the company managed and controlled the following three key risks, and the specific risks and countermeasures are as follows:

| Main Risks  | Countermeasure   |
|---|--|
| Potential market competition during the development of monocrystalline  | ➤ The Company focused on the profitability of its existing assets, such as securing major customers with long-term contracts, enhancing utilization rates through introducing diversified and customized products, and reinforced its advantage over producers of polysilicon by improving its quasi-mono wafer production technique and narrowing the power gap between quasi-mono wafer and multi-wafer modules. The Company has also strengthened the cooperation with its strategic partners in order to obtain monocrystalline production capacity through such strategic partnerships while acquiring market share in the monocrystalline market through sales collaboration.  |
| Liquidity risk brought by the macro economy and the Company's own relatively high gearing ratio                 | ➤ The Company has tightened its communication with financial institutions to maintain secured financing. It has also enhanced its efficiency and increased cash flows from its production activities by promoting the quasi-mono wafer and the polysilicon produced by its Xinjiang production base. It has also stepped up the collection of trade receivables and tightly controlling its capital expenditures.  |
| Technological, research and development risks resulting from any delay in its research and development projects | ➤ The Company has maintained the existing scale of FBR and CCZ. In particular, it is boosting the quality of FBR modules and testing their ability to work long cycles. As for CCZ, the Company focused on refining their production technique in order to improve quality, increase the reliability of domestic modules and explore applications beyond PV. Additional efforts have been made to research and develop better quasi-mono wafer crystal growth technique as well as to product promotion. The performance of polycrystalline black silicon products has been enhanced while costs dropped. The application of the black silicon technologies was also extended from polysilicon wafer to monocrystalline wafer and third-grade quasi-mono wafer. Furthermore, the Company will persist in improving its corporate image, shouldering its corporate social responsibility, monitoring market response, bolstering relationship with the media, and extending its social influence. |

To further improve risk management work, we forewarn of significant risks in the operation process with red, yellow and green risk signals and take actions through a well-established risk management process.

## COMPANY PROFILE



### Risk Warning and Management Process

#### Compliance Management and Anti-Corruption

The Company combines internal and external training, and training and publicity to optimize the internal control management environment, enhance the legal operation awareness of managerial staff and employees at all levels, and promote compliance management of each business unit. During the reporting period, the Company successively carried out training and publicity activities on “risk identification, handling, and prevention in the process of enterprise listing”, “application of the results of internal control optimization projects”, “internal control and risk control (Publicity Week)”, etc. We also carried out legal compliance training for listed companies for GCL-Poly Energy Holdings and its subsidiaries and affiliated companies. As of 31 December 2018, the Company provided 2,000 employees with legal compliance training for listed companies.

In addition, GCL-Poly attaches great importance to running a clean company and is dedicated to integrating ethical and compliance requirements to its daily operation. In strict accordance with laws and regulations, including the *Law of the People's Republic of China Against Unfair Competition* and *Anti-Monopoly Law of the People's Republic of China*, the Company developed and strictly conforms to its internal *Management Standards for Anti-Fraud and Whistleblowing*, which defined the types of fraud, the responsibilities of different departments in handling fraud, and handling processes for fraud and whistleblowing. The Company aims to establish a fraud prevention and control mechanism, advocate a corporate culture marked by integrity, and perform internal control effectiveness evaluation through a three-level internal control evaluation mechanism to reduce the chances of potential fraud.

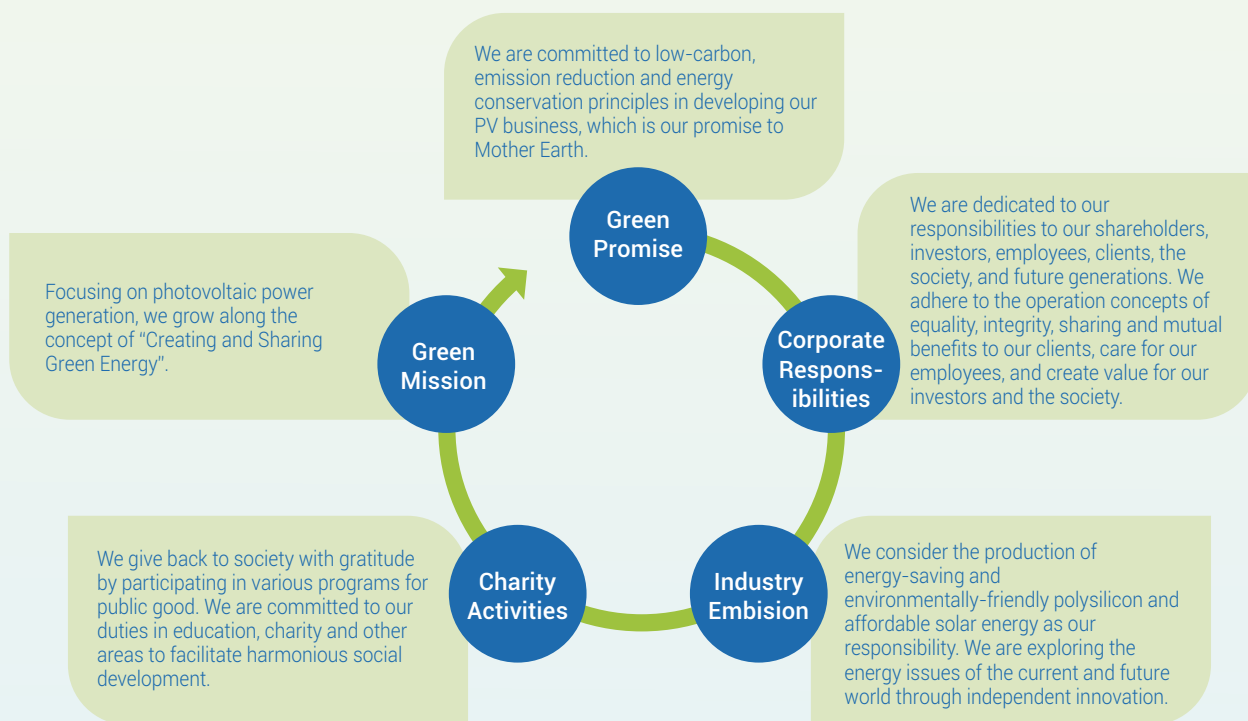
The Company has established codes of conduct, including Employee Handbook, “Integrity, Culture, and GCL ten taboos” and “Employee Behaviors Standards”, to provide employees with clear guidance with regard to their authority, confidential information, and moral behavior and enhanced the integrity culture through integrity training and anti-corruption training. As of 31 December 2018, the company has carried out nine training sessions for managerial personnel at middle-level and above, covering over 600 employees. Anti-corruption policy training for general employees was concluded by exams, covering 11,214 employees.

In addition, to enhance the integrity culture of the Company, we established whistleblowing channels for employees and undertook to never disclose the personal information of informers without their consent. During the reporting period, the Company received one report of fraud (real-name whistleblowing). In terms of this case, the internal control department of the Company acted in strict accordance with the Anti-Fraud and Whistleblowing Management Standards to investigate the matter and communicate and confirm with the informer and those involved in the matter about the results.

## COMPANY PROFILE

### ESG Governance

The Company regards fulfillment of its responsibilities to society, the environment, and various stakeholders as the basis for promoting sustainable development. In the process of development, the Company improves its corporate responsibility structure, identifies stakeholders closely related to its own development, identifies their issues of concern and responds in an effective manner to enhance its the ESG performance.



**Corporate Responsibility Concept**



## COMPANY PROFILE

We believe that two-way, transparent and regular communication helps the Company maintain harmonious relationships with all stakeholders and strengthens mutual trust and respect, which lays a stable foundation for the Company's sustainable development<sup>1</sup>. We have identified seven key stakeholder groups based on their impact on GCL-Poly's decision-making, and the influence of GCL-Poly's decision-making and actions on them, and their proximity to our operation (for example, contractually or geographically). In addition, according to previous reports, main strategies and businesses of the Company, and the communication and interviews with the key management personnel of GCL-Poly, we have identified and listed the following stakeholder concerns, communication channels and reporting frequency<sup>2</sup>.

| Stakeholder Group <sup>3</sup>           | Concerns <sup>4</sup>  | Major Communication/<br>Feedback Channels   | Reporting Frequency  |
|--|--|---|--|
| Employees                                | <ul style="list-style-type: none"> <li>Employee rights and benefit and guarantees</li> <li>Employee occupational health and safety</li> <li>Diversity and equal opportunities</li> <li>Career development and training</li> </ul>  | <ul style="list-style-type: none"> <li>Regular meetings</li> <li>Employees' meeting</li> <li>Performance review</li> <li>Internal publications (GCL magazine, GCLer newspaper, GCL's WeChat Public Platform)</li> </ul>   | <ul style="list-style-type: none"> <li>Annual (performance review, employees' meeting)</li> <li>Quarterly (GCL magazine)</li> <li>Monthly (GCLer newspaper)</li> <li>Bi-weekly (regular meeting with the President)</li> <li>Weekly (regular meeting of a department)</li> </ul> |
| Shareholders/<br>Investors               | <ul style="list-style-type: none"> <li>Business development</li> <li>Corporate governance and risk management</li> </ul>   | <ul style="list-style-type: none"> <li>General meeting</li> <li>Special meeting</li> <li>Investor's meeting</li> <li>Result announcement meetings</li> <li>Press release/ announcement</li> <li>Non-trade roadshow</li> <li>Trade roadshow</li> <li>One-on-one meeting</li> </ul> | <ul style="list-style-type: none"> <li>A general meeting is normally held once a year. In case of significant events, special meetings will be arranged</li> <li>Other meetings are held irregularly when necessary</li> </ul>   |
| Government<br>Departments/<br>Regulators | <ul style="list-style-type: none"> <li>Business development</li> <li>Environmental compliance performance</li> <li>Employee occupational health and safety</li> <li>Community and charity work</li> <li>Corporate governance and risk management</li> <li>Business ethics and anti-corruption</li> </ul> | <ul style="list-style-type: none"> <li>On-site visits</li> <li>Meetings</li> <li>Phone</li> </ul>   | <ul style="list-style-type: none"> <li>Irregular</li> </ul>  |

<sup>1</sup> GRI 102-43

<sup>2</sup> GRI 102-42

<sup>3</sup> GRI 102-40

<sup>4</sup> GRI 102-44

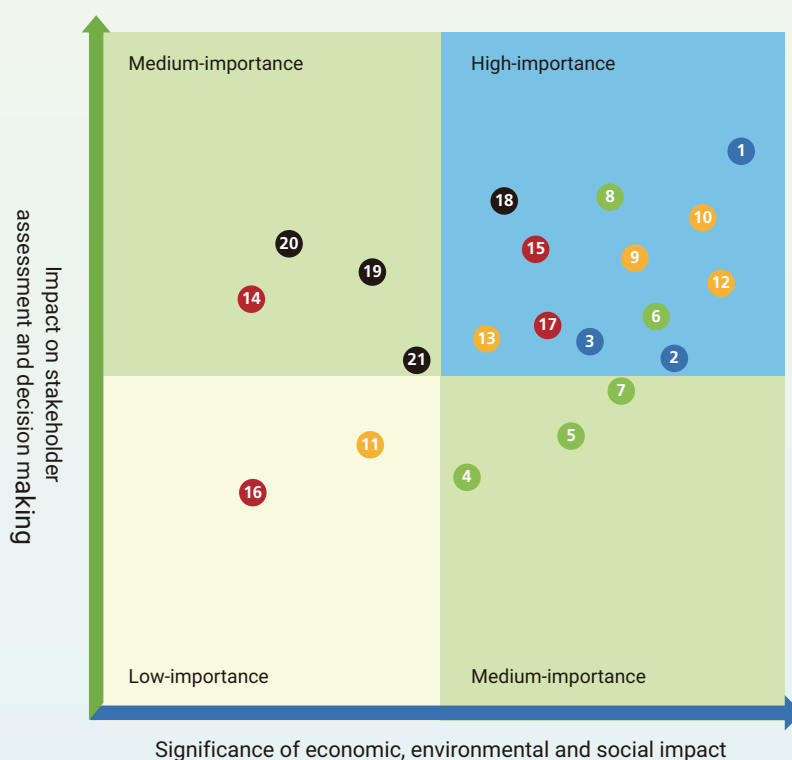
## COMPANY PROFILE

| Stakeholder Group <sup>3</sup>               | Concerns <sup>4</sup>   | Major Communication/<br>Feedback Channels  | Reporting Frequency  |
|--|---|--|--|
| Clients                                      | <ul style="list-style-type: none"> <li>• Product quality control</li> <li>• Technology R &amp; D</li> <li>• Client services</li> </ul>  | <ul style="list-style-type: none"> <li>• On-site visits</li> <li>• Meetings</li> <li>• Client acknowledgement and exchange meetings</li> <li>• E-mail</li> <li>• Phone</li> </ul>                      | <ul style="list-style-type: none"> <li>• Communicate with different clients by phone or e-mail every day</li> <li>• Visit two to three clients each week</li> <li>• Receive two to three clients each month</li> </ul> |
| Business partners                            | <ul style="list-style-type: none"> <li>• Technology R&amp;D</li> <li>• Supply chain management</li> <li>• Industrial innovation</li> <li>• Business performance</li> <li>• Product quality management</li> </ul>  | <ul style="list-style-type: none"> <li>• On-site visits</li> <li>• Meetings</li> <li>• Supplier meetings</li> <li>• Industry exhibitions</li> </ul>  | <ul style="list-style-type: none"> <li>• Irregular</li> </ul>  |
| Community members/<br>Organizations/<br>NGOs | <ul style="list-style-type: none"> <li>• Environmental compliance performance</li> <li>• Materials and water resources management</li> <li>• Energy management and energy saving</li> <li>• Sewage, exhaust and waste discharge</li> <li>• Green house gas emissions</li> <li>• Community contributions and charities</li> <li>• Impact of business on communities</li> </ul> | <ul style="list-style-type: none"> <li>• On-site visits</li> <li>• Meetings</li> <li>• Press release/public report</li> </ul>  | <ul style="list-style-type: none"> <li>• Irregular</li> </ul>  |
| Media  | <ul style="list-style-type: none"> <li>• Business development</li> <li>• Industrial innovation</li> <li>• Community and charity work</li> </ul>   | <ul style="list-style-type: none"> <li>• Press release/announcement</li> <li>• Conference</li> <li>• Exhibition</li> <li>• Luncheon</li> <li>• Acknowledgement meeting</li> <li>• Interview</li> </ul> | <ul style="list-style-type: none"> <li>• Irregular</li> </ul>  |

## COMPANY PROFILE

During the reporting period, we conducted eight in-depth stakeholder interviews, and distributed and collected 695 stakeholder questionnaires to gather, analyze and group major stakeholder concerns. Based on the 2017 report, changes in the external and internal macro environment, adjustments in the Company's businesses and strategies during the reporting period, as well as the results of the questionnaires, we identified the following 12 issues of high significance<sup>1</sup> upon adjustment to the 2017 materiality matrix<sup>2</sup>:

### Materiality Matrix<sup>3</sup>



| ● Economic issues                          | ● Environmental issues                    | ● Responsibility Issues    | ● Labour Issues                               | ● Social Issues                                 |
|--|---|----------------------------|---|---|
| 1 Business performance                     | 4 Material and water resources management | 9 Product quality control  | 14 Employee rights and benefit and guarantees | 18 Contributions to the Community and charities |
| 2 Corporate governance and risk management | 5 Energy management and saving            | 10 Technology R&D          | 15 Employee occupational health and safety    | 19 Business impact on the community             |
| 3 Government support                       | 6 Environmental compliance performance    | 11 Client services         | 16 Diversity and equal opportunities          | 20 Business ethics and anti-corruption          |
|  | 7 Sewage, exhaust and waste discharge     | 12 Supply chain management | 17 Career development and training            | 21 Contributions to ethnic unity                |
|  | 8 Greenhouse gas emissions                | 13 Industrial innovation   |   |   |

<sup>1</sup> Issues in red are of high significance

<sup>2</sup> GRI 102-49

<sup>3</sup> GRI 102-47

## COMPANY PROFILE

### Social Recognition

- In January 2018, GCL-Poly won the “Golden Hong Kong Stocks Award for Most Valuable Energy and Resources Company” at the 2017 “Golden Hong Kong Stocks Awards” Ceremony.
- In February 2018, GCL-Poly was accredited as the “Most Influential Brand Leader of the Year” at the 2017 China Energy Media & PR Conference.
- In March 2018, Funing GCL Photovoltaic was awarded the “China Photovoltaic Smart Manufacturing Demonstration Application Innovation Promotion Award” at the 2nd China Photovoltaic Green and Intelligent Manufacturing Summit.
- In April 2018, GCL-Poly won the “Star Enterprise of the Year”, the only major award at the Shanghai Distributed New Energy Investment and Financing Summit.
- In April 2018, the wafer cutting plant of Yangzhou GCL Photovoltaic Technology Co., Ltd. was honored as “National Pioneer Worker” by the All-China Federation of Trade Unions.
- In May 2015, the second-generation “TS+” black silicon wafer products of GCL-Poly was granted the “Terawatt Diamond Award”, the top award of the “Top 10 Highlights” presentation of the 2018 SNEC Exhibition.
- In July 2018, GCL-Poly’s 2016 Environmental, Social and Governance Report was given 4.5 stars by the CASS-CSR Report Ratings Committee.
- In July 2018, Xuzhou GCL Solar Energy Co., Ltd. (“Xuzhou Solar”) was listed on the “Top 100 Chinese Electronic Information Enterprises” for the fifth consecutive year at the 2018 Top 100 Chinese Electronic Information Enterprises Awarding Ceremony & the Integrated Informatization and Industrialization Development Summit.
- In August 2018, GCL-Poly was given the “Photovoltaic Industry Technological Contribution Award” at the Double Glass Bifacial Industrial Chain Technology and Application Seminar & Photovoltaic Power Station Asset Management and Overseas Market Investment Strategy Seminar.
- In September 2018, Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd. (“Zhongneng”) was awarded the 2017 Jiangsu Province Quality Award at the Jiangsu Province Quality Control Conference.
- In September 2018, the Pilot Project for Intelligent Polysilicon Factory of Zhongneng was the only entity from Xuzhou, Jiangsu Province to be listed among “pilot projects for intelligent manufacturing in 2018” issued by the Ministry of Industry and Information Technology.
- In October 2018, the third-generation solar-energy-grade high-performance polysilicon ingot and wafer research, development and industrialization project of Xuzhou Solar won the second prize of the 2018 China Energy Research Society Energy Innovation Awards.



## COMPANY PROFILE

- In October 2018, GCL-Poly received the sole Best Research and Development Team of the Year as well as the Outstanding Photovoltaic Material Enterprise of the Year at the 10th “Night of GCL” dinner party of Wuxi New Energy Exhibition & “Solar Energy Cup” CREC Annual Awards Ceremony 2018.
- In November 2018, GCL-Poly won the “Best Brand Value in the High-Tech Industry of China” and the “Outstanding PV Material Supplier” at the OFweek China High-tech Industry Conference 2018.
- In November 2018, 12 plants under Suzhou GCL-Poly Solar Power Investment Ltd. and Zhongneng Polysilicon were included in the 2018 List of Pilot Intelligent Plants in Jiangsu Province granted by the Industry and Information Technology Department of Jiangsu.
- In November 2018, GCL-Poly Energy Holdings Limited received the 2018 Outstanding Contribution Award at the 2nd Meeting of the 2nd Board of Directors & Award Presentation Ceremony of the China Photovoltaic Industry Association.
- In December 2018, GCL-Poly was honored as one of the “2018 Global Top 500 Technology Innovation Enterprises in New Energy Category” at the 2018 International Energy Forum and the 8th Global Top 500 New Energy Enterprises Summit.
- In December 2018, GCL-Poly was one of the Top 25 Global Renewable Energy Leaders for 2017 announced by Thomson Reuters, a global resource platform.

# FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

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As a world-leading developer and manufacturer of high-efficiency photovoltaic materials, GCL-Poly is committed to building monocrystalline silicon and polysilicon projects that require low investment and operating cost, produce satisfactory comprehensive benefits and are highly intelligent through developing smart manufacturing, increasing investment in R&D and technological transformation, and providing high-quality customized products and services. As the Chinese PV industry transforms from high-speed development to high-quality development, GCL-Poly actively responds to market changes, forges ahead, and continuously innovates. The Company begins to increase efforts in low-cost high-quality projects, grasp and guide the direction of high-efficiency photovoltaic materials technology, and lead middle and downstream partners to bring high-quality energy to millions of households.









## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### Product Quality Control

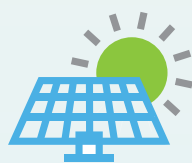
The Company acts in strict accordance with law and regulations on product responsibility including the *Product Quality Law of the People's Republic of China*, *Standardization Law of the People's Republic of China* and *Implementing Rules for the Manufacturing License for Industrial Products*. It has developed internal policies including *Corporate Standards System*, *Standard Development Rules*, *Silane Gas Standards* and *Solar Grade Polysilicon*, and set out detailed processes for raw material screening, production optimization, and management and monitoring to effectively control product quality and ensure the stability and reliability of upstream products as a solid foundation for subsequent photovoltaic products and the operation of solar farms.

We adhere to standardized production, adopt delicacy management in procurement and production processes, and constantly pursue higher product quality. During the reporting period, there was no violation against rules on the health and safety of products and services.



#### Procurement

Control the quality of raw materials, arrange incoming inspections according to procurement contracts. Materials that pass the incoming inspection will be admitted. Materials that fail to pass the incoming inspection must be returned or replaced



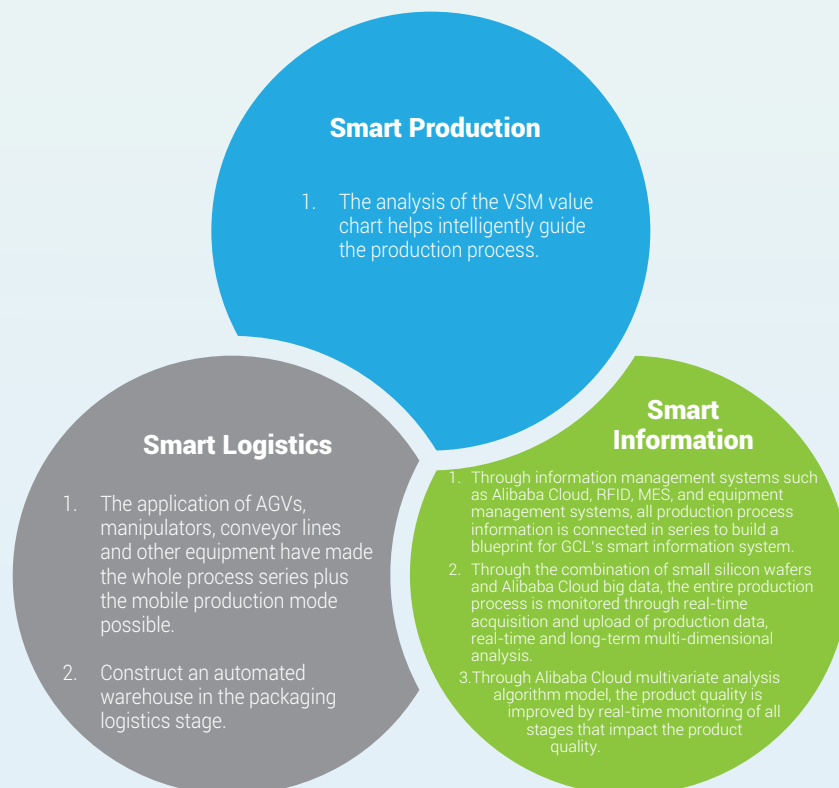
#### Production process

Perform a feasibility assessment on the quality requirements and technical characteristics of silicon wafers

## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### Smart Production

Based on standardized production and delicacy management, we vigorously explore and develop smart manufacturing. Through the intelligentization of the production system, logistics system, and information system, we realized the transformation to smart manufacturing. We continuously improve our smart manufacturing capability to save manpower and significantly improve production efficiency, driving steady improvement in product quality.



## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### Suzhou GCL Photovoltaic Technology Co., Ltd. Won "Pilot Intelligent Plants in Jiangsu Province" in 2018

In 2018, the smart manufacturing team of Suzhou GCL Photovoltaic Technology Co., Ltd. piloted the following projects with 12 workshops, i.e. automatic ingot examination line, RGV of degumming and chip inserting, robot-enabled automatic glue, integrated cleaning and sorting, central dispatching system for wafer cutting+full-process AGV, automated single-box packaging+automated pallet filming and packaging, automated loading and unloading for wafer cutting robots, RFID automated information collection, plate-free degumming, and smart warehousing. Each is new to the solar power industry. The team has reached the most advanced smart manufacturing level and promotion conditions in the slicing sector. Specifically, RFID automated information collection reduces the risk of human error and data collection and analysis of carriers effectively improves product quality.

We verified and implemented each project as planned and achieved satisfactory results. For example, our per capita efficiency increased by 30%, automation rate increased by 96%, and thereby received "Pilot Intelligent Plants in Jiangsu Province" in 2018.



### Our achievements:

During the reporting period, the qualified product rate of the Company was 94%

During the reporting period, the product return and exchange rate was lower than 0.30%

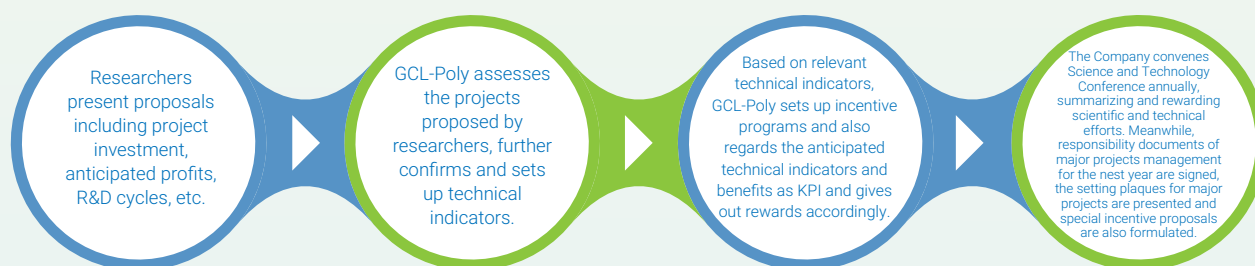


## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### Innovation and R&D

#### Technology R&D Management

GCL-Poly focuses on cultivating a professional and innovative R&D team to constantly explore cutting-edge technologies and diligently research into polysilicon, ingot grain growth, silicon wafer cutting and silicon wafer surface improvement in order to reduce cost, improve efficiency, and help GCL-Poly enhance product quality and develop core competitiveness with advantages in innovation. We spare no effort to promote in-depth integration of information technology and manufacturing technology and keep with the innovation era of the manufacturing industry. We developed policies and systems on S&T management, including *Science and Technology Work Management Standards*, *Scientific Research Projects Management Standards*, *Technological Transformation Management Standards*, and *Technological Achievements Incentive Management Measures*, to regulate the R&D, transformation of S&T achievements, incentives for and evaluation of S&T achievements of the Company.



#### Incentive Management Process of Technological Achievements

To encourage all employees to engage in research and innovation in a continuous and effective manner, GCL-Poly pays great attention to the protection of intellectual property rights in the R&D process and acts in strict accordance with laws and regulations including the *Patent Law of the People's Republic of China*, *Copyright Law of the People's Republic of China*, and *Detailed Rules for the Implementation of the Patent Law of the People's Republic of China*. The Company actively standardizes corporate intellectual property management, and has issued documents including the Intellectual Property Management Standards, Trademark Management Standards, Patent Management Measures, Trade Secret Management Measures, and Intellectual Property Incentive and Accountability Management Measures, and established an effective intellectual property management process. In addition to ensuring dedicated personnel and funds to intellectual property management, we actively develop, utilize, manage and protect intellectual property and effectively promote the innovation level of the Company.

## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### Our achievements

During the reporting period, the Company invested a total of RMB945.53 million in technological transformation and R&D

During the reporting period, the Company applied for a total of 97 patents and granted 103 patents

As of 31 December 2018, the Company has applied for 1,146 patents worldwide and was granted 646 patents

### Innovation and R&D Achievements

Through long-term research and exploration, R&D projects of the Company increased efficiency, reduced cost and solved technical problems. During the reporting period, we strengthened efforts in R&D in polysilicon, ingot growth, wafer cutting, and wafer surface improvement and achieved remarkable results.

#### GCL-Poly's Key R&D Projects in Polysilicon in 2018

**Hydrochlorination production capacity enhancement project:** The old hydrochlorination facilities of GCL Poly produced low yield compared to that of other companies. Under the hydrochlorination production capacity enhancement project, the Company cooperated with external institutions to improve the fluidised bed components of existing 50,000-tonne and 100,000-tonne hydrochlorination facilities. As a result, we improved the yield of TCS, increased our production capacity and reduced the cost. After the transformation, we increased the production capacity of the entire hydrochlorination facilities by approximately 20%.

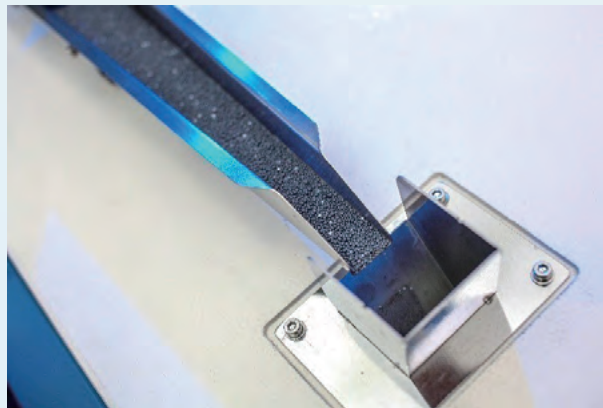


## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

**Silicon ribbon crushing technology:** To meet the increasing demand for fine-particle materials for monocrystalline silicon products in the downstream market, GCL-Poly conducted R&D in silicon ribbon crushing technology. We researched into and experimented with three methods, i.e. machinery-based crushing, temperature difference-based crushing and high-pressure pulse crushing, to optimize the distribution of crushed particles. According to the results of the experiments, all three methods are able to produce adequate particles for subsequent monocrystalline silicon processes. During actual production, the crushing method and parameters utilized are based on the needs of downstream customers to achieve the best economic benefits.



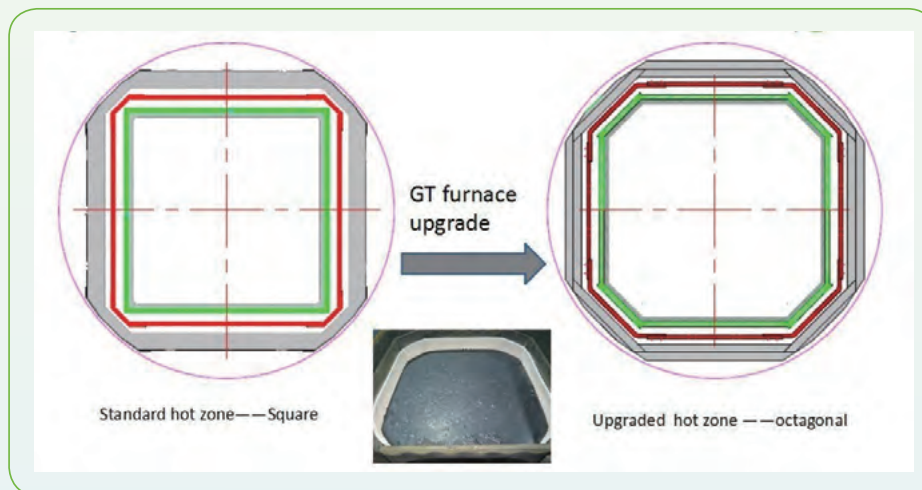
**Fluidised bed reactor:** To speed up the R&D and industrialization of the fifth-generation silicon particle fluidised bed, we make full efforts to solve nozzle blockage, wall deposition, stagnation, slugging and other problems in the production process. GCL-Poly developed and produces the fluidised bed with the largest production capacity in the world. A single set of reactors produces more than 5,000 tonnes of products each year, and the reducibility power consumption per unit is lower than 3kwh/kg. The facilities had been in operation for four months by the end of 2018. During the implementation of the project, we have overcome technical bottlenecks of large-scale silicon particle production such as equipment amplification, control of product diameter and purity, wall deposition, internal tube rupture, etc., breaking the technological monopoly of developed countries and filling the technological gap for the Chinese silicon particle industry. The project won the Second Prize for 2018 China Nonferrous Metals S&T Achievements and the Second Prize for Jiangsu Provincial Science and Technology Award.



## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### GCL-Poly's Key R&D Projects in Ingot Growth in 2018

**Octagonal silicon ingot and low-resistance co-doping technology:** To meet the market demand for high-efficiency silicon wafers, GCL-Poly worked on octagonal silicon ingots and low-resistance co-doping technology for PERC, and creatively designed the octagonal hot zone. As a result, we increased the output of traditional GT furnaces by 20% and reduced the cost by RMB2/kg. According to battery client performance, the average efficiency of octagonal low-resistance silicon wafer is 0.05–0.1% higher than that of conventional wafers. Degradation 5KWH is reduced to 0.9%. The linear efficiency of PERC battery is increased by over 0.1% on average. With MBB technology, over 70% of modules can reach 300W, which promotes the 300W era of polysilicon battery.



**Third-generation quasi-mono wafer technology:** GCL-Poly made great efforts to develop third-generation quasi-mono wafer technology that can be industrialised. The Company developed new seed crystal splicing technology, crystal boundary engineering and splicing technology to reduce dislocation multiplication and increase the ratio of quasi-mono wafer. At present, the difference between the efficiency of quasi-mono wafer and CZ monocrystalline silicon wafer is 0.3% maximum, so that quasi-mono wafer can deliver the same wattage as monocrystalline silicon wafer. The third-generation product was also much more effective than the previous two generations. Later, GCL-Poly and GCL Integrated Technology Co., Ltd. jointly released a new high-efficiency quasi-mono wafer module in the United States. The product was well received by the market.





## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### GCL-Poly's Key R&D Projects in Wafer Cutting in 2018

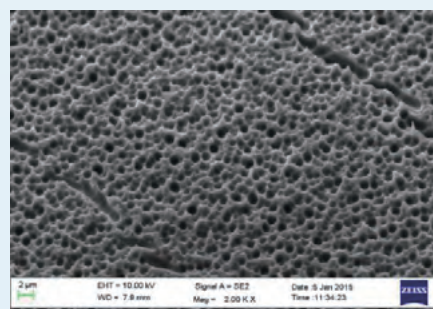
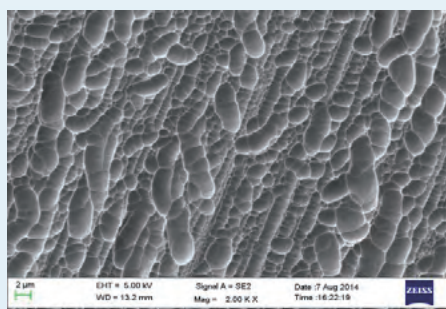
As the leader and trendsetter of diamond wire wafer cutting, GCL-Poly has increased efforts to enhance the efficiency and application of diamond wire wafer cutting. We reduced disruption due to wiring error by adjusting the wire structure of the diamond wire wafer cutting equipment. We enhanced the quality of diamond wire and resultantly the efficiency of diamond wire wafer cutting by screening the shape of brittle materials and optimizing the plating process. The project improved the cutting efficiency of solar silicon wafers by 40% and furthered reduced labor costs, equipment depreciation costs and general operating costs.

At the same time, we upgraded the fourth-generation Hennecke sorting machine which was used for examining wafers cut by multi-wire sawing. As we switched from multi-wire sawing to diamond wire cutting, the surface of the wafer became brighter. As a result, the machine was not sufficient to detect hidden cracks in diamond-wire cut wafers. After we upgraded the machine, the false positive rate dropped to 0.43% and the omission rate was 0.12%. The detection capability of the Hennecke machine for diamond-wire cut wafers was equivalent to a dedicated machine in this regard.



### GCL-Poly's Key R&D Projects in Wafer Surface Improvement in 2018

The Company developed high-efficiency light-trapping nano-cellular black silicon wafer production technology, which could perfectly solve the texture problem of diamond-wire cut wafers by texturing a sub-micron structure on the surface of the wafer and thus improving its light-trapping performance. As a result, the photoelectric conversion efficiency of black silicon battery increased from 19.80% to 20.25%. We can further improve the photoelectric conversion efficiency by combining the black silicon technology, emitter electrode, and rear surface passivation, and thereby narrowing the photoelectric conversion efficiency gap between monocrystalline silicon wafers and polysilicon wafers, and making our wafers more competitive. At the same time, continuous R&D efforts in low-cost monofacial black silicon technology further reduced the cost of black silicon, which was RMB0.1/piece lower than bifacial black silicon.



Conventional surface VS Nano-cellular surface

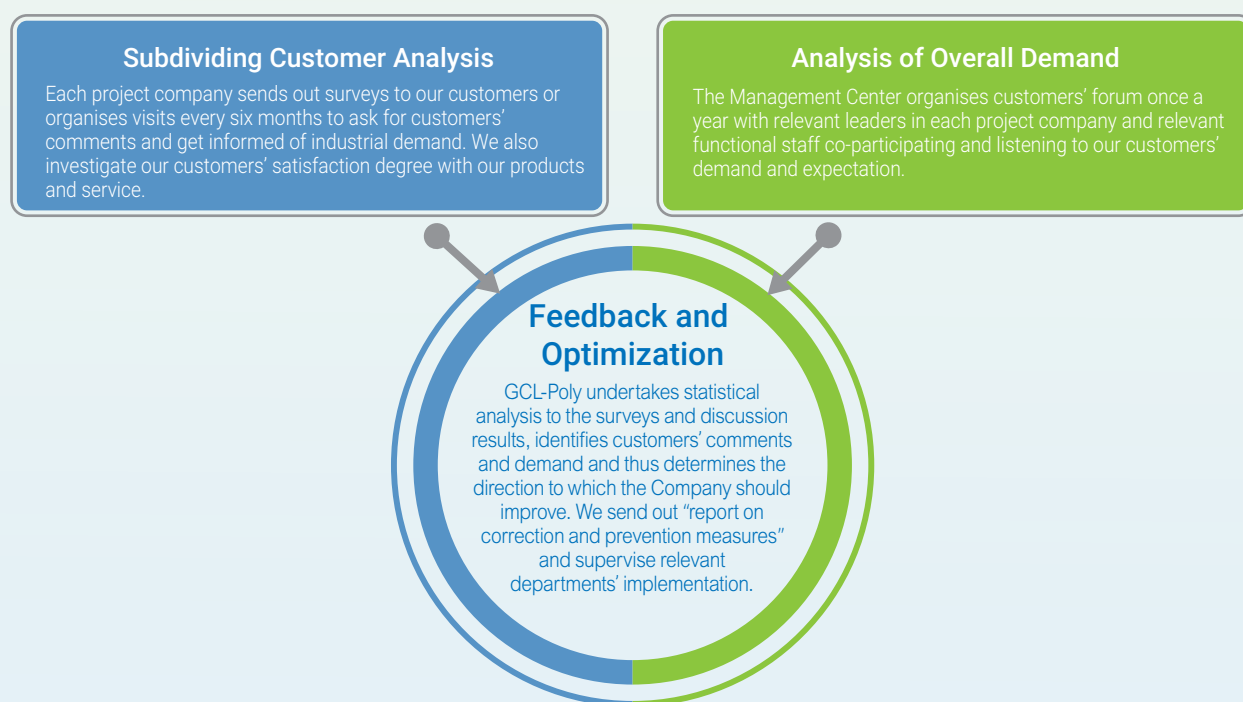
## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

### Customer Service

GCL-Poly is in constant pursuit of product quality to effectively cater to the customization needs of customers and support the excellence and development of customers. Adhering to the principle of “embracing customers”, we continuously improve the professional quality of our customer service personnel and optimize customer communication channels to meet the needs of customers. We will listen to customers’ opinions and gather customer’s needs as soon as we can, formulate solutions, get back to customers in a timely manner, and thereby win the trust and recognition of customers and build harmonious and friendly customer relationships.

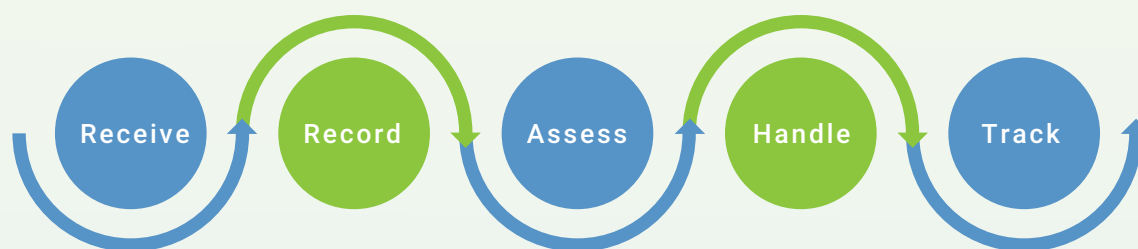
### Customer communication

We conduct daily customer communication mainly through regular and irregular mail, telephone, visit to customers, customer audit at GCL-Poly, etc. At the same time, we conduct segment customer analysis and overall demand analysis to provide customers with practical feedback and improved products. During the reporting period, we incorporated quarterly visits on product quality into customer communication channels to ensure that customer feedback could be received in a timely manner and thus improving customer satisfaction.



## FULFILL RESPONSIBILITIES AND SUPPLY HIGH-QUALITY ENERGY

A well-established customer communication mechanism ensures the timeliness of customer feedback and complaint reception. In response to customer opinions and complaints, we established and continuously improved our customer complaint handling process to timely handle problems and develop preventive measures, and thereby enhancing customer satisfaction in all aspects.



**Customer Complaint Handling Process**

During the reporting period, in order to reduce communication barriers with customers and provide more professional and accurate solutions to the problems of customers, we have taken the following measures:

- Improve the response mechanism for pre-sales and after-sales technical service needs.
- Equip customer service personnel with stronger professional skills by organizing regular training on the matching processes of battery manufacturers and component manufacturers.

### Privacy Protection

As the Company provides customers with quality services and continuously improves customer services, it also pays attention to customer privacy protection. We have taken the following steps to protect customer privacy:

1. All after-sales data is submitted to the SAP EC (Enterprise Controlling) system.
2. To ensure the security of data on office computers, the Company adopts a "one person one computer" policy. The data in any computer cannot be exported to a USB drive. Therefore, everyone except relevant personnel have no access to customer information.
3. Replace specific customer names with codes such as customer A/B/C when providing data comparison to customers to avoid data leak.

### Our achievements:

During the reporting period, the customer satisfaction score of the Company was 94.40 points, which has been on the rise for four consecutive years

During the reporting period, the Company received 29 customer complaints and settled 29 customer complaints, a 100% after-sales problem settlement rate

# VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

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Improving environment has been a shared concern of the government as well as the general public. As an enterprise in the green-power field, GCL-POL has always borne in mind the mission and dream of “Bringing Green Power to Life”. We pay attention to the influence of our products on environment and keep reducing the possible negative effects and implement the whole-process green production management covering design, production and operation. With continuous efforts to enhance our staff’s awareness of low-carbon and environment conservation, we commit ourselves to implementing the green development philosophy that “Lucid Waters and Lush Mountains are Invaluable Assets”.









## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

### Environmental Management

#### System Management

The Company attaches great importance to environmental protection and implement “responsible environmental protection”. We strictly abide by laws and regulations such as the *Environmental Protection Law of People’s Republic of China*, *Water Pollution Prevention and Control Law of the People’s Republic of China*, *Air Pollution Prevention and Control Law of the People’s Republic of China*, and *Law of the People’s Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*. We formulate relevant management measures, set up environment and security units to supervise and control environmental problems emerging from the process of production and operation. During the reporting period, we have made adjustments to our internal environmental regulations, and based on the policies of each operation, we have revised the subsidiaries regulations as shown in the following:

#### GCL-Poly Internal Policy Revision During the Reporting Period

##### ➤ GCL-Poly:

##### • Revised regulations:

Environmental Protection Regulation, Regulation on EHS of Projects, Regulation on Inspection and Hidden Danger Control, Education Management Regulation, Provision of Emergency Management, etc;

##### • Revised contingency plans:

Contingency Plan for Hazardous Chemical Incident, Contingency Plan for Environmental Pollution Incident, Contingency Plan for Radiological Incident, etc.

##### ➤ Subsidiaries:

- **Sichuan Golden Concord:** revised and released 15 regulations on safety and environmental protection;
- **Xinjiang GCL:** developed and released 18 regulations on environmental protection management;
- **GCL PV Materials (Xuzhou):** revised eight green management standards;
- **Xuzhou GCL Solar Energy:** updated two environmental management regulation documents and one regulation document of greenhouse gas emissions;
- **Yangzhou GCL Photovoltaic:** revised four regulations on green and safe production management;
- **Zhongneng Polysilicon:** revised 24 environmental protection management regulations and developing one provision.

## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

### Increasing Awareness

Initiated by the Company and responded by units at all levels, we hold training sessions on work safety and environmental protection, organize and carry out environmental protection activities to increase employees' awareness of work safety and environmental protection, enhance their capability of environmental risk prevention, and convey the concept of green and environmental protection. During the reporting period, we have invested RMB381,000 and completed environmental protection training of 23,726 employees.

#### Xinjiang GCL holds training and themed publicity activity of Law on Environmental Protection and "World Environment Day of June 5th"

In June 2018, Xinjiang GCL held training and themed publicity activity of Law on Environmental Protection and World Environment Day. On that day, Xinjiang GCL hanged banners of environmental protection on site, sent message of environmental protection via WeChat official account, projected the theme "I am the practitioner of the Initiative 'Building a beautiful China'" onto the computer screen of Control Room. It also organized staff to study the *Law of the People's Republic of China on Environmental Protection* and other laws and regulations, environmental accidents and cases, and "Eco-Environmental Code of Conduct for Citizens" made by the Unit. With activities mentioned above, Xinjiang GCL has created an atmosphere in which all the staff pays attention to, support, and participate in environmental protection, enhanced the awareness of environmental crisis, and increased employees' awareness of ecological civilization. Meanwhile, each department, taking the themed activity of "World Environment Day" as an opportunity, actively organizes environmental protection activities in construction, residential and office areas to create a clean, tidy and comfortable working and living environment.



### Our achievement:

During the reporting period, the coverage rate of environmental protection training was 85%

## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

### Green Production

GCL-Poly pays attention to the possible influence of its products on environment. While committed to improving quality and reducing costs, it makes efforts to save energy, reduce consumption, and achieve recycling of materials. As an industrial leader, it tries to integrate China's polysilicon to the world's highest level. GCL-Poly controls the use of resources and discharge of pollutants throughout the whole process of design, production and operation, sets up and puts into practice internal policies such as *Management Regulation for Three Wastes* and *6S Management Standard for Office Areas* to standardize the management of production and operation. In order to improve its capability of environmental protection, GCL-Poly also actively puts manpower, finance and material resources into development of technology and equipment.

### Water Resources and Wastewater Management

Strictly abiding by the *Water Law of the People's Republic of China*, the *Water Resources Protection Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China* and the *Law of the People's Republic of China on Environmental Impact Assessment*, we are committed to reducing water consumption while ensuring capacity of production, and to reducing the negative effect of production and operation on environment. We have developed and implemented internal policies including *Control Procedures of Wastewater Discharge*, *Control Procedures of Wastewater Discharge in the Plant*, *Regulation on Energy and Water Conservation* and *Comprehensive Wastewater Discharge Standard*. On the basis that rainwater and sewage are separated and rainwater is recycled, we test the concentration of pollutants in the total discharge outlet, so that we ensure all types of pollutants are satisfied the standard of being discharged into a municipal sewage treatment plant.

Regarding project management, we adopt a new cooling technology. We promote the use of water-saving equipment and appliances, and choose the sewage treatment process featuring stable operation and low energy consumption to promote water recycling and achieve zero discharge of wastewater. In addition, in the slicing process, we carry out research on and implementing the "New Operation Plan of the Diamond Wire Slice Slurry System". While meeting the demand to increase production capacity, we, through the experiment on and demonstration of the small circulation system and the coolant performance test of gradual introduction of low chemical oxygen demand (COD), we realize the control of COD from the source of use, thereby reducing the COD value of the discharged sewage and the sewage treatment pressure, and ensuring that the effluent water quality meets the standards.

## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

### Wastewater Treatment in Xinjiang GCL

Due to the limited water resources in Xinjiang, we invest in the construction of domestic wastewater treatment facilities and production wastewater treatment facilities to process the wastewater from the production activities of the daily business operation of Xinjiang projects and from employees' live. By doing so, we can ensure that all processed wastewater can be reused and realize "No Discharged" of wastewater.



| Water Resources   | Unit          | 2017      | 2018              |
|---|---------------|-----------|-------------------|
| Tap water consumption <sup>1</sup>                                    | 10,000 tonnes | 711.55    | <b>648.96</b>     |
| Surface water consumption   | 10,000 tonnes | 559.99    | <b>433.59</b>     |
| Recycled water consumption  | 10,000 tonnes | 34,474.77 | <b>133,336.16</b> |
| Wastewater discharge  | 10,000 tonnes | 879.58    | <b>830.78</b>     |
| Total water consumption density per megawatt silicon wafer production | Tonnes/MW     | 0.0532    | <b>0.0448</b>     |

(As of 31 December 2018)

### Our Achievement:

During the reporting period, the total amount of recycled and reused water by GCL Poly has increased from 344,747,700 tonnes in 2017 to 1,333,361,600 tonnes, up by 286.76%

<sup>1</sup> GRI 102-48 In this year, the Company revised the data unit of water usage in 2017, resulting in the change of water usage.

## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

### Material Management

During the process of production and operation, we need to use dozens of materials, such as silicon powder, silicon carbide and steel wire. To ensure the optimum cost, quality and environmental friendliness, we carry out full experiments on each material. We select environmentally-friendly materials while ensuring production and operation. At the meantime, we actively develop new technologies and reduce material consumption through the improvement of production technology. By using the diamond wires, during the reporting period, we decreased the use of silicon carbide dramatically during the cutting process.



### Innovative Achievement — Material

We have increased our material recovery rate from 50% to 100% by using the ultra-large-scale clean production technology of GCL polysilicon with independent intellectual property rights. This technology has been adopted by Zhongneng Polysilicon Base of 60,000 tonnes and Xinjiang GCL Base of 60,000 tonnes to achieve the full-recycling of materials. In addition, the Xinjiang base pays attention to the matching between technique and equipment and reduces energy consumption. Moreover, it independently develops techniques to recycle materials and achieves zero-discharge of materials.



## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

| Material            | Unit                | 2017      | 2018              |
|---------------------|---------------------|-----------|-------------------|
| Silicon ingot       | Tonnes              | 45,938.42 | <b>120,538.22</b> |
| Silicon carbide     | Tonnes              | 13,356.36 | <b>1,296.96</b>   |
| Dicing solution     | Tonnes              | 12,356.36 | <b>3,213.84</b>   |
| Packaging materials | Tonnes <sup>1</sup> | 674.64    | <b>4,361.19</b>   |

(As of 31 December 2018)

### Waste Management

According to the *“Three Waste” Management Regulations* and the *Management and Control Procedures for Waste and Hazardous Waste*, we categorize general waste and hazardous waste. In addition, we require all subsidiaries to conduct classified collection of recyclable and non-recyclable waste, and invite qualified recycling and operating companies to recycle and comprehensively utilize the waste. Moreover, we strictly requires that all project contractors take the responsibility to sort and recycle flammable materials and construction waste in their operation areas, and clean waste in a centralized manner to reduce the negative impact of waste on the environment.

| Waste <sup>2</sup>                  | Unit   | 2017      | 2018             |
|-------------------------------------|--------|-----------|------------------|
| Hazardous waste                     | Tonnes | 15,882.62 | <b>946.83</b>    |
| General waste (Non-hazardous waste) | Tonnes | 43,834.10 | <b>28,549.69</b> |
| Recyclable waste                    | Tonnes | /         | <b>42,550.94</b> |

(As of 31 December 2018)

### Exhaust and Noise Management

Pursuant to the *Integrated Emission Standard of Air Pollutants*, the *Emission Standard of Air Pollutants for Boilers*, the *Procedures for Controlling the Production Exhaust Emissions*, and other laws and internal policies, we carry out exhaust management. For the tail gas generated in the production process, we mainly recycle it through the exhaust absorption devices to reduce the pollution to atmospheric environment. For the dust generated in the production process, we use dust collectors, dust removal and purification devices to minimize its damage to the health of operators.

#### High-tech Nano Exhaust Treatment

GCL High-tech Nano New Material Industry Group Company (hereinafter referred to as the “High-tech Nano”) affiliated to Zhongneng Silicon absorbs the hydrogen chloride gas and chlorine gas from the production process through the new reaction tail gas absorption treatment plant. At the same time, High-tech Nano collects and treats non-organized dust by the cloth bag filter in the packaging workshop. Through a series of waste gas treatment devices, High-tech Nano has achieved:

- The absorption efficiency of hydrogen chloride by the water scrubbing tower is 60%. The treatment efficiency of hydrogen chloride by the alkaline tower is 99%. The overall efficiency is 99.60%;
- The treatment efficiency of chlorine by a single alkaline tower reaches 99.90%, and the overall efficiency is 99.99%.

<sup>1</sup> GRI 102-48 In 2017, the disclosing unit of packaging materials in the report was actually “kg”. In 2018, the Company took “tonnes” as the statistical unit of packaging materials, and expanded the statistical scope, resulting in an increase in the use of packaging materials.

<sup>2</sup> In 2018, due to the dissolution of some subsidiaries, it was difficult to collect waste data, which resulted in a decline of this part of the statistical data.

## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

### Exhaust Treatment in Xinjiang GCL

The process waste gas, replacement purging waste gas, accident waste gas and waste generated by equipment protection of Xinjiang GCL projects need to enter the process waste gas treatment system, and be collected through the gas collection hood and then be washed through the water ejector and washing tower. After treatment, the removal rate of hydrogen chloride is up to 99%, and the processed waste is discharged through a 23-meter-high exhaust pipe to reduce its pollution to the atmosphere.

| Emission                      | Unit   | 2017  | 2018   |
|-------------------------------|--------|-------|--------|
| Nitrogen oxides               | Tonnes | 94.97 | 126.00 |
| Sulphur oxides/sulfur dioxide | Tonnes | 2.70  | 1.44   |
| Dust                          | Tonnes | 16.07 | 24.03  |

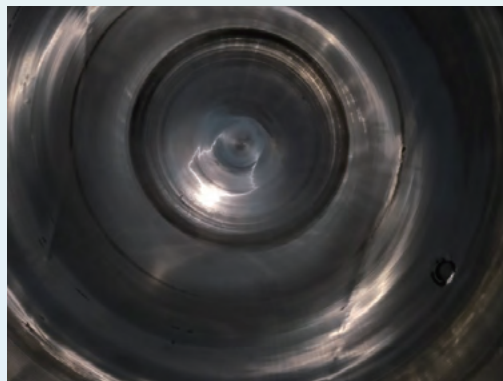
(As of 31 December 2018)

### Low-carbon and Environmental Conservation

With gratitude for resources on the Earth, we value all the resources provided by the Nature. We strictly observe the *Law of the People's Republic of China on Conserving Energy*, the *Electric Power Law of the People's Republic of China*, the *Law of the People's Republic of China on Promoting Clean Production*, the *Renewable Energy Law of the People's Republic of China*, the *Decision of the State Council on Strengthening Energy Conservation*, the *Notice of the State Council on Further Enhancing the Efforts to Phase out Outdated Production Capacities*, the *Measures for Key Energy-Consuming Units to Conserve Energy and for Key Electric power-Consuming Units to Save electric Power*, and so on. We also formulate internal policies such as *Regulations on Energy and Water Conservation* and *Manual of Energy Regulation* and put them into practice. With standardized and effective management of energy and via approaches of awareness enhancement and technology upgrading, we have reduced energy consumption and improved energy efficiency.

### The Project to Improve the Quality of Polysilicon and Reduce Energy Consumption

We implement a project which can improve the quality of polysilicon and reduce energy consumption at the same time. To that end, we selectively spray and polish the inner wall of the reduction furnace by using specific spraying materials which bring no pollution to products. By doing so, we shield metal ion dissipation of metal underlayer material and achieve heat reflection effect. After the implementation of the project, the resistivity of polysilicon increases by more than 10%, and the electric power consumption per kilogram of polysilicon decreases by about 5%.



## VALUE THE SOURCE OF LIFE AND ACHIEVE GREEN DEVELOPMENT

In addition, we call on our staff to reduce energy consumption in their daily work and life through the green office initiative.



- Repair any dripping or damaged faucet timely repair to prevent water leaks;



- Adjust the air conditioner temperature according to outdoor temperature;
- The last person leaving the office is responsible for making sure that all power is off;



- Promote paperless office and using online communication;
- Use both sides of paper as much as possible;
- Protect office equipment and minimize the waste of stationery;



- Encourage employees to travel by public transports instead of private cars.

| Energy   | Unit   | 2017         | 2018         |
|--|--|--------------|--------------|
| Coal   | 10,000 tonnes                                      | 1.78         | 1.47         |
| Natural gas  | 10,000 cubic meters                                | 7,286.78     | 4,575.82     |
| Diesel   | Tonnes   | 35.10        | 15.77        |
| Purchased Electricity <sup>1</sup>   | 10,000 kWh   | 423,186.21   | 287,344.48   |
| Self-generating electricity  | 10,000 kWh   | 270,001.00   | 287,479.66   |
| Steam  | Tonnes   | 4,052,168.80 | 3,220,137.00 |
| Direct energy consumption  | Tonnes of standard coal                            | 622,836.71   | 480,219.30   |
| Indirect energy consumption  | Tonnes of standard coal                            | 520,095.86   | 353,146.40   |
| Comprehensive energy consumption   | Tonnes of standard coal                            | 1,142,932.57 | 833,365.70   |
| Comprehensive energy consumption density per megawatt silicon wafer production | Tonnes of standard coal/MW                         | 47.82        | 11.88        |
| Scope 1 greenhouse gas emissions   | Equivalent to 10,000 tonnes of CO <sub>2</sub>     | 0.80         | 0.72         |
| Scope 2 greenhouse gas emissions   | Equivalent to 10,000 tonnes of CO <sub>2</sub>     | 294.44       | 197.50       |
| Total greenhouse gas emissions <sup>2</sup>                                    | Equivalent to 10,000 tonnes of CO <sub>2</sub>     | 295.24       | 198.22       |
| Total greenhouse gas emissions density per megawatt silicon wafer production   | Equivalent to 10,000 tonnes of CO <sub>2</sub> /MW | 0.0124       | 0.0082       |

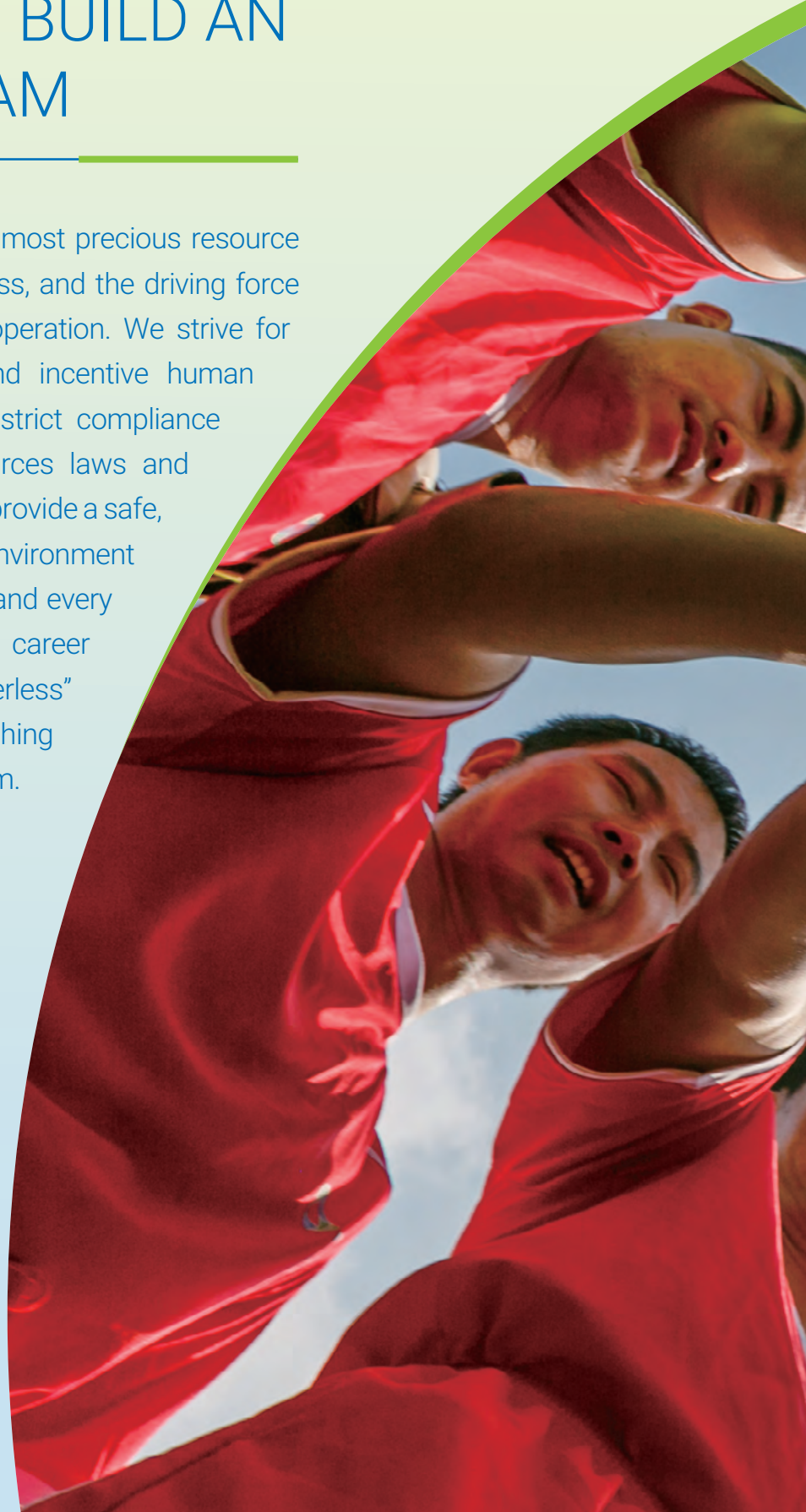
<sup>1</sup> GRI 102-48 In this year, the Company made a unified revision to the statistical unit of purchased electricity in 2017, resulting in changes purchased electricity's value in 2017.

<sup>2</sup> GRI 102-48 This year, the Company made a unified revision of the purchased electricity in 2017, which resulted in the change of the greenhouse gas emission value.

# UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

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GCL-Poly regards talents as the most precious resource in enterprise development process, and the driving force for its lasting and sustainable operation. We strive for a standardized, orderly, fair and incentive human resources operation system in strict compliance with the relevant human resources laws and regulations. Besides, we hope to provide a safe, healthy and diversified working environment for employees and enable each and every employee to achieve his or her career aspirations by creating a “borderless” cooperative culture and establishing a fair talent selection mechanism.







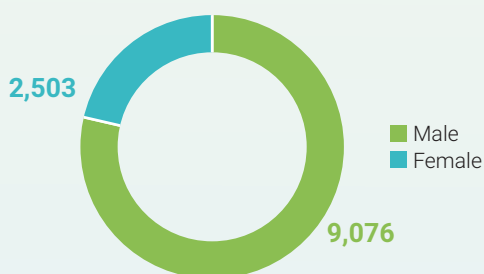
## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Employee Overview

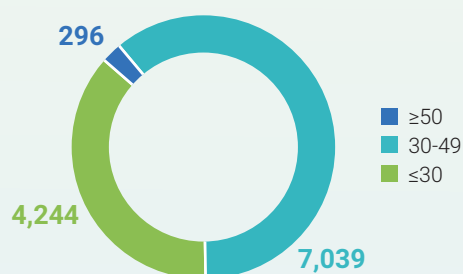
We firmly believe that talent is one of the important driving forces for our continuous development and progress, as well as the primary wealth for enterprise development. We have internally formulated the *Recruitment Management Standards* and the *Internal Recommendation Management Standards* for the purpose of standardizing the management of talent recruitment. In recruitment, we would screen candidates based on academic qualifications, experience, skills, potential and interview performances, and do not consider other factors such as gender, age, marital status, race or disability. Besides, we strictly abide by the requirements under the *Labor Law of the People's Republic of China* and strictly prohibit the employment of child labor and forced labor. In the case of any illegal use of child labor, forced labor, and discrimination, etc., we will impose disciplinary sanctions in accordance with the relevant provisions.

During the reporting period, there were 11,579 employees in the Company, specifically as follows:

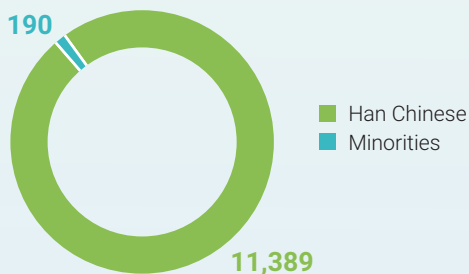
Number of Employees by Gender (Person)



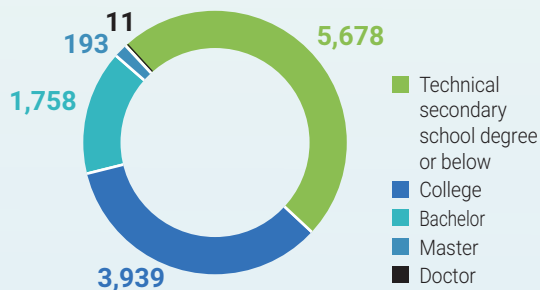
Number of Employees by Age Group (Person)



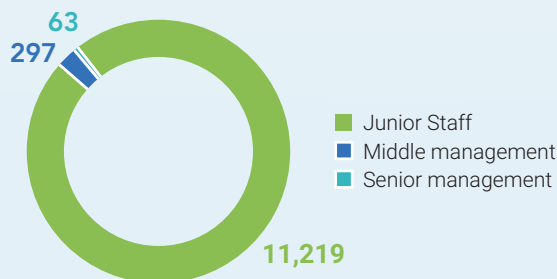
Number of Employees by Ethnic Background (Person)



Number of Employees by Educational Background (Person)

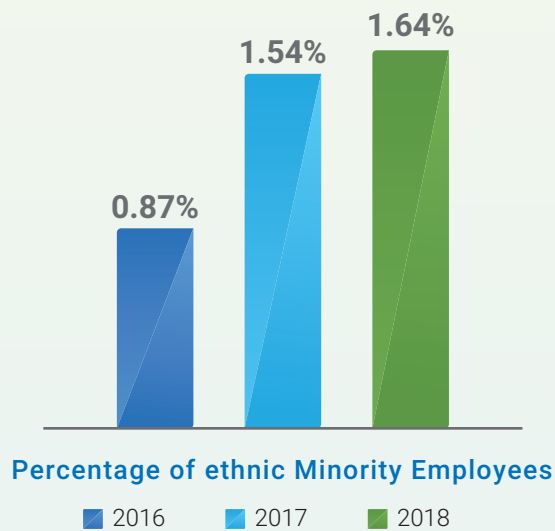


Number of Staff by Position Levels (Person)



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

Further, we have vigorously and strongly promoted local recruitment policy and implemented proportional recruitment of employees from Han and minority nationalities. During the reporting period, the proportion of employees from minority nationalities in GCL-Poly has been rising for three consecutive years:



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Compensation and Benefits

We respect human rights, strictly abide by the labor standards and relevant laws and regulations of the business operation bases worldwide, and safeguard the legitimate rights and interests of employees according to law. Based on the *Social Insurance Law of the People's Republic of China*, the *Salary Management Standards for PV Enterprises*, the *Benefits Management Standards* and the *Employee Reward and Punishment Management Standards* and other laws and regulations, as well as the Company's internal management system, we have unified management of employees' compensation and benefits. In 2018, we amended the *Employee Attendance and Vacation Management Standards* to ensure legitimate rights and interests of employees and promote open and transparent management of human resources.

In order to show our cherish for talents, we provide the following benefits for employees based on comparison with internal and external industrial peers in benefit level:



- Provide employees with regional subsidies based on the project operation area;



- Provide employees with pension insurance, medical insurance, work injury insurance, unemployment insurance, the Housing Provident Fund, commercial medical insurance, employers' liability insurance, etc.;



- Ensure that employees are entitled to legal holidays;
- Ensure that ethnic minority employees in project operations areas are entitled to holidays of their ethnic groups;
- Ensure that employees are entitled to parental leave;



- Ensure that pregnant employees are not assigned to work night shifts;
- Ensure that pregnant employees can enjoy maternity leave and pay and return to their previous position;
- Provide lactation rooms and breastfeeding breaks for female employees.

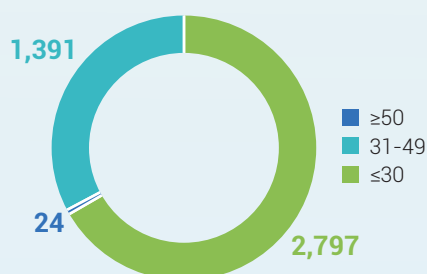


## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

| Benefits of Employees for Xinjiang Project  |   |
|---|---|
| <p>Regardless of its abundant natural resources and magnificent scenery, Xinjiang base has harsh natural environment. At present, the Project only involves more than 800 employees, half of them are from Xuzhou, while the other half is a newly emerging force absorbed by GCL-Poly based on localization through on-campus recruitment and directed education of vocational colleges.</p>   |   |
| <p><b>Benefits of Employees Supporting Xinjiang Project</b></p> <p>To subsidize the employees supporting the Xinjiang Project, we provide the following benefits for the employees involved in the Project:</p> <ul style="list-style-type: none"> <li>Grant travel allowance and home leave to Xinjiang Project personnel appointed by the Group, implement the policy of "45-day attendance and 15-day vacation", effectively avoid the objective conditions of vast territory and remote project site in Xinjiang, and reimburse the transportation expenses incurred for family visit;</li> <li>Encourage family members of employees under the Project to work in Xinjiang together;</li> <li>Grand subsidies ranging from RMB6,800 to RMB20,000 based on position levels;</li> <li>Entitle the children of employees under the Project to educational grants in primary and secondary schools.</li> </ul> | <p><b>Benefits of Employees from Minority Nationalities for Xinjiang Project</b></p> <p>In order to show our respect for minority customs, we offer the following benefits to minority employees in Xinjiang Project:</p> <ul style="list-style-type: none"> <li>Open Muslim Restaurant;</li> <li>Set up a one-to-one oriented guidance mechanism;</li> <li>Observe minority holidays;</li> <li>Set an excellent example for minority personnel.</li> </ul> |

In addition, despite the common downturn in the peer market, we still maintain our original benefits, salary, bonus and post, and keep staff morale and retain key talents through corporate culture promotion and model power transmission. During the reporting period, the new of the Company were as follows:

Number of New Hires by Age Group (Person)



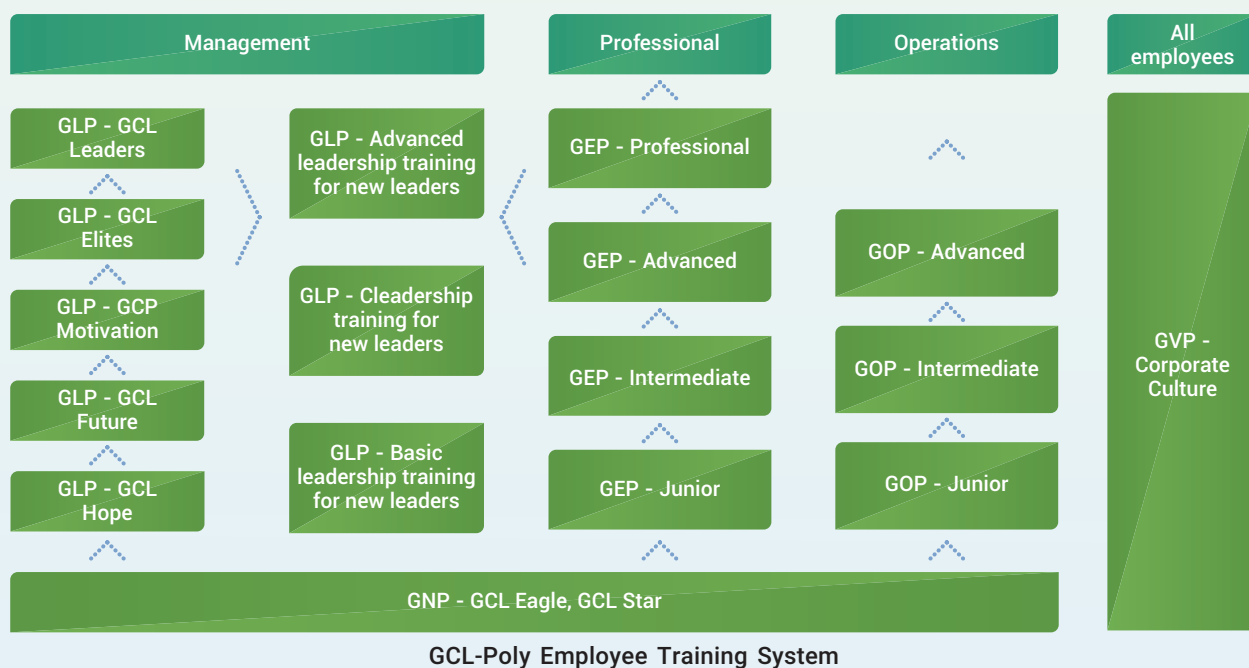
## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Talent Development

The rapid scientific research iteration in the new energy industry imposes practical challenges to both enterprises and talents. We hold that enterprises need to provide fertile soil for talent growth, so as to promote employees to enhance their abilities and give full play to their talents in their work through training and education, performance management, and incentive mechanism. In order to meet the development needs of employees in different stages and fields, we manage employee development based on *Training Management Standards*, *Performance Assessment Management Standards for Functional Personnel*, *Measures for Management of Promotion and Promotion of Employees* and *Internal Recommendation Management Standards*.

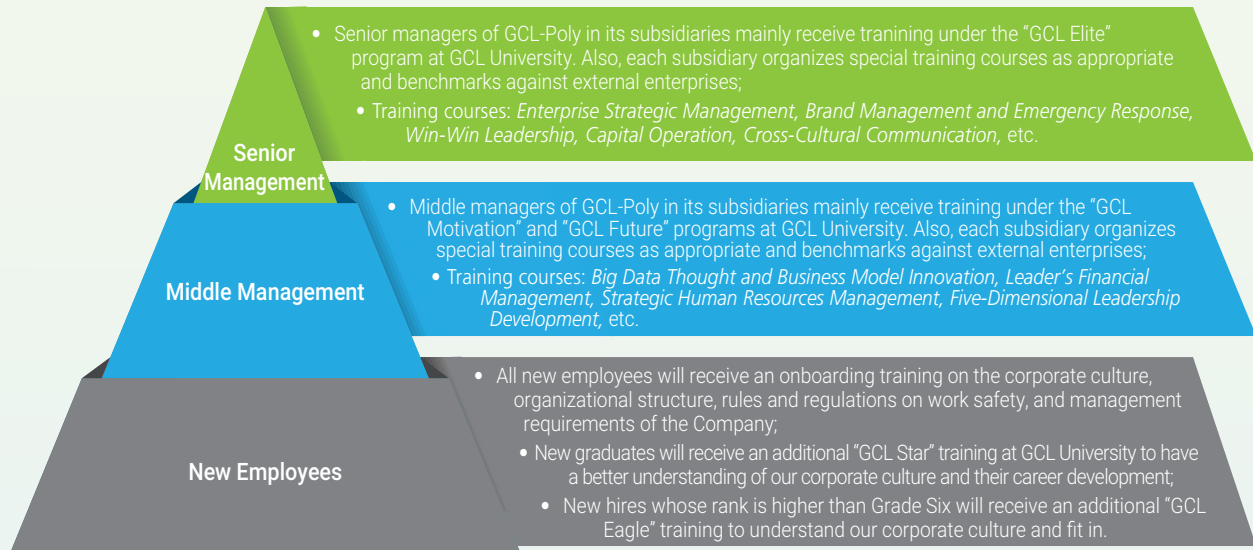
### Talent Training

In 2018, GCL-Poly launched the Leadership – New Leaders Project, which was designed to enhance the strategic insight, operation capacity and market awareness of senior managers, thus providing the supporting professional competence for the third strategic transformation of the Group. In addition, the Company established GCL University for customized training for employees of different levels. During the reporting period, the total number of employees covered by training was 83,296, with the number of training hours totaling 15,940, the average length of training time per employee was 72 hours.



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

The specific training objectives and contents for new employees, middle management and senior management are as follows:



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### “Master Instructing Apprentice” Employee Training

For the purpose of improving and enhancing the skills of operators, the Company adopts the “Master Instructing Apprentice” employee training mode. The skilled masters guide and lead the “apprentice” to hone the operating skills in the actual operation, which enables the newcomers to constantly learn skills while such masters can also continuously identify and improve the possible deficiencies in skills operation, thus ensuring the continuous skills improvement of our operators.



### Employee Promotion

We value the efforts and contributions of employees, and have established a sound performance management and career promotion mechanism to attract, retain and motivate them. We provide employees with career development channels for different sequences, such as “professional sequence”, “management sequence”, “technical sequence” and “operation sequence”, and employees can be transferred among different sequences after passing certain examinations. In order to ensure the professional level and encourage employees to continuously improve themselves, we require that employees in “management sequence” must reach a certain level in “professional sequence” before they can be promoted in “management sequence”. In addition, in the event of lateral transfer of employees, we conduct training in management theory through “GCL Hope”. We will carry out further training for different professional contents in the next level of training, and train the employees on knowledge they may need in the future in the training of different echelons, so as to ensure timely talent supplement in case of job vacancies.



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Occupational Health and Safety

We regard employees as our family members and treat occupational health and safety of employees as the first priority of human resources management. During the reporting period, we actively responded to the national requirements of implementing laws and regulations such as the *Regulations on the Prevention and Control of Pneumoconiosis*, the *Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used*, the *Measures for the Supervision and Administration of Employers' Occupational Health Surveillance*, strictly abided by the *Company's Responsibility System for Safety, Occupational Health and Environment Management*, the *Management System of Articles (Appliances) for Labor Protection*, the *Regulations on Management of Work Subject to High Temperature and Heatstroke Prevention and Cooling*, *Regulations on Occupational Health Management of Radioactive Sources*, *Occupational Disease Prevention and Control Plan and Implementation Program*, *Responsibility System for Occupational Disease Prevention and Control*, *Occupational Disease Hazard Warning and Informing System*, *Occupational Disease Prevention and Control Publicity, Education and Training System*, *Implementing Maintenance and Repair System for Protection Against Occupational Hazards*, *Management System for Monitoring and Evaluating Occupational Hazard Factors in Workplace*, and other internal policies and systems, established and developed the concept of safe production development, and further improved human resources management and OHSAS 18001 occupational health and safety management system construction, vigorously enhancing the overall level of energy safety production. In the meanwhile, we have revised a number of management policies at the Group level on occupational health and safety production of employees, and amended the occupational health management and EHS accident management in combination with the operation of local companies and local laws and regulations.

#### Company

- Resolve safety goals in "both horizontal and vertical ways" and develop work safety goals;
- Require divisions at all levels to sign a *Letter of Responsibility on Safety and Environmental Protection Goals*.

#### Plant/ Units

- Establish a detailed and complete safety standardization management handbook, procedure documents, rules and regulations, and a safety technical operation process, and revise the documents on a regular basis;
- Establish a safety hazard detection system.

#### Team

- Actively organize and participate in various safety training, live demonstrations, competitions, and appraisals;
- Enhance publicity and education through display board and other media.

### Three-level Safety Management Network

## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Safety Production Promotion

We highlight the promotion of safety awareness, as evidenced by organizing affiliated enterprises to carry out publicity and education activities such as *Law on Prevention and Control of Occupational Disease* publicity week, safe production month in June, fire control month in November and Production Safety Law publicity week, and traffic safety publicity day, thus enhancing employees' safety awareness. During the reporting period, we organized and carried out EHS related training totaling 95,373.50 hours, with a total of 44,051 employees trained, and with an average EHS training hour for per employee of 8.24 hours. According to the criteria specified in *Byelaw Governing Reporting, Investigation and Handling of Production Safety Accidents* (Decree No. 493 of the State Council), there were no general and above production safety accidents in the Company during the reporting period.

### Our achievements:

During the reporting period, our work-related injuries rate per 200,000 hours was 0.26%, and the number of employees suffering from work-related deaths was 0



#### Safety Month

The Safety Month event enhanced the first-aid skills of managerial staff in an interactive manner and improved the safety awareness and emergency response capability of employees.

#### Fire Safety Month

The Company invited the head of fire services at the industrial park to train employees on fire safety and equip them with basic fire protection knowledge.



#### Work Safety Law Publicity Week and Road Safety Publicity Day

The Company organized a Work Safety Law Publicity Week and a Road Safety Publicity Day themed on "Details Matter, Travel Safely and Civilly". During the event, the administrative department and the safety and environment department of Ningxia GCL Monocrystalline inspected all vehicles of the Company and carried out publicity on civil travel. At the biweekly meeting of Safety Officers, the departments educated and trained Safety Officers from various departments and workshops to enhance the safety awareness of frontline workers.

#### Publicity Week of Law on prevention and treatment of occupational diseases

The Company enhanced work safety education by holding meetings and setting banners to improve employees' understanding of the *Occupational Disease Prevention and Treatment Law*, ensure that employees recognize the importance of wearing and using safety production equipment in a proper way, and enhance employees' awareness of self-protection.



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Training of Work Safety

We require subsidiaries at all levels to fulfill their responsibilities of industry safety supervision according to law, implement responsibility for local safety production management, formulate comprehensive emergency plans, special emergency plans, and on-site disposal plans in light of their own production and operation conditions, and strengthen safety risk management by clarifying emergency reporting procedures, risk assessment reports and emergency resource investigation reports. Besides, we require all new employees to participate in three-level (company-level, functional department/workshop-level, post-level) environment security education, employees must pass the assessment before they can take up the post.

#### Local Companies Carry out EHS Related Training

##### EHS Training of Xuzhou GCL Photovoltaic

During the reporting period, Xuzhou GCL Photovoltaic conducted 27 EHS training sessions, covering 32,395 trainees. Besides, life safety knowledge, work-related injury prevention, environmental risk factors identification, workshop environmental protection control, carbon emissions system and other knowledge, and the contents concerning three-level safety education and training for related new employees are pushed on WeChat official account platform.



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### EHS Training of Xinjiang GCL

During the reporting period, in order to enhance employees' safety awareness and risk response ability, Xinjiang GCL organized the following safe production training activities:

- Six Job Hazard Analysis (JHA) training sessions involving 229 participants were conducted;
- One EHS managers' responsibility awareness training involving 25 EHS management participants was conducted;
- One work safety standardization training involving 30 EHS management participants was conducted;
- Safety learning activities and examinations for all staff were conducted, involving a total of 885 participants, with the pass rate for the training examinations reaching 100%;
- Four training sessions for principals and safe production managers were conducted, with a total of 127 people obtaining the certificate;
- Two training sessions for persons in charge of fire safety and building and structure firefighters were conducted, with a total of 12 people obtaining the certificate;
- Two training sessions on radiation safety and protection were conducted, with a total of 10 people obtaining the certificate;
- One training session on operation of chemical process automation control instrument was conducted, with a total of 11 people obtaining the certificate;
- One training session on welding and thermal cutting was conducted, with a total of 2 people obtaining the certificate;
- One training session on registration of hazardous chemicals was conducted, with a total of 1 person obtaining the certificate;
- Two continuing education training sessions for certified safety engineers were conducted, with a total of 9 people obtaining the certificate.





## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Emergency Drill for Production Safety

We can improve employees' awareness of safety risks prevention and their ability to respond to safety risks by carrying out emergency drills, so as to minimize the loss of life and property in the case of emergency while nipping risks in bud. During the reporting period, the Company actively participated in fire emergency evacuation drills and Fire Games organized by GCL Energy Center to strengthen employees' safety awareness.

#### Local Companies Conduct Emergency Drills

##### Emergency Drill of Xinjiang GCL

During the reporting period, Xinjiang GCL organized a number of emergency drills, including company-level emergency drills for hazardous chemicals leakage accidents, fire escape emergency evacuation drills for people stationed in quadrangle dwellings and cabins, etc., thus integrating emergency safety knowledge and practical training through safety drills.



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Emergency Drill of Henan GCL Photovoltaic

During the reporting period, Henan GCL Photovoltaic organized and carried out several emergency drills at different levels in response to the call of GCL-Poly to vigorously implement safe production, including:

- 2 company-level drills;
- 40 workshop-level and team-level emergency drills;
- 8 training sessions on various equipment.



### Employee Care

We encourage employees to communicate with the management, and cherish every opportunity to communicate with employees. By establishing democratic management system, cultivating the sense of ownership of employees, the Company regularly communicates with its employees through president's biweekly meetings, departmental meetings and team meetings, and via WeChat official account, and Lanxin, etc. Besides, we listen to the suggestions or opinions of employees through managers' mailboxes and general manager hotline, so as to make positive adjustments to the management of the Company in a timely manner<sup>1</sup>. In addition, we strive to create a harmonious and friendly working environment and actively forming GCL "home" culture, aiming at ensuring the balance between work and life of employees by "considering what employees want and meeting what employees need". During the reporting period, the Company actively carries out various employee activities and Party building work through internal and external propaganda, thus uniting the staff and enhancing the fighting strength of employees.

<sup>1</sup> GRI 102-41

## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### Cultural Propaganda

We combine external promotion with internal publicity for cultural propaganda. Externally, we publicize our business philosophy of attaching importance to scientific and technological development, actively practicing environmental protection and corporate social responsibility by media propaganda and inviting the public to visit the enterprise. Internally, we promote the spirit of GCL and create the atmosphere of a "home" through newspapers, magazines and publicity and interaction on WeChat official account platform.



Internal and External Cultural Publicity Mechanism

### Eco-tour of "GCL Photovoltaic Cup" in High-tech Zone (External Promotion)

On 16 May 2018, 30 volunteers followed the host of Suzhou Radio and Television Station to visit GCL-Poly workshop to understand the production process of silicon wafers. The whole event was broadcast live, attracting 11,000 people to watch online. In the meanwhile, environmental cartoons solicitation was launched for the public, and five excellent works were selected and published to promote the spirit of energy conservation and environmental protection.



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM

### WeChat Content Planning (Internal Publicity)

We take the advantages of rapid publication and timely push of WeChat official account platform, and improve the dissemination effect and efficiency of corporate culture, employee activities, management policies and other contents through WeChat content planning.



### Employee Activities

During the reporting period, in order to improve the cohesion of employees, enhance the communication and interaction among employees, and strengthen the centripetal force and sense of identity of employees, the Company carried out rich and colorful and practical employee activities.



Employee Activities of GCL-Poly in 2018



## UNITE THE STRENGTH OF THE STAFF TO BUILD AN EFFICIENT TEAM



The 4th Table Tennis and Badminton Games

### “Charming Girls, Happy Life” March 8 DIY Baking Activities

In order to make the busy female employees in the production line feel the care and love of the enterprise and relieve their pressure in the workplace, in the afternoon of 8 March 2018, Xinjiang GCL Polysilicon League Committee organized and carried out the “Charming Girls, Happy Life” March 8 DIY Baking Activities. At the event site, more than 60 female employees from various departments and branches gathered in the staff restaurant. The general manager of the Company delivered a speech for the event, extended his gratitude for the female employees for their hard work in the past year, and called on all of them to be heroines in the new era and make greater contributions to the high-quality development of the enterprise.



# WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

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GCL-Poly cooperates with suppliers, midstream and downstream enterprises in the industry, governments, scientific research institutes, public welfare organizations and other partners, to achieve common progress in product quality improvement, advanced technology research and development, and social public welfare practice, and to jointly contribute to the creation of photovoltaic innovation ecological chain and the building of a harmonious and beautiful society. We will continue to optimize our own management methods, strive to exert the influence of industry leader, and lead the common development and prosperity of the whole industry and even the whole society.









## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

### Supply Chain Management

The stable product quality of GCL-Poly is the premise of ensuring the effective operation of the whole photovoltaic industry chain, and the stable supply quality of our suppliers is the primary condition to ensure the quality of our products. We not only cooperate with suppliers to provide high quality silicon products for midstream and downstream enterprises, but also play an exemplary role in the process of supply chain management, driving suppliers to fulfill corporate social responsibility and build a better society with us.

The Company formulates *Supplier Management Standards* to regulate supply chain management. Relying on the supplier management portal system, it builds a dynamic management mode of full supply chain life cycle integrating sourcing management, information release, supplier management, supplier service center and other functions. During the reporting period, we took the following measures to improve the level of supply chain management:

Realize the unification and standardization of basic data such as material coding, and supplier coding by means of informationization, laying a foundation for integration of finance and business and high integration, and improve the standardization and visualization of supply chain management.

Realize a complete supplier management and evaluation system by means of supporting group guidance, decentralized execution, partial centralization, partial decentralization, centralized management and other supply modes, enabling suppliers to manage relevant information by themselves through the portal system and report demand to GCL-Poly, thus realizing the two-way interaction between GCL-Poly and suppliers.

Enable selfservice of suppliers in terms of registration and quotation by allowing them to register and go through the access approval process. Realize the digitalization of tendering and bid evaluation, sourcing, quotation soliciting and supplier collaboration, so as to achieve open and transparent source of suppliers and more transparent public information of procurement tender.

GCL-Poly manages the supply chain through strict management model, while also pays attention to two-way communication with suppliers, thus promotes a win-win cooperation between the two parties through regular and effective communication.

#### Supplier Communication

1. Extensively receive the opinions of supplier partners on the portal platform, jointly discuss the problems encountered in the cooperation between the two parties, analyze the technology development trend and future product plans, and then set up continuous improvement team to set goals for the problems, thus giving full play to the role of model and leader, and promoting the continuous improvement in supply chain collaboration.

2. Initiate internal meetings on cooperation strategy review and development, and establish meeting communication between senior management of the two parties.



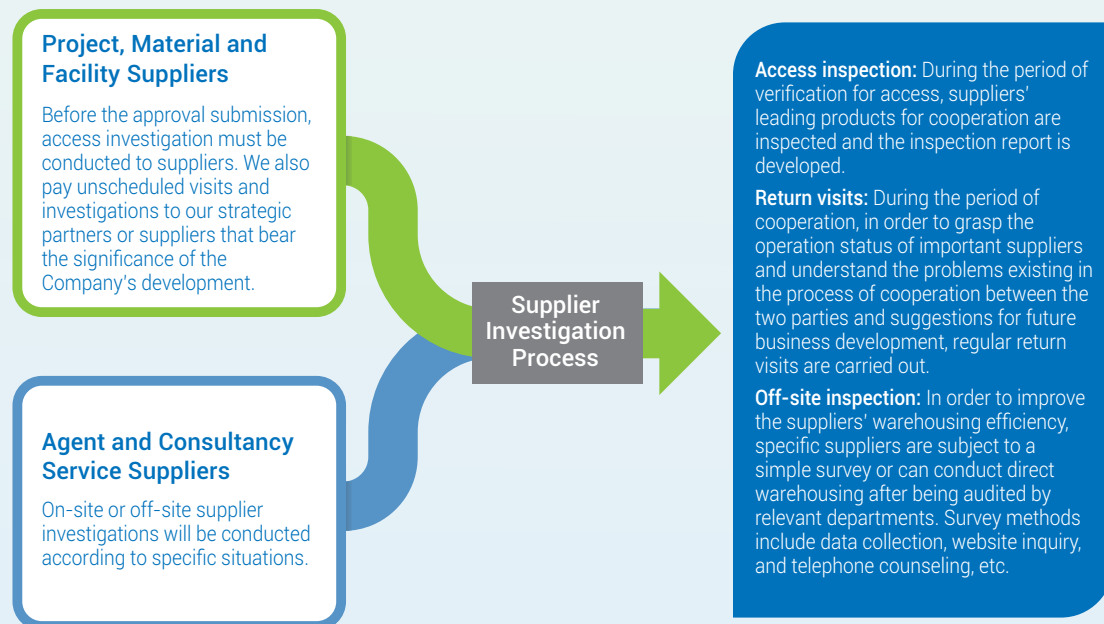
## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

### Supplier Access and Inspection

We have been adhering to “Sunny Purchasing”, stipulating that all the qualified suppliers can get involved in competition, and carrying out supplier access, performance and development management based on supplier membership system to ensure fair competition among suppliers. The Company constantly improves its supplier screening, access, inspection and evaluation system, conducts a comprehensive inspection of suppliers through multi-level and multi-type inspection methods, and makes the final decision based on complete and true inspection situation.



### Supplier Access Process



## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

We assess material suppliers by means of performance evaluation and strategic evaluation. Based on the results of strategic evaluation, GCL-Poly carries out hierarchical management of suppliers: strategic suppliers, preferred suppliers, general suppliers and rectification suppliers. We focus on cultivating suppliers of long-term cooperation significance, so as to achieve win-win cooperation by strengthening the frequency and quality of communication; suppliers who can not meet the requirements are eliminated timely.



During the reporting period, we cooperated with a total of 1,183 suppliers, all of which have an annual purchase amount of more than RMB200,000. The number of suppliers classified by region is as follows:

| Number of Suppliers Classified by Region (Unit: Firm) |       |
|---|-------|
| Mainland China  | 1,176 |
| Outside China   | 7     |

### Sustainable Procurement

While realizing mutual benefit and win-win with suppliers, we also require suppliers to assume due corporate social responsibility. We regard fulfilling corporate social responsibility as one of the most important factors for supplier selection. During the reporting period, the Company conducted environmental impact and social impact assessment for 100% of suppliers during warehousing. We take the following measures to control the environmental and safety risks of suppliers in the daily production and operation process:



With respect to chemicals management, we strictly review suppliers' production/operation qualification, transportation vehicle qualification, transportation personnel qualification, and check the vehicles and personnel involved in each transportation to effectively prevent the occurrence of dangerous accidents.



In the production process, we adopt more environmentally friendly materials as far as possible, and conduct constant development and test. Besides, we actively try out cleaning agents with low nitrogen and phosphorus content and develop and try out low-COD cooling liquid.

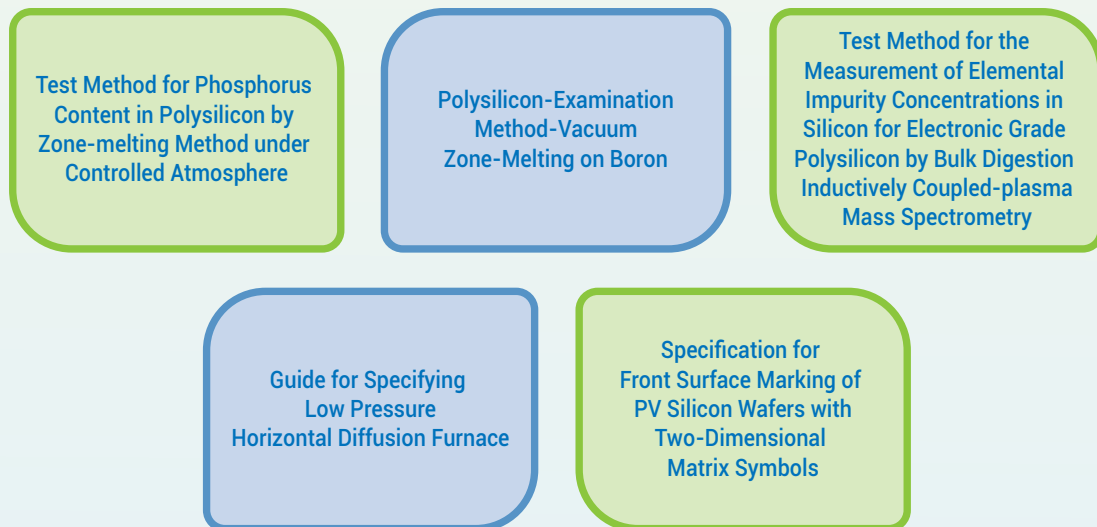


In the procurement of equipment and materials, we pay special attention to energy-saving and cost-reducing equipment and materials with low consumption under the same conditions.

## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

### Industry Progress

GCL-Poly strive to assume the responsibility of the most upstream enterprise in the photovoltaic module industry chain, actively participates in the national photovoltaic power generation “Top Runner” Program, and jointly exchanges technology development, strategic experience and market trends with excellent partners in the industry, so as to promote cooperation, sharing and win-win situation in the industry. We have been maintaining long-term friendly cooperative relations with institutions of higher learning, industry partners and government agencies, and we are committed to researching and solving key and forward-looking technical problems in the development of photovoltaic manufacturing industry, training professional and technical personnel in photovoltaic manufacturing industry, and promoting the sound development of the photovoltaic industry chain. During the reporting period, we were involved in the formulation of various industry standards, organized or participated in various kinds of exchanges in the photovoltaic industry, actively carried out industry-university-research cooperation projects, and promoted the continuous innovation and progress of the photovoltaic industry.



Industry Standards Formulated and Released by GCL-Poly in 2018

## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

Professor Yang Deren, Academician of Chinese Academy of Sciences and Director of State Key Laboratory of Silicon Materials, Zhejiang University, visited Jiangsu GCL Silicon Material Technology Development Co., Ltd. for guidance.



On the afternoon of 12 October 2018, Yang Deren, Academician of the Chinese Academy of Sciences and Director of the State Key Laboratory of Silicon Material, Zhejiang University, arrived at Jiangsu GCL Silicon Material Technology Development Co., Ltd. to give on-site guidance on the theme of "control of polycrystalline and mono-like ingot casting process". The two sides established a bridge of communication through face-to-face communication of "reporting-answering".

Professor Shen Hui, Sun Yat-sen University Solar Energy System Research Institute, visited Jiangsu GCL Silicon Material Technology Development Co., Ltd. for guidance.



On the morning of 13 December 2018, Professor Shen Hui, Sun Yat-sen University Solar Energy System Research Institute, together with R&D technicians of Jiangsu GCL Silicon Material Technology Development Co., Ltd., conducted an academic discussion on "technologies related to mono-crystalline and polycrystalline components". Professor Shen Hui introduced the main solar cell systems to the R&D technicians at the meeting, and expressed his views on the main development directions of solar cells.

Opening Ceremony Activities of Intelligent Manufacturing Practice Center of Suzhou GCL Photovoltaic Technology Co., Ltd.



On 19 October 2018, Zheng Xiongjiu, General Manager of Suzhou GCL Photovoltaic Technology Co., Ltd., Jin Shanming, Liu Jianping, and Que Jianhua, Vice General Managers, and Kuai Yaqin, Assistant General Manager, attended the meeting to congratulate and unveil the opening of the Practice Center. Equipped with touch screen, holographic cabinet, stereo projection, AR glasses, intelligent robots and other modern intelligent equipment, the Intelligent Manufacturing Practice Center has applied the state-of-art AR augmented reality technology, VR virtual reality technology, holographic projection, real-time shooting and other technologies, bringing novel interactive experience to visitors.



## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY



Jiangsu GCL Silicon Material Technology Development Co., Ltd. and the State Key Laboratory of Silicon Materials, Zhejiang University jointly built "Jiangsu Enterprise Academician Workstation"

The School of Chemistry and Chemical Engineering of Harbin Institute of Technology and Jiangsu Zhongneng Silicon Industry Technology Development Co., Ltd. conducted industry-university-research cooperation and set up an internship base for college students



Ningxia GCL Crystal Technology Development Co., Ltd. conducted industry-university-research cooperation with Ningxia University



### Industry-University-Research Cooperation Project Launched by GCL-Poly in 2018

#### Our achievements:

During the reporting period, the Company participated in the formulation of 11 industry standards, of which 5 were released

## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

### Benefit the Society

Taking fulfilling social responsibility as its own mission, GCL-Poly has formulated the *White Paper on Corporate Citizenship of GCL-Poly* and *Guidelines for Corporate Citizenship Construction of GCL-Poly*, adhered to the concept of contributing to society throughout production and operation activities, and included support for public welfare undertakings into its long-term strategic objectives, thus benefiting people's livelihood and serving society through various channels, sparing no effort to contribute to social development, setting good industry example, and striving to be an excellent "corporate citizen". Adhering to the philosophy of going green and environmental protection, we have established charitable public welfare modes featuring environmental protection and public welfare, giving consideration to both education and disaster relief, focusing on public welfare undertakings in environmental protection, donation to schools and disaster relief. Through public welfare activities, the Company has internally enhanced the cohesion in enterprise and externally established a high-quality corporate brand image.

The Company has been actively participating in social donation activities sponsored by municipal and district charity foundations for a long time, as evidenced by the donation of a total of RMB7,491,901 during the three years from 2016 to 2018. During the reporting period, Suzhou GCL Photovoltaic Technology Co., Ltd. donated RMB100,000 to the Charity Foundation of Suzhou High-tech Zone. In addition, we also bring warmth and affection to society by donating clothes, books and other materials. From 2016 to 2018, Yangzhou Photovoltaic launched the "Dream Bookshelf" public welfare activities in conjunction with Yangzhou Daily and the Communist Youth League Committee, donated 3,000 books and benefited more than 400 left-behind children.

## WORK TOGETHER WITH PARTNERS TO BUILD A BETTER SOCIETY

Under the guidance of "GCL Dream", GCL-Poly has been paying attention to enterprise progress, highlighting employee happiness, emphasizing social responsibility and focusing on corporate social responsibility. It actively organizes and participates in all kinds of social public welfare activities, vigorously advocates green life and calls for humanistic concerns by the Company and its Party branches, trade unions and League committees, thus establishing a good corporate image. During the Reporting Period, the Company led to establish the Gaoxin District (Huqiu District) Green Development Association and was employed as vice director.

- On 6 January 2018, Ningxia GCL Crystal set up a social welfare volunteer team consisting of more than 20 members to clean up the snow on the pavement of the pedestrian street.
- In March 2018, Xinjiang GCL Polysilicon organized the youth League members to carry out the "My 60 + Start GCL Life" 2018 GCL Earth Hour Activity.



Suzhou GCL Photovoltaic Technology Co., Ltd. hosted the "spreading green seed and building beautiful new home together" themed activity

## OUTLOOK

As a global leader in the photovoltaic industry, we believe that corporate sustainable development is only possible when we implement ESG governance in all respects of daily production and operation. We will pay close attention to the latest regulatory requirements and enhance the concept of responsible investment to grasp the responsible investment trends in the capital market, improve our ESG governance system, enhance the role of the Board of Directors in ESG governance, and continue the delicacy management of product quality, R&D and innovation, environmental protection, talent cultivation, and public welfare to fulfill our corporate social responsibility, and exert our social influence.

In 2018, the “531 PV New Policy” presented challenges to the photovoltaic industry. However, there are always development opportunities embedded in challenges. In light of the new landscape shaped by the New Policy, we will prepare for the new initiatives and new actions as well as continue to explore and research into cutting-edge technologies that improve efficiency and reduce cost. We will equip ourselves for the sound and organized development of the silicon material market and the photovoltaic industry in the long run and embrace grid parity. We believe that promoting grid parity is the best way for GCL-Poly to exercise its advantages to contribute to society and fulfill corporate social responsibility.

Here, we would like to extend our sincere gratitude to the Board of Directors, the management, employees, and value chain partners for their hard work in 2018, and to all shareholders and stakeholders for their longstanding attention and support.



## KEY STATISTICS

### Business Performance

| Index   | 2017      | 2018             |
|---|-----------|------------------|
| Revenue (RMB'Million)                                   | 23,794.46 | <b>20,565.43</b> |
| Gross profit (RMB'Million)                              | 8,198.70  | <b>5,032.87</b>  |
| Income tax expense (credit) (RMB'Million)               | 637.88    | <b>(52)</b>      |
| Polysilicon production (tonnes)                         | 74,818    | <b>61,785</b>    |
| Wafer production*(MW)                                   |           |                  |
| * including processing business with supplied materials | 23,902    | <b>24,189</b>    |
| Customer satisfaction rate (%)                          | 92        | <b>94.40</b>     |

### Environmental Performance

| Index   | 2017      | 2018              |
|---|-----------|-------------------|
| Environmental training coverage (%)   | 100       | <b>85</b>         |
| Sulphur oxides/sulfur dioxide emission (tonnes)   | 2.70      | <b>1.44</b>       |
| Dust (tonnes)   | 16.07     | <b>24.03</b>      |
| Total amount of recycled and reused water (10,000 tonnes)                               | 34,474.77 | <b>133,336.16</b> |
| Generation of hazardous waste (tonnes)  | 15,882.62 | <b>946.83</b>     |
| General waste (non-hazardous waste) generation (tonnes)                                 | 43,834.10 | <b>28,549.69</b>  |
| Completion rate of new projects' assessment over environmental and social influence (%) | 100       | <b>100</b>        |

### Employee Performance

| Index   | 2017     | 2018            |
|---|----------|-----------------|
| Total number of employees (person)  | 13,707   | <b>11,579</b>   |
| Number of employees from ethnic minority groups (person)  | 211      | <b>190</b>      |
| Female employment (%)   | 23.5     | <b>21.6</b>     |
| Ratio of employees remained in their position 12 months after returning from maternal/paternal leaves (%) | 100      | <b>100</b>      |
| Investment in labor protection (RMB10,000)  | 6,557.80 | <b>3,858.47</b> |
| Work-related fatalities (person)  | 0        | <b>0</b>        |
| Work-related injuries (person)  | 23       | <b>34</b>       |
| Loss of working days due to work-related injuries (day)   | 2,359    | <b>4,163</b>    |
| Average training hours per employee (hour)  | 75.6     | <b>72</b>       |
| Employee training coverage rate (%)   | 100      | <b>100</b>      |

### Corporate Governance Performance

| Index   | 2017 | 2018       |
|---|------|------------|
| Compliance training coverage (%)  | 100  | <b>100</b> |
| Cases involving bribery and corruption (case)                                   | 0    | <b>0</b>   |
| Cases involving unfair competition, antitrust and anti-monopoly lawsuits (case) | 0    | <b>0</b>   |

## APPENDIX 1:

### LIST OF LAWS AND REGULATIONS AND INTERNAL POLICIES

#### Applicable Laws and Regulations:

Law of the People's Republic of China Against Unfair Competition  
Anti-Monopoly Law of the People's Republic  
Product Quality Law of the People's Republic of China  
Standardization Law of the People's Republic of China  
Patent Law of the People's Republic of China  
Copyright Law of the People's Republic of China  
Environmental Protection Law of the People's Republic of China  
Water Pollution Prevention and Control Law of the People's Republic of China  
Air Pollution Prevention and Control Law of the People's Republic of China  
Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste  
Water Law of the People's Republic of China  
Water Resources Protection Law of the People's Republic of China  
Law of the People's Republic of China on Appraising of Environment Impacts  
Integrated Emission Standards of Air Pollutants  
Law of the People's Republic of China on Conserving Energy  
Electric Power Law of the People's Republic of China  
Law of the People's Republic of China on Promoting Clean Production  
Renewable Energy Law of the People's Republic of China  
Labor Law of the People's Republic of China  
Social Insurance Law of the People's Republic of China  
Corporate Governance Code  
Corporate Governance Report  
Enterprise Control Specification  
Detailed Rules for the Implementation of Production Licenses for Industrial Products  
Detailed Rules for the Implementation of the Patent Law of the People's Republic of China  
Emission Standard of Air Pollutants for Boiler  
Decision of the State Council on Strengthening Energy Conservation  
Notice of the State Council on Further Strengthening the Elimination of Backward Production Capacities  
Measures for the Administration of Energy/Power Conservation of Major Energy-Consuming Entities  
Regulation on the Prevention and Control Pneumoconiosis  
Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used  
Measures for the Supervision and Administration of Employers' Occupational Health Surveillance

## APPENDIX 1: LIST OF LAWS AND REGULATIONS AND INTERNAL POLICIES

### Applicable Internal Policies of the Company:

General Risk Management Guidelines  
 Risk Alert Management Measures  
 Principles and System of Internal Control Management  
 Authorization and Process Management Standards  
 Guidelines for Small Enterprise Internal Control  
 Guidelines for Internal Control Effectiveness Evaluation  
 Guidelines for the Application of Internal Control Effectiveness Evaluation  
 Management Standards for Anti-Fraud and Whistleblowing  
 Employee Handbook  
 Silane Gas Standards  
 Solar Grade Polysilicon  
 Corporate Standards System  
 Standard Development Rules  
 Science and Technology Work Management Standards  
 Scientific Research Projects Management Standards  
 Technological Transformation Management Standards  
 Technological Achievements Incentive Management Measures  
 Intellectual Property Management Standards  
 Trademark Management Standards  
 Patent Management Measures  
 Trade Secret Management Measures  
 Intellectual Property Incentive and Accountability Management Measures  
 Management Regulation for Three Wastes  
 6S Management Standard for Office Areas  
 Control Procedures of Wastewater Discharge  
 Control Procedures of Wastewater Discharge in the Plant  
 Regulation on Energy and Water Conservation  
 Comprehensive Wastewater Discharge Standard  
 Management and Control Procedures for Waste and Hazardous Waste  
 Regulations on Energy and Water Conservation  
 Procedures for Controlling the Production Exhaust Emissions  
 Manual of Energy Regulation  
 Recruitment Management Standards  
 Internal Recommendation Management Standards  
 Employee Attendance Vacation Management Standards  
 Salary Management Standards for PV Enterprises  
 Benefits Management Standards  
 Employee Reward and Punishment Management Standards  
 Training Management Standards  
 Performance Assessment Management Standards for Functional Personnel

## APPENDIX 1:

### LIST OF LAWS AND REGULATIONS AND INTERNAL POLICIES

Measures for Management of Promotion and Demotion of Employees  
Responsibility System for Safety, Occupational Health and Environment Management  
Management System of Articles (Appliances) for Labor Protection  
Regulations on Management of Work Subject to High Temperature and Heatstroke Prevention and Cooling  
Regulations on Occupational Health Management of Radioactive Sources  
Occupational Disease Prevention and Control Plan and Implementation Program  
Responsibility System for Occupational Disease Prevention and Control  
Occupational Disease Hazard Warning and Informing System  
Occupational Disease Prevention and Control Publicity Education and Training System  
Implementing Maintenance and Repair System for Protection Against Occupational Hazards  
Management System for Monitoring and Evaluating Occupational Hazard Factors in Workplace  
Supplier Management Standards  
White Paper on Corporate Citizenship of GCL-Poly  
Guidelines for Corporate Citizenship Construction of GCL-Poly



## APPENDIX 2: SEHK ESG REPORTING GUIDE CONTENT INDEX

| Subject Areas, Aspects, General Disclosures and KPIs   | Index  |
|--|--|
| <b>A. Environmental</b>  |  |
| <b>Aspect A1 Emissions</b>   |  |
| General Disclosure<br>Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that<br>Have a significant impact on the issuer relating to air and<br>greenhouse gas emissions, discharges into water and land, and<br>generation of hazardous and non-hazardous waste.<br>Note: Air emissions include NO <sub>x</sub> , SO <sub>x</sub> , and other pollutants<br>regulated under national laws and regulations.<br>Greenhouse gases include carbon dioxide, methane, nitrous oxide,<br>hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.<br>Hazardous wastes are those defined by national regulations.<br>The types of emissions and respective emissions data. | Value the Source of Life and Achieve<br>Green Development – Environmental<br>Management<br>Value the Source of Life and Achieve<br>Green Development – Green<br>Production<br>Value the Source of Life and Achieve<br>Green Development – Low-Carbon and<br>Environmental Conservation |
| KPI A1.1   | Value the Source of Life and Achieve<br>Green Development – Green<br>Production  |
| KPI A1.2   | Value the Source of Life and Achieve<br>Green Development – Low-Carbon and<br>Environmental Conservation   |
| KPI A1.3   | Value the Source of Life and Achieve<br>Green Development – Green<br>Production  |
| KPI A1.4   | Value the Source of Life and Achieve<br>Green Development – Green<br>Production  |
| KPI A1.5   | Value the Source of Life and Achieve<br>Green Development – Green<br>Production<br>Value the Source of Life and Achieve<br>Green Development – Low-Carbon and<br>Environmental Conservation  |
| KPI A1.6   | Value the Source of Life and Achieve<br>Green Development – Green<br>Production  |

## APPENDIX 2: SEHK ESG REPORTING GUIDE CONTENT INDEX

| Subject Areas, Aspects, General Disclosures and KPIs   |  | Index   |
|--|--|---|
| <b>Aspect A2 Use of Resources</b>                      |  |   |
| General Disclosure                                     | Policies on the efficient use of resources, including energy, water and other raw materials.<br>Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.  | Value the Source of Life and Achieve Green Development – Green Production   |
| KPI A2.1   | Directed and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).   | Value the Source of Life and Achieve Green Development – Low-Carbon and Environmental Conservation  |
| KPI A2.2   | Water consumption in total and intensity (e.g. per unit of production volume, per facility).   | Value the Source of Life and Achieve Green Development – Green Production   |
| KPI A2.3   | Description of energy use efficiency initiatives and results achieved.   | Value the Source of Life and Achieve Green Development – Low-Carbon and Environmental Conservation  |
| KPI A2.4   | Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.  | Value the Source of Life and Achieve Green Development – Green Production   |
| KPI A2.5   | Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.   | Value the Source of Life and Achieve Green Development – Green Production   |
| <b>Aspect A3 The Environment and Natural Resources</b> |  |   |
| General Disclosure                                     | Policies on minimising the issuer's significant impact on the environment and natural resources.   | Value the Source of Life and Achieve Green Development – Environmental Management   |
| KPI A3.1   | Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.  | Value the Source of Life and Achieve Green Development – Environmental Management   |
| <b>B. Society</b>                                      |  |   |
| <b>Employment and Labor Practices</b>                  |  |   |
| <b>Aspect B1 Employment</b>                            |  |   |
| General Disclosure                                     | Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination and other benefits and welfare. | Unite the Strength of the Staff to Build an Efficient Team – Employee Profile<br>Unite the Strength of the Staff to Build an Efficient Team – Compensation and Benefits |
| KPI B1.1   | Total workforce by gender, employment type, age group and geographical region.   | Unite the Strength of the Staff to Build an Efficient Team – Employee Profile   |
| KPI B1.2   | Employee turnover rate by gender, age group and geographical region.   | Not disclosed, the Company plans to enhance management in the future  |

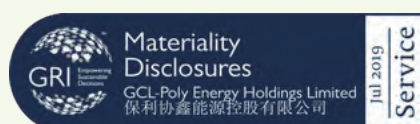
## APPENDIX 2: SEHK ESG REPORTING GUIDE CONTENT INDEX

| Subject Areas, Aspects, General Disclosures and KPIs |   | Index   |
|--|---|---|
| <b><i>Aspect B2 Health and Safety</i></b>            |   |   |
| General Disclosure                                   | Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards. | Unite the Strength of the Staff to Build an Efficient Team – Occupational Health and Safety |
| KPI B2.1   | Number and rate of work-related fatalities.   | Unite the Strength of the Staff to Build an Efficient Team – Occupational Health and Safety |
| KPI B2.2   | Lost days due to work injury.   | Key Statistics – Employee Performance   |
| KPI B2.3   | Description of occupational health and safety measures adopted, how they are implemented and monitored.   | Unite the Strength of the Staff to Build an Efficient Team – Occupational Health and Safety |
| <b><i>Aspect B3 Development and Training</i></b>     |   |   |
| General Disclosure                                   | Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.<br>Note: Training refers to vocational training. It may include internal and external courses paid by the employer.   | Unite the Strength of the Staff to Build an Efficient Team – Talent Development             |
| KPI B3.1   | The percentage of employees trained by gender and employee category (e.g. senior management, middle management).  | Unite the Strength of the Staff to Build an Efficient Team – Talent Development             |
| KPI B3.2   | The average training hours completed per employee by gender and employee category.  | Unite the Strength of the Staff to Build an Efficient Team – Talent Development             |
| <b><i>Aspect B4 Labor Standards</i></b>              |   |   |
| General Disclosure                                   | Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.   | Unite the Strength of the Staff to Build an Efficient Team – Employee Profile               |
| KPI B4.1   | Description of measures to review employment practices to avoid child and forced labor.   | Unite the Strength of the Staff to Build an Efficient Team – Employee Profile               |
| KPI B4.2   | Description of steps taken to eliminate such practices when discovered.   | Unite the Strength of the Staff to Build an Efficient Team – Employee Profile               |

## APPENDIX 2: SEHK ESG REPORTING GUIDE CONTENT INDEX

| Subject Areas, Aspects, General Disclosures and KPIs |  | Index   |
|--|--|---|
| Operating Practices                                  |  |   |
| <b>Aspect B5 Supply Chain Management</b>             |  |   |
| General Disclosure                                   | Policies on managing environmental and social risks of the supply chain.   | Work Together with Partners to Build a Better Society – Supply Chain Management           |
| KPI B5.1   | Number of suppliers by geographical region.  | Work Together with Partners to Build a Better Society – Supply Chain Management           |
| KPI B5.2   | Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.  | Work Together with Partners to Build a Better Society – Supply Chain Management           |
| <b>Aspect B6 Product Responsibility</b>              |  |   |
| General Disclosure                                   | Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>Relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress. | Fulfill Responsibilities and Supply High-Quality Energy – Product Quality Control         |
| KPI B6.1   | Percentage of total products sold or shipped subject to recalls for safety and health reasons.   | Fulfill Responsibilities and Supply High-Quality Energy – Product Quality Control         |
| KPI B6.2   | Number of products and service related complaints received and how they are dealt with.  | Fulfill Responsibilities and Supply High-Quality Energy – Customer Service                |
| KPI B6.3   | Description of methods relating to observing and protecting intellectual property rights.  | Fulfill Responsibilities and Supply High-Quality Energy – Innovation and R&D Achievements |
| KPI B6.4   | Description of quality assurance process and recall procedures.  | Fulfill Responsibilities and Supply High-Quality Energy – Product Quality Control         |
| KPI B6.5   | Description of consumer data protection and privacy policies, how they are implemented and monitored.  | Fulfill Responsibilities and Supply High-Quality Energy – Customer Service                |
| <b>Aspect B7 Anti-corruption</b>                     |  |   |
| General Disclosure                                   | Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.   | Company Profile – Corporate Governance  |
| KPI B7.1   | Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.   | Company Profile – Corporate Governance  |
| KPI B7.2   | Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.   | Company Profile – Corporate Governance  |
| <b>Community</b>                                     |  |   |
| <b>Aspect B8 Community Investment</b>                |  |   |
| General Disclosure                                   | Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.   | Work Together with Partners to Build a Better Society – Benefit the Society               |
| KPI B8.1   | Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).   | Work Together with Partners to Build a Better Society – Benefit the Society               |
| KPI B8.2   | Resources contributed (e.g. money or time) to the focus area.  | Work Together with Partners to Build a Better Society – Benefit the Society               |





## APPENDIX 3:

### GRI CONTENT INDEX<sup>1</sup>

| Disclosure                               | Description  | Chapter(s)   | Page(s)    |
|--|--|--|------------|
| <b>GRI 101: Foundation 2016</b>          |  |  |            |
| <b>GRI 102: General Disclosures 2016</b> |  |  |            |
| <b>Organizational Profile</b>            |  |  |            |
| 102-1                                    | Name of the organization                                     | About the Report   | 2          |
| 102-2                                    | Activities, brands, products, and services                   | About Us   | 11         |
| 102-3                                    | Location of headquarters                                     | About Us   | 10         |
| 102-4                                    | Location of operations                                       | About Us   | 10         |
| 102-5                                    | Ownership and legal form                                     | About Us   | 10         |
| 102-6                                    | Markets served   | About Us   | 11         |
| 102-7                                    | Scale of the organization                                    | About Us – Employee Overview   | 10, 12, 48 |
| 102-8                                    | Information on employees and other workers                   | Employee Overview  | 48         |
| 102-9                                    | Supply chain   | Supply Chain Management  | 68         |
| 102-10                                   | Significant changes to the organization and its supply chain | During the reporting period, the company terminated the operation of two subsidiaries after consultation with the local government in accordance with the policies of China. | –          |
| 102-11                                   | Precautionary Principle or approach                          | Corporate Governance   | 16         |
| 102-12                                   | External initiatives   | Industry Progress  | 69         |
| 102-13                                   | Membership of associations                                   | Benefit the Society  | 73         |
| <b>Strategy</b>                          |  |  |            |
| 102-14                                   | Statement from senior decision-maker                         | Chairman's Statement   | 4-5        |
| 102-15                                   | Key impacts, risks, and opportunities                        | Chairman's Statement   | 4-5        |
| <b>Ethics and Integrity</b>              |  |  |            |
| 102-16                                   | Values, principles, standards, and norms of behavior         | About Us   | 10         |
| <b>Governance</b>                        |  |  |            |
| 102-18                                   | Governance structure   | Corporate Governance   | 14         |
| <b>Stakeholder Engagement</b>            |  |  |            |
| 102-40                                   | List of stakeholder groups                                   | ESG Governance   | 19         |
| 102-41                                   | Collective bargaining agreements                             | Employee Care  | 60         |
| 102-42                                   | Identifying and selecting stakeholders                       | ESG Governance   | 19         |
| 102-43                                   | Approach to stakeholder engagement                           | ESG Governance   | 19         |
| 102-44                                   | Key topics and concerns raised                               | ESG Governance   | 19         |

<sup>1</sup> For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the traditional Chinese version of the report.

## APPENDIX 3:

### GRI CONTENT INDEX

| Disclosure                                     | Description  | Chapter(s)   | Page(s)   |
|--|--|--|---|
| <b>Reporting Practice</b>                      |  |  |   |
| 102-45   | Entities included in the consolidated financial statements                     | About Us   | 12  |
| 102-46   | Defining report content and topic boundaries                                   | About the Report   | 2   |
| 102-47   | List of material topics  | ESG Governance   | 21  |
| 102-48   | Restatements of information  | About the Report   | 2, for detailed restatements, please refer to Page 41, 43 and 45. |
| 102-49   | Changes in reporting   | ESG Governance   | 21  |
| 102-50   | Reporting period   | About the Report   | 2   |
| 102-51   | Date of most recent report   | About the Report   | 2   |
| 102-52   | Reporting cycle  | About the Report   | 2   |
| 102-53   | Contact point for questions regarding the report                               | Appendix 4   | 89  |
| 102-54   | Claims of reporting in accordance with the GRI Standards                       | About the Report   | 2   |
| 102-55   | GRI content index  | Appendix 3   | 83-88   |
| 102-56   | External assurance   | The report has successfully completed GRI Materiality Disclosures Service. |   |
| <b>Specific Disclosures</b>                    |  |  |   |
| <b>Economic</b>                                |  |  |   |
| <b>GRI 201: Economic Performance 2016</b>      |  |  |   |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                       | ESG Governance   | 21  |
|  | 103-2 The management approach and its components                               | Corporate Governance   | 14  |
|  | 103-3 Evaluation of the management approach                                    | Corporate Governance   | 14  |
| 201-1  | Direct economic value generated and distributed                                | About Us   | 12  |
| 201-2  | Financial implications and other risks and opportunities due to climate change | Corporate Governance   | 16  |
| <b>GRI 202: Market Presence 2016</b>           |  |  |   |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                       | ESG Governance   | 21  |
|  | 103-2 The management approach and its components                               | Employee Overview – Compensation and Benefits                              | 49-50   |
|  | 103-3 Evaluation of the management approach                                    | Employee Overview – Compensation and Benefits                              | 49-50   |
| 202-2  | Proportion of senior management hired from the local community                 | Employee Overview  | 48  |
| <b>GRI 203: Indirect Economic Impacts 2016</b> |  |  |   |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                       | ESG Governance   | 21  |
|  | 103-2 The management approach and its components                               | About Us   | 12  |
|  |  | Benefit the Society  | 72  |
|  | 103-3 Evaluation of the management approach                                    | About Us   | 12  |
|  |  | Benefit the Society  | 72-73   |
| 203-1  | Infrastructure investments and services supported                              | About Us   | 12  |
|  |  | Benefit the Society  | 72-73   |
| 203-2  | Significant indirect economic impacts  | About Us   | 12  |
|  |  | Benefit the Society  | 72-73   |

## APPENDIX 3: GRI CONTENT INDEX

| Disclosure                                     | Description   | Chapter(s)   | Page(s) |
|--|---|--|---------|
| <b>GRI 205: Anti-corruption 2016</b>           |   |  |         |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                        | ESG Governance   | 21      |
|  | 103-2 The management approach and its components                                | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
|  | 103-3 Evaluation of the management approach                                     | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
| 205-1  | Operations assessed for risks related to corruption                             | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
| 205-2  | Communication and training about anti-corruption policies and procedures        | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
| 205-3  | Confirmed incidents of corruption and actions taken                             | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
| <b>GRI 206: Anti-competitive Behavior 2016</b> |   |  |         |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                        | ESG Governance   | 21      |
|  | 103-2 The management approach and its components                                | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
|  | 103-3 Evaluation of the management approach                                     | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
| 206-1  | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | Corporate Governance – Compliance Management and Anti-Corruption | 17      |
| <b>Environmental</b>                           |   |  |         |
| <b>GRI 301: Materials 2016</b>                 |   |  |         |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                        | ESG Governance   | 21      |
|  | 103-2 The management approach and its components                                | Green Production   | 42      |
|  | 103-3 Evaluation of the management approach                                     | Green Production   | 43      |
| 301-1  | Materials used by weight or volume  | Green Production   | 43      |
| 301-2  | Recycled input materials used   | Green Production   | 42      |
| <b>GRI 302: Energy 2016</b>                    |   |  |         |
| GRI 103: Management Approach 2016              | 103-1 Explanation of the material topic and its boundary                        | ESG Governance   | 21      |
|  | 103-2 The management approach and its components                                | Low-carbon and Environmental Conservation                        | 44      |
|  | 103-3 Evaluation of the management approach                                     | Low-carbon and Environmental Conservation                        | 45      |
| 302-1  | Energy consumption within the organization                                      | Low-carbon and Environmental Conservation                        | 45      |
| 302-3  | Energy intensity  | Low-carbon and Environmental Conservation                        | 45      |
| 302-4  | Reduction of energy consumption   | Low-carbon and Environmental Conservation                        | 45      |
| 302-5  | Reduction in energy requirements of products and services                       | Low-carbon and Environmental Conservation                        | 44      |

## APPENDIX 3:

### GRI CONTENT INDEX

| Disclosure   | Description   | Chapter(s)  | Page(s) |
|--|---|---|---------|
| <b>GRI 303: Water 2016</b>                             |   |   |         |
| GRI 103: Management Approach 2016                      | 103-1 Explanation of the material topic and its boundary  | ESG Governance  | 21      |
|  | 103-2 The management approach and its components  | Green Production  | 40      |
|  | 103-3 Evaluation of the management approach   | Green Production  | 40      |
| 303-1  | Water withdrawal by source  | Green Production  | 41      |
| 303-3  | Water recycled and reused   | Green Production  | 41      |
| <b>GRI 305: Emissions 2016</b>                         |   |   |         |
| GRI 103: Management Approach 2016                      | 103-1 Explanation of the material topic and its boundary  | ESG Governance  | 21      |
|  | 103-2 The management approach and its components  | Green Production<br>Low-carbon and Conservation                         | 44-45   |
|  | 103-3 Evaluation of the management approach   | Green Production<br>Low-carbon and Conservation                         | 44-45   |
| 305-1  | Direct (Scope 1) GHG emissions  | Low-carbon and Conservation   | 45      |
| 305-2  | Energy indirect (Scope 2) GHG emissions   | Low-carbon and Conservation   | 45      |
| 305-4  | Intensity of GHG emissions  | Low-carbon and Conservation   | 45      |
| 305-7  | Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions | Green Production  | 44      |
| <b>GRI 306: Effluents and Waste 2016</b>               |   |   |         |
| GRI 103: Management Approach 2016                      | 103-1 Explanation of the material topic and its boundary  | ESG Governance  | 21      |
|  | 103-2 The management approach and its components  | Green Production  | 40, 43  |
|  | 103-3 Evaluation of the management approach   | Green Production  | 40, 43  |
| 306-1  | Water discharge by quality and destination  | Green Production  | 41      |
| 306-2  | Waste by type and disposal method   | Green Production  | 43      |
| 306-3  | Significant spills  | During the reporting period, the company has no major leakage incidents | —       |
| 306-4  | Transport of hazardous waste  | Green Production  | 43      |
| <b>GRI 307: Environmental Compliance 2016</b>          |   |   |         |
| GRI 103: Management Approach 2016                      | 103-1 Explanation of the material topic and its boundary  | ESG Governance  | 21      |
|  | 103-2 The management approach and its components  | Environmental Management  | 38-39   |
|  | 103-3 Evaluation of the management approach   | Environmental Management  | 38-39   |
| 307-1  | Non-compliance with environmental laws and regulations  | Environmental Management  | 38-39   |
| <b>GRI 308: Supplier Environmental Assessment 2016</b> |   |   |         |
| GRI 103: Management Approach 2016                      | 103-1 Explanation of the material topic and its boundary  | ESG Governance  | 21      |
|  | 103-2 The management approach and its components  | Supply Chain Management   | 66-68   |
|  | 103-3 Evaluation of the management approach   | Supply Chain Management   | 66-68   |
| 308-1  | New suppliers that were screened using environmental criteria   | Supply Chain Management   | 67      |



## APPENDIX 3: GRI CONTENT INDEX

| Disclosure   | Description   | Chapter(s)                     | Page(s) |
|--|---|--------------------------------|---------|
| <b>Social</b>  |   |                                |         |
| <b>GRI 401: Employment 2016</b>                      |   |                                |         |
| GRI 103:<br>Management<br>Approach 2016              | 103-1 Explanation of the material topic and its boundary  | ESG Governance                 | 21      |
|  | 103-2 The management approach and its components  | Employee Overview              | 46-48   |
|  | 103-3 Evaluation of the management approach   | Employee Overview              | 46-48   |
| 401-1  | New employee hires and employee turnover  | Compensation and Benefits      | 51      |
| 401-2  | Benefits provided to full-time employees that are not provided to temporary or part-time employees                            | Compensation and Benefits      | 50-51   |
| 401-3  | Parental leave  | Compensation and Benefits      | 50      |
| <b>GRI 403: Occupational Health and Safety 2016</b>  |   |                                |         |
| GRI 103:<br>Management<br>Approach 2016              | 103-1 Explanation of the material topic and its boundary  | ESG Governance                 | 21      |
|  | 103-2 The management approach and its components  | Occupational Health and Safety | 55-60   |
|  | 103-3 Evaluation of the management approach   | Occupational Health and Safety | 55-60   |
| 403-2  | Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities | Occupational Health and Safety | 56      |
| 403-3  | Workers with high incidence or high risk of diseases related to their occupation  | Occupational Health and Safety | 57-58   |
| 403-4  | Health and safety topics covered in formal agreements with trade unions   | Occupational Health and Safety | 57-58   |
| <b>GRI 404: Training and Education 2016</b>          |   |                                |         |
| GRI 103:<br>Management<br>Approach 2016              | 103-1 Explanation of the material topic and its boundary  | ESG Governance                 | 21      |
|  | 103-2 The management approach and its components  | Talent Development             | 52      |
|  | 103-3 Evaluation of the management approach   | Talent Development             | 52      |
| 404-1  | Average hours of training per year per employee   | Talent Development             | 52      |
| 404-2  | Programs for upgrading employee skills and transition assistance programs   | Talent Development             | 52-53   |
| 404-3  | Percentage of employees receiving regular performance and career development reviews  | Talent Development             | 54      |
| <b>GRI 405: Diversity and Equal Opportunity 2016</b> |   |                                |         |
| GRI 103:<br>Management<br>Approach 2016              | 103-1 Explanation of the material topic and its boundary  | ESG Governance                 | 21      |
|  | 103-2 The management approach and its components  | Employee Overview              | 46-48   |
|  | 103-3 Evaluation of the management approach   | Employee Overview              | 46-48   |
| 405-1  | Diversity of governance bodies and employees  | Employee Overview              | 46-48   |
| <b>GRI 408: Child Labor 2016</b>                     |   |                                |         |
| GRI 103:<br>Management<br>Approach 2016              | 103-1 Explanation of the material topic and its boundary  | ESG Governance                 | 21      |
|  | 103-2 The management approach and its components  | Employee Overview              | 48      |
|  | 103-3 Evaluation of the management approach   | Employee Overview              | 48      |
| 408-1  | Operations and suppliers at significant risk for incidents of child labor   | Supply Chain Management        | 68      |

## APPENDIX 3:

### GRI CONTENT INDEX

| Disclosure                                      | Description  | Chapter(s)   | Page(s) |
|---|--|--|---------|
| <b>GRI 409: Forced or Compulsory Labor 2016</b> |  |  |         |
| GRI 103: Management Approach 2016               | 103-1 Explanation of the material topic and its boundary   | ESG Governance   | 21      |
|   | 103-2 The management approach and its components   | Employee Overview  | 48      |
| 409-1   | 103-3 Evaluation of the management approach  | Employee Overview  | 48      |
|   | Operations and suppliers at significant risk for incidents of forced or compulsory labor                                   | During the reporting period, no operations and suppliers at significant risk for incidents of forced or compulsory labor more identified | —       |
| <b>GRI 412: Human Rights Assessment 2016</b>    |  |  |         |
| GRI 103: Management Approach 2016               | 103-1 Explanation of the material topic and its boundary   | ESG Governance   | 21      |
|   | 103-2 The management approach and its components   | Employee Overview  | 48      |
|   | 103-3 Evaluation of the management approach  | Employee Overview  | 48      |
| 412-2   | Employee training on human rights policies or procedures   | Employee Overview  | 52      |
| 412-3   | Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening | Employee Overview  | 49      |
| <b>GRI 413: Local Communities 2016</b>          |  |  |         |
| GRI 103: Management Approach 2016               | 103-1 Explanation of the material topic and its boundary   | ESG Governance   | 21      |
|   | 103-2 The management approach and its components   | Benefit the Society  | 72      |
|   | 103-3 Evaluation of the management approach  | Benefit the Society  | 72      |
| 413-1   | Operations with local community engagement, impact assessments, and development programs                                   | Benefit the Society  | 72      |
| <b>GRI 414: Supplier Social Assessment 2016</b> |  |  |         |
| GRI 103: Management Approach 2016               | 103-1 Explanation of the material topic and its boundary   | ESG Governance   | 21      |
|   | 103-2 The management approach and its components   | Supply Chain Management  | 66-68   |
|   | 103-3 Evaluation of the management approach  | Supply Chain Management  | 66-68   |
| 414-1   | New suppliers that were screened using social criteria   | Supply Chain Management  | 68      |
| <b>GRI 416: Customer Health and Safety 2016</b> |  |  |         |
| GRI 103: Management Approach 2016               | 103-1 Explanation of the material topic and its boundary   | ESG Governance   | 21      |
|   | 103-2 The management approach and its components   | Product Quality Control  | 26      |
|   | 103-3 Evaluation of the management approach  | Product Quality Control  | 26-27   |
| 416-1   | Assessment of the health and safety impacts of product and service categories  | Product Quality Control  | 26-27   |
| <b>GRI 419: Socioeconomic Compliance 2016</b>   |  |  |         |
| GRI 103: Management Approach 2016               | 103-1 Explanation of the material topic and its boundary   | ESG Governance   | 21      |
|   | 103-2 The management approach and its components   | Corporate Governance   | 14-17   |
|   | 103-3 Evaluation of the management approach  | Corporate Governance   | 14-17   |
| 419-1   | Non-compliance with laws and regulations in the social and economic area   | Corporate Governance   | 17      |

## APPENDIX 4:

# READER FEEDBACK FORM

Dear readers,

Thank you for reading the 2018 Environmental, Social and Governance Report of GCL-Poly Energy Holdings Limited.

We value and expect to hear your feedback on GCL's sustainability performance and this report. Your opinions and suggestions are the important basis for us to improve the management and practice of sustainable development and enhance our environmental, social and governance performance.

You can fill in the form below and send us your feedback by post or email. Thank you again for your valuable comments and suggestions.

| Reader Feedback Form |  |
|----------------------|--|
| 1.                   | <b>What's your role for GCL-Poly?</b><br>A. Employee      B. Shareholder/Investor      C. Government official      D. Customer<br>E. Partner (E.g. Supplier/Contractor/Industrial Partner)<br>F. Member of the community/organization/non-government organization      G. Media  |
| 2.                   | <b>In what way did you access the 2018 Environmental, Social and Governance Report of GCL-Poly Energy Holdings Limited?</b><br>A. Business visit      B. Exhibition      C. Business communication      D. Website<br>E. Company mail      F. Others ( )   |
| 3.                   | <b>How do you view the overall report of the 2018 Environmental, Social and Governance Report of GCL-Poly Energy Holdings Limited?</b><br>A. Excellent      B. Good      C. Ordinary      D. Bad      E. Terrible  |
| 4.                   | <b>(I) Do you think the information you are concerned about is disclosed and responded in the report?</b><br>A. Fully      B. Partly      C. No<br><b>(II) What information do you think has not been fully disclosed and responded?</b><br>( )  |
| 5.                   | <b>What display form do you expect to be enriched in the 2019 Environmental, Social and Governance Report of GCL-Poly Energy Holdings Co., Ltd.?</b><br>A. Management philosophy, policies and system      B. Data and charts      C. Cases<br>D. Photos      E. Others ( )  |
| 6.                   | <b>What topics or contents do you hope to be added in the Environmental, Social and Governance Report of GCL-Poly Energy Holdings Limited in 2019?</b><br>A. Management in sustainable development, in terms of ( )<br>B. Products and services, in terms of ( )<br>C. Environmental protection, in terms of ( )<br>D. Employee welfares, in terms of ( )<br>E. Community and charity, in terms of ( )<br>F. Others, in terms of ( ) |
| 7.                   | <b>What are your opinions and suggestions on the social responsibility management and practice of GCL-Poly Energy Holdings Limited?</b><br>( )   |

## Contact Us

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**GCL-Poly Energy Holdings Limited**  
保利協鑫能源控股有限公司

### Report Release

This report is released in both Chinese and English versions,  
Further information can be found on the GCL-Poly website  
(<http://www.gcl-poly.com.hk>) °

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