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开发太阳能 造福全人类

DEVELOP SOLAR POWER TO BENEFIT THE ENTIRE HUMAN RACE

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JA SOLAR
晶澳太阳能

JA SOLAR 晶澳太阳能有限公司

2017-2018 企业社会责任报告

CORPORATE SOCIAL RESPONSIBILITY REPORT



2017-2018

企业社会责任报告

CORPORATE SOCIAL RESPONSIBILITY REPORT

关于本报告 Report Specifications

本报告为晶澳太阳能有限公司发布的第二份企业社会责任报告，报告暂定每两年发布一次。

报告中“晶澳太阳能有限公司”以“晶澳”“晶澳太阳能”“公司”“我们”表示。

This report is the second corporate social responsibility report released by JA Solar Co., Ltd. Tentatively, the report is released every two years.

In the report, "JA Solar Co., Ltd." is referred to as "JA Solar" "the company" and "we".

时间范围 Reporting Period

本报告时间跨度自2017年1月1日至2018年12月31日，为期2年，因项目的延续性，部分内容超出上述范围。

This report covers the period from January 1, 2017 to December 31, 2018, with a duration of two years. As for the project continuity, some contents may exceed the above period.

报告边界 Organizational Scope

本报告覆盖晶澳太阳能有限公司及下属各级子公司和生产基地。

This report covers JA Solar Co., Ltd. and its branches and manufacturing bases.

涵盖内容 Content Description

本报告披露了晶澳太阳能有限公司的社会责任实践，涵盖市场、环境、员工、社会等利益相关方的社会责任绩效。

This report discloses the social responsibility practices of JA Solar Co., Ltd., covering the social responsibility performance relating to market, environment, employees, community, and other stakeholders.

编写依据 Reference Standards

本报告编写参考了全球报告倡议组织《可持续发展报告指南4.0》及《中国企业社会责任报告编写指南基础框架4.0》

This report is prepared with the reference of the "G4 Sustainability Reporting Guidelines" of Global Reporting Initiative (GRI) and the "Chinese CSR Preparation Guide (CASS-CSR 4.0)" of Chinese Academy of Social Sciences (CASS).

数据来源 Data Sources

本报告中的数据主要来源于公司实际运行的原始记录和季报、年报等公开披露的正式文件。

The data of this report are mainly from the original records of actual corporate operations, as well as the quarterly reports, annual reports, and other publicly released formal documents.

报告声明 Disclosures

我们保证本报告信息的可靠性、真实性、客观性，希望通过发布报告，加强与利益相关方的沟通与交流。

JA Solar Co., Ltd. guarantees the reliability, authenticity and objectivity of the information disclosed in this report, and hopes that the release of the report could enhance the communication and exchanges of the Company with stakeholders.

报告获取方式 Availability of Report

报告以电子版和纸质版两种形式呈现。

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如需纸质版报告，请致电或邮件索取。

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董事长致辞

MESSAGE FROM THE CHAIRMAN



靳保芳
Jin Baofang
董事长
Chairman

晶澳太阳能立志“做一个伟大的企业”，在产出绿色能源的同时，积极承担社会责任，为社会创造更大价值。以此，我们持续发布公司社会责任报告，向社会展示晶澳太阳能的社会责任实践。

多年来，晶澳太阳能始终坚持客户至上，通过持续不断的科技创新和严格的质量管控，为客户提供优质高效的产品，让光伏在全球更多地区广泛应用；坚持股东优先，稳健经营，持续为股东创造长远价值；坚持员工受益，关注员工权益，重视员工成长，为员工创造个人发展的大平台；坚持绿色发展，严守安全、环保底线，始终做绿色生产的践行者；坚持合作共赢，与合作伙伴携手共进，共创未来；坚持“客户至上、股东优先、员工受益”的核心价值观，积极参与公益事业，用实际行动温暖更多的人。

功崇惟志，业广惟勤。建设生态文明是中华民族永续发展的千年大计，必须树立和践行绿水青山就是金山银山的理念。晶澳太阳能将继续坚守“开发太阳能、造福全人类”的使命，秉持“真诚、质朴、敬畏、感恩”的企业精神，与各利益相关方携手共创更加美好的未来。

“德之不厚，行之不远。”一个永续发展的企业，一定是有良知的企业，一定是有高度社会责任感的企业。

“Moral virtues are the foundation and support of prosperity as they are the soul of greatness.” A sustainable enterprise must be conscience and highly socially responsible.

Adhering to the corporate vision of “make a great company,” JA Solar has been actively undertaking social responsibility while producing green energy, creating greater value for society. For this reason, we continue to release corporate social responsibility reports to show the social responsibility practices of JA Solar to society.

For years, we have always put the customer first, offering high-quality and highly-efficient products to customers through continuous innovations in science and technology and strict quality management and control. We strive to promote the extensive use of PV products in more parts of the world. We have given top priority to shareholders, and insisted on the principle of stable business operation, constantly creating long-term value for shareholders. We have given great attention to the benefits, as well as the rights and interests of employees, and focused on their career growth, providing a big platform for employees to achieve personal development. We have adhered to green development, strictly followed the bottom lines of work safety and environmental protection, always being a practitioner of green manufacturing. We have insisted on the principle of cooperation and win-win results, and established cooperative relationships with partners, creating the future together. We have adhered to the core values of putting the customer first, giving top priority to shareholders, and attaching great importance to employee benefits. We have taken the initiative to participate in charitable activities, seeking welfare for more people with practical actions.

“Great accomplishments require ambition and tireless effort.” Building an ecologically friendly civilization is vital to sustain the Chinese nation’s development. We must realize that lucid waters and lush mountains are invaluable assets and act on this understanding. Adhering to its mission of “develop solar power to benefit the entire human race” and corporate spirit of “sincerity, simplicity, reverence, gratitude,” JA Solar will spare no effort to create a better future for all mankind.

晶澳太阳能董事长
Chairman of JA Solar

聚源，谋发展

PROMOTING DEVELOPMENT WITH GREEN ENERGY



晶澳太阳能的事业，就是开发绿色能源，为人类创造美好生活。这是晶澳的初心，也是晶澳的良知，我们所有的实践都围绕着“开发太阳能、造福全人类”这一伟大的使命展开，无论路途多么坎坷，无论遇到多少困难，我们都以此为目标，知行合一，将晶澳“阳光”洒向人间。

JA Solar is committed to developing green energy and creating a better life for mankind. This is the original aspiration as well as the conscience of JA Solar. All of our practices are carried out around the great mission of “develop solar power to benefit the entire human race.” No matter how bumpy the road is and how many difficulties we encounter, we will, as always, take this as our goal and fully honor our commitments, spreading the “sunshine” of JA Solar to the world.

公司简介

CORPORATE PROFILE

晶澳太阳能成立于2005年，产业链覆盖硅片、电池、组件及光伏电站。截止到2018年底，晶澳在全球拥有12个生产基地，员工约2万人，产品遍布120多个国家和地区，广泛应用于地面光伏电站以及工商业、住宅分布式光伏系统。其中，2018年晶澳组件出货8.06GW,出货量位居全球第二。

Established in 2005, product line covers silicon wafers, cells, modules and PV power stations. As of the end of 2018, JA Solar has 12 manufacturing bases around the world, employing about 20,000 people; and the products, which are widely used in ground-mounted PV power stations, commercial & industrial rooftop PV systems and residential rooftop PV systems, have been sold in over 120 countries and regions worldwide. In 2018, shipments of our PV modules reached 8.06 GW, ranking JA Solar second in the world.

凭借持续的技术创新、稳健的财务优势和完善的全球销售与服务网络，晶澳受到国内外客户的认可，公司连续多年荣登《财富》中国500强和“全球新能源企业500强”榜单。

With its advantages of continuous technological innovation, sound financial performance, and well-established global sales and service networks, JA Solar has been well-received and highly recognized by customers from China and abroad. The Company has been listed on the Fortune China 500 and Global Top 500 New Energy Enterprises for several consecutive years.

在全球拥有生产基地
Has 12 manufacturing bases around the world

12^个

员工人数约
Employing about 20,000 people

20,000^人

2018年晶澳组件出货量位居全球
Global shipment ranking

第2^位

2017-2018 年公司大事记

CORPORATE MILESTONES IN 2017-2018

2017年
03月05日

靳保芳董事长参加全国“两会”，并为光伏行业发展建言献策。

March 5, 2017:

Jin Baofang, Chairman of JA Solar, attended the annual National People's Congress (NPC), offering advice and suggestions for the development of the PV industry.

2017年
03月23日

晶澳当选为中国机电产品进出口商会副会长单位。

March 23, 2017:

JA Solar was elected as the Vice President Member of the China Chamber of Commerce for Import and Export of Machinery and Electronic Products (CCCME).

2017年
05月14日

靳保芳董事长参加“一带一路”国际合作高峰论坛。

May 14, 2017:

Chairman Jin Baofang attended the Belt and Road Forum for International Cooperation.

2017年
06月29日

晶澳包头基地3GW晶硅项目奠基。

June 29, 2017:

The ground-breaking ceremony was held for the 3 GW crystalline silicon project in JA Solar's manufacturing base in Baotou.

2017年
10月10日

晶澳东海基地金刚线切片项目正式投产。

October 10, 2017:

The diamond wire sawing (DWS) project was formally put into production in JA Solar's manufacturing base in Donghai.

2018年
01月07日

晶澳包头基地3GW晶硅项目顺利投产。

January 7, 2018:

The 3 GW crystalline silicon project in JA Solar's manufacturing base in Baotou was successfully put into production.

2018年
02月05日

晶澳东海基地与东海县政府签约2.5GW智能化硅片项目。

February 5, 2018:

JA Solar's Donghai manufacturing base signed the 2.5 GW smart silicon wafer project with the Government of Donghai County, in eastern China's Jiangsu Province.

2018年
06月01日

晶澳越南基地1.5GW硅片项目顺利试生产。

June 1, 2018:

The 1.5 GW silicon wafer project in JA Solar's manufacturing base in Vietnam was successfully put into trial production.

2018年
06月14日

晶澳韩国公司成立。

June 14, 2018:

JA Solar Korea Co. was established.

2018年
07月17日

晶澳完成了从美国纳斯达克证券交易所私有化退市工作。

July 17, 2018:

JA Solar was officially privatized and delisted from Nasdaq Stock Exchange.

2018年
07月23日

天业通联宣布将与晶澳资产重组，晶澳构成借壳上市。

July 23, 2018:

Qinhuangdao Tianye Tolian Heavy Industry Co. announced its intention to conduct an asset-based reorganization with JA Solar, enabling JA Solar to eventually be relisted in China.

2018年
09月30日

晶澳完成拆红筹，并整合晶龙集团光伏业务板块。

September 30, 2018:

JA Solar removed the red chip structure and reorganized the PV business segment of Jinglong Group.

公司战略

CORPORATE STRATEGY



“五化”战略支撑

未来,晶澳将继续履行“开发太阳能、造福全人类”的伟大使命,坚持人才战略、创新战略、品牌战略、资本战略和全球化战略“五大战略”,以市场为导向,以人才为支撑,借力资本、全球布局、创新驱动、做强做优,不断巩固和扩大竞争优势,把晶澳公司建设成——以光伏高端制造为主,全球领先的光伏系统解决方案供应商。

In the future, JA Solar will continue to fulfill the great mission of “develop solar power to benefit the entire human race,” and execute five major strategies relating to talent, innovation, brand, capital and globalization. Guided by the market and supported by our talent, we will leverage the power of capital and innovation to establish a global presence, and spare no effort to support the Company in becoming stronger, doing better, and growing bigger. We will constantly consolidate and enhance our competitive advantages, striving to build the Company into a global leading manufacturer of high-performance PV products and a world-class solution provider for PV systems.

为保障公司战略的有效落地,公司提出“五化”战略支撑。

To guarantee the effective implementation of our corporate strategy, the Company has put in place five strategic initiatives.

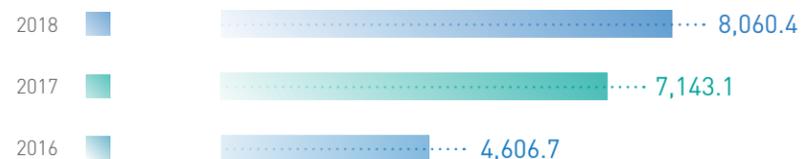
财务绩效

FINANCIAL PERFORMANCE

组件出货量 (兆瓦)

SHIPMENTS OF MODULES/MW

单位:年
UNIT: YEAR



营业收入 (万元)

OPERATING REVENUE / 10,000 YUAN

单位:年
UNIT: YEAR



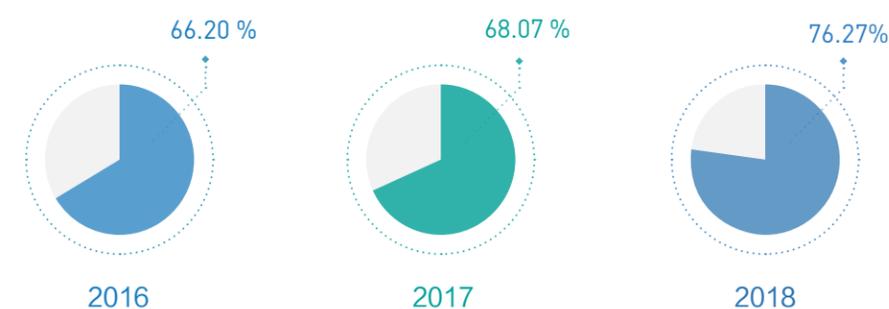
净利润 (万元)

NET PROFITS / 10,000 YUAN



资产负债率 (%)

DEBT/ASSET RATIO / %



晶澳文化

CORPORATE CULTURE

经过14年的积淀，晶澳形成了深厚的企业文化。自成立之初，晶澳就把“开发太阳能、造福全人类”作为自己的使命，秉持“真诚、质朴、敬畏、感恩”的企业精神，始终践行“堂堂正正做人、兢兢业业做事”的企业信念，立志“做一个伟大的企业”。晶澳文化最显著的特色是继承和发扬了中华优秀传统文化，获得了员工的高度认同，成为了晶澳全体员工的思想准则和行动指南。

After 14 years of development, JA Solar has forged a profound corporate culture. Since its establishment, JA Solar has made its mission to “develop solar power to benefit the entire human race”, insisted on the corporate spirit of “sincerity, simplicity, reverence, gratitude,” and always fulfilled the corporate belief of “act honorably, work conscientiously,” striving to make a great company. One of the most distinct characteristics of JA Solar’s corporate culture is that it inherits and carries forward the excellent Chinese traditional culture. Our employees have embraced this to guide their thinking and actions.

晶澳文化体系

CORPORATE CULTURE OF JA SOLAR:



晶澳风控

RISK CONTROL

反舞弊 Anti-Fraud

晶澳致力于营造公平诚信的工作氛围，推动商业道德体系建设。公司层面，在原有审计监察部的基础上，组建成立了审计监察委员会，并设立了内控审计组、专项审计组、工程审计组和反舞弊审计组。晶澳建立起了包含事前预防宣导、事中监督把控、事后调查处罚的全过程反舞弊体系，并成为中国企业反舞弊联盟常务理事单位和阳光诚信联盟理事单位。

JA Solar is committed to making a work environment featuring fairness and integrity and promoting the building of a business ethics system. At the corporate level, JA Solar has reorganized the original audit and supervision department into the audit and supervision committee, and established teams for internal control and audit, special audit, project audit and anti-fraud audit. The Company has established an anti-fraud system for all stages of operations from beginning to end to ensure that every aspect of examination and approval is subject to oversight and accountability. JA Solar serves as the standing director member of the China Enterprise Anti-Fraud Alliance (CEAFA) and the director member of the Trust and Integrity Enterprise Alliance (TIEA).

晶澳太阳能的反舞弊措施

ANTI-FRAUD MEASURES OF JA SOLAR



开展反舞弊培训
Carried out 22 anti-fraud training sessions

22 次

总计培训
Total participants are 958

958 人次

2017-2018年，晶澳共对448个二级子流程进行了梳理，每年进行三轮内控测试，两年测试样本总计15,307个，测试范围涵盖公司所有业务部门，测试结果显示均无重大内控缺陷。2017-2018年，公司开展反舞弊培训22次，总计培训958人次；开展工程监标18次，监察7次，审计合同85项，合计为公司减少损失1,418.69万元。

In 2017-2018, JA Solar teased out a total of 448 secondary sub-processes. Three rounds of internal control testing were conducted each year, and 15,307 samples were tested totally during those two years. The results of the internal control testing, which covered all of the business divisions, detected no major internal control defects. In 2017-2018, the Company carried out 22 anti-fraud training sessions with 958 participants. JA Solar also supervised 18 project bids, conducted seven supervision visits, and audited 85 contracts, reducing the loss by 14.1869 million yuan.



晶澳采购平台反舞弊培训现场
Anti-fraud training conducted by the procurement division of JA Solar

商标、专利保护 Trademark & Patent Protection

在商标、专利保护方面，晶澳在其产品上明确标明“晶澳”或 **JA SOLAR** 字样，在近100个国家申请注册了核心商标，在全球范围内已经或者正在寻求更为广泛和扎实的商标注册和保护工作。

To help protect its trademarks and patents, JA Solar clearly marks “晶澳” or “**JA SOLAR**” on its products, and has applied for or registered core trademarks in nearly 100 countries and regions. More extensive and effective trademark registration and protection work has been conducted and will be further enhanced worldwide.

2017-2018年，晶澳在全国范围展开全面的打假行动，对涉及10多个省份的30余家企业进行侵权投诉或商标侵权诉讼。

打假行动

Crackdown on counterfeits

In 2017-2018, JA Solar launched a nationwide campaign against counterfeit goods, and filed infringement complaints or trademark infringement lawsuits against over 30 companies in more than 10 provinces, municipalities and autonomous regions.

海外维权

Overseas IPR protection

一家中国贸易公司在印尼欲抢注晶澳核心商标，晶澳向印尼知识产权总局提起异议，成功阻止该商标的注册。

A Chinese trading company tried to register a core trademark of JA Solar in Indonesia; JA Solar successfully blocked the registration of the trademark by raising an objection at the Directorate General of Intellectual Property of Indonesia.

海关保护

Customs protection

晶澳充分运用海关知识产权保护系统，将核心商标和专利在海关知识产权保护系统进行了备案。海关知识产权保护系统给晶澳知识产权的保护提供了利器。

JA Solar has made full use of the regulations on customs protection of intellectual property rights to protect its core trademarks and patents. The customs protection of intellectual property rights is an effective tool in protecting intellectual property rights of the Company.

聚智，思创新

BOOSTING INNOVATION WITH INTELLIGENCE



推进能源转型，实现绿色发展，是国策，亦是时代选择。晶澳始终坚持研发投入，突破技术瓶颈，不断优化技术工艺，降低光伏发电成本，向市场提供最有竞争力的产品。同时，晶澳坚持以客户为中心，通过对消费需求模式、产品开发模式、商业流通模式的不断优化和创新，促进公司的可持续发展。

Promoting energy transition and pursuing green development is a national policy, and is one of the trends of our time. JA Solar has always invested in research and development to surmount technological bottlenecks, to constantly optimize technological processes, and to reduce the levelized cost of electricity (LCOE), providing the market with the most competitive products. Adhering to the principle of customer first, JA Solar has continuously optimized and conducted innovation in the consumption model, product development model and commercial distribution model, striving to achieve sustainable development.

研发创新

R&D AND INNOVATION

晶澳在自主研发的基础上，积极开展与国内外顶级科研机构、高校的合作，实现了研发一代、储备一代、推广一代的研发机制。目前行业主流的PERC电池技术由晶澳率先在国内实现规模化量产。在此基础上，晶澳通过自主研发，推出了双面PERC技术，在国内外申请了PERC双面电池专利并获得授权，助力行业发展。2017年和2018年，晶澳新增专利分别为103项和118项。截至2018年底，晶澳拥有授权专利660项，其中发明专利96项，位居行业前列。

Based on independent research and development, JA Solar has actively conducted cooperation with top scientific research institutions and universities both at home and abroad, and realize the R & D mechanism that one generation is developing, one generation is reserving, one generation is promoting. PERC cell technology, now a mainstream technology of the industry, achieved mass production first at JA Solar in China. Building on this achievement, JA Solar launched bifacial PERC technology, and obtained patents on bifacial PERC cells successfully both at home and abroad, facilitating the development of the industry. In 2017 and 2018, JA Solar obtained 103 and 118 patents respectively. As of the end of 2018, the Company has had 660 patents, among which 96 were patents for invention, ranking among the top in the industry.

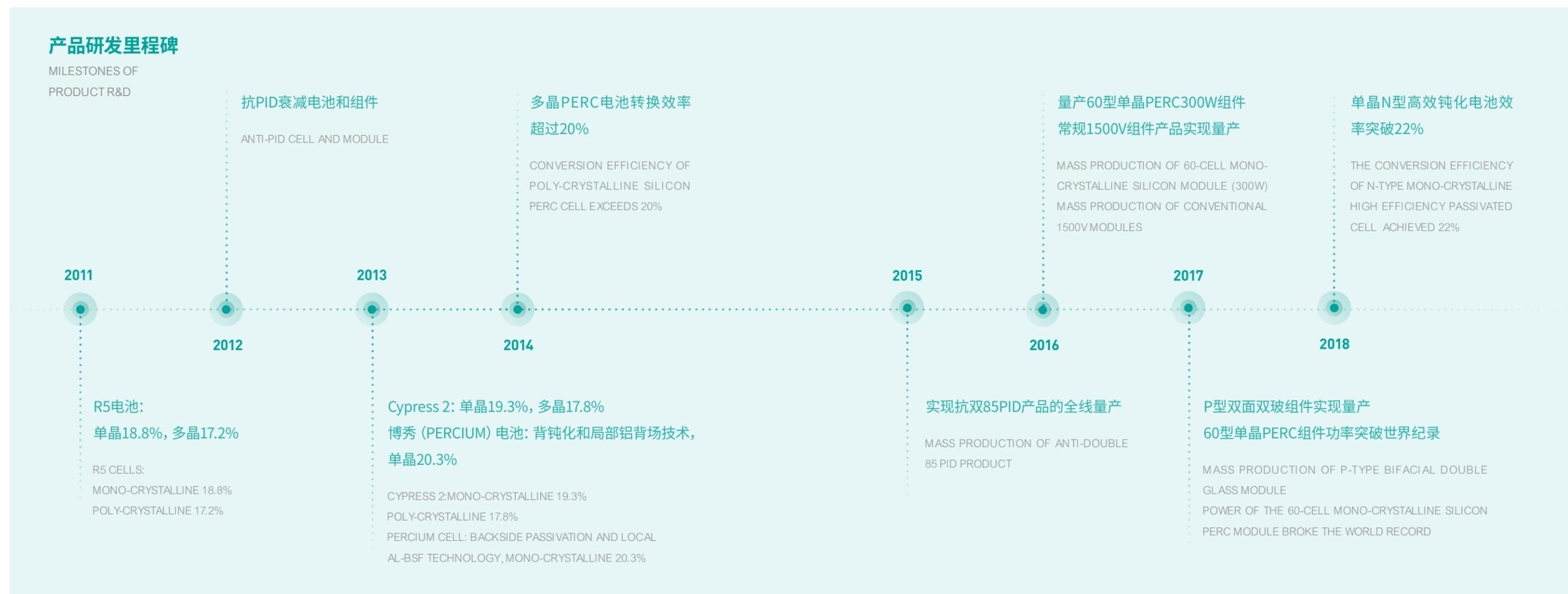


得益于先进的技术和高性能的产品,晶澳连续多年荣获权威机构EuPD Research授予的“欧洲顶级光伏品牌”,全球知名独立能源专家和认证机构DNV GL授予的“全球最佳表现组件制造商”,中国质量认证中心(CQC)颁发的“光伏发电产品领跑者认证计划杰出贡献奖”等荣誉。在实验室资质方面,2017-2018年晶澳获得Intertek(天祥集团)颁发的全球首家UL61215及UL61730标准的“卫星计划”实验室资质,以及TÜV南德颁发的 Stage2客户实验室资质等。

With its sophisticated technologies and high-performance products,JA Solar has received the Top PV Seal in Europe from EuPD Research for three consecutive years, a highly recognized European research firm.JA Solar has been awarded "2018 Top Performer" by DNV GL,a world renowned independent energy expert and certificate insititute.JA Solar also won the Award for Outstanding Contributions to PV Power Generation Products in the Top Runner Program by the China Quality Certification Center (CQC), and so on. As for laboratory qualification in 2017-2018, JA Solar was designated by Intertek as a "Satellite Program" certified laboratory, which was the first of its kind in the world receiving Underwriters Laboratories (UL) 61215 certification and UL 61730 certification,and received the CTF Stage 2 qualification certificate by TÜV SÜD.



晶澳2018年技术大会在合肥基地召开
2018 JA Solar Technology Conference held in Hefei manufacturing base





晶澳荣获DNV GL“全球最佳表现组件制造商”殊荣
JA Solar was recognized as a “Top Performer” in the DNV GL/PVEL PV Module Reliability Scorecard



晶澳荣获EuPD Research授予的“欧洲顶级光伏品牌”
JA Solar received the Top Brand PV Seal from EuPD Research



晶澳荣获Intertek全球首家UL61215/UL61730标准“卫星计划”实验室资质
JA Solar was designated by Intertek as a “Satellite Program” certified laboratory, which was the first of its kind in the world receiving Underwriters Laboratories (UL) 61215 certification and UL 61730 certification



晶澳中标第三批光伏发电领跑计划项目

CASE: JA SOLAR WINS BIDDING FOR TOP RUNNER PROGRAM PV POWER PROJECT



晶澳荣获中国质量认证中心颁发的“光伏发电产品领跑者认证计划杰出贡献奖”

JA Solar won the Award for Outstanding Contributions to PV Power Generation Products for the Top Runner Program by China Quality Certification Center

国家能源局从2015年开始推出“光伏领跑者计划”，主要面向已实现量产的领先技术产品或尚未量产的前沿技术、突破性技术产品。晶澳在第三批“光伏领跑者计划”中表现优异，尤其是在“技术领跑者”项目中，晶澳中标上饶光伏发电“技术领跑者”基地项目250MW，充分彰显了晶澳太阳能技术的先进性。

China's National Energy Administration (NEA) launched the Top Runner Program in 2015, awarding leading technologies and products that achieve mass production; or cutting-edge and disruptive technologies and products still under development. JA Solar achieved outstanding performance in the third batch of Top Runner Program projects, especially in the PV technology field, and won the bidding for the 250 MW PV power project in Shangrao, in eastern China's Jiangxi Province. This fully highlights the sophistication of solar energy technologies developed by the Company.



晶澳产品应用于全球首个PERC双面双玻光伏项目

CASE: JA SOLAR'S PRODUCTS APPLIED TO WORLD'S FIRST BIFACIAL PERC DOUBLE GLASS PV PROJECT

青海黄河水电共和晨阳光伏项目是全球第一个大规模应用PERC双面双玻组件的光伏项目，该项目采用晶澳的PERC双面双玻组件产品，在沙尘暴、强紫外线、盐碱地和沙地等恶劣环境下，仍具有显著发电优势。经由TÜV莱茵现场测试和数据分析验证，晶澳PERC双面双玻组件较常规单晶组件可以使整个系统发电量提升10%以上，三十年超长质保为客户提供了更多的保障。

The Chenyang PV Power Project of Qinghai Yellow River Hydropower Development Co. is the world's first PV power project to apply bifacial PERC double-glass modules at scale. The project adopted PERC double-glass modules, which still has significant power generation advantages under the harsh environment of sandstorm, intense ultraviolet, saline alkali land and sand land. According to the testing results of TÜV Rheinland, a global leader in independent inspection services, the bifacial PERC double-glass modules could increase the power generation of the whole system by more than 10 percent in comparison with that of conventional mono-crystalline modules. And with the 30-year-long quality guarantee policy of the Company, customers can feel even more confident in those products.



青海黄河水电大型光伏项目

Large PV power project of Qinghai Yellow River Hydropower Development Co.

智能制造 和运维

INTELLIGENT MANUFACTURING AND OPERATION & MAINTENANCE

晶澳一直将智能生产作为企业转型升级的加速器，不断推进产品向高端化、智能化迈进，未来计划建立覆盖生产制造基地和其他各商业主体的智能综合管理运营平台。

JA Solar has always used "smart manufacturing" as an accelerator for corporate transformation and upgrading, and constantly promoted high-end manufacturing and intelligent development of products. In the future, the Company will establish the intelligent comprehensive management and operation platform covering manufacturing bases and other commercial entities.

目前，在硅片环节，晶澳已经建立了生产大数据分析系统，将设备、辅材、硅片的50余个参数采集入库并加以计算，该系统如车间管家一般24小时对生产进行实时监测和自动预警，借助大数据，实现了对硅片产品质量的精细控制。

Currently, JA Solar has established a big data analysis system for silicon wafer manufacturing activities. More than 50 parameters relating to equipment, supporting materials and silicon wafers are included in the database. Like a workshop manager, the system conducts real time monitoring of the manufacturing process for 24 hours a day and gives early warnings automatically. Using the big data, JA Solar produces high quality silicon wafers with lean management.

在电池环节，晶澳建立了产品质量分析系统，通过对生产过程中的所有质量和过程数据进行汇总，实现了全面的质量管理体系及质量标准化。设备方面全部使用单晶槽式制绒设备、低压软着陆扩散系统、等离子增强化学气相沉积、原子层气相沉积、高精度激光掺杂、高速视觉定位印刷设备等，高精度6轴机器人，全自动颜色EL检测，均为世界先进水平高度自动化设备，智能化自动化可升级程度高，便于实现全程智能控制和监控。

As for cells, JA Solar has established a product quality analysis system, and thus realized a comprehensive quality management system and quality standardization by summarizing all of the data relating to manufacturing quality and process. As for the equipment, JA Solar has introduced Mono-crystalline batch texturing equipment, low-pressure diffusion system, plasma-enhanced chemical vapor deposition(PECVD), atomic layer deposition(ALD), high resolution laser doping, high-speed screen-printing equipment, and so on, as well as high precision six-axis robot and auto EL appearance inspection, all of which are world's advanced highly automated equipment and can be upgraded easily both in terms of intelligent operation and automation, thus facilitating full process intelligent control and monitoring.

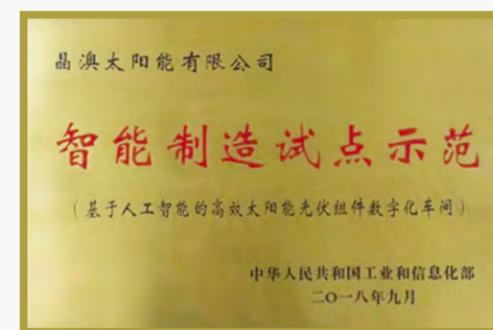


在组件环节，全部使用全自动双轨高速串焊机、双腔层压机、全自动排版机和全自动装框一体机，拥有工业级电脑智能控制多维度机械手的自动排版机等世界先进水平的设备。同时，该生产线拥有较高的适应性，实现了生产全过程智能联动，一键完成产品规格更换。另外，通过对生产运营管理软件系统（EPR、PLM、MES、WMS等）和大数据平台、分析应用的融合应用，建设一体化企业综合管理运营平台，实现生产、运营、管理、分析、决策等的全面业务整合。

As for the modules, JA Solar has introduced fully automatic high-speed double-line tabber&stringer machine, double cavity laminator, auto layup machine, and automatic framing machine and owns the world-class equipment and facilities including auto layup machine controlled by IPC's intelligent system with multidimensional manipulator. The production lines for modules feature high adaptability, and have realized intelligent linkage throughout the production process; a change of product specifications can be made with just one-click. In addition, through the integration and application of software systems for production and operation management (EPR, PLM, MES, WMS, etc.), the big data platform, and analytical application tools, JA Solar has established an integrated corporate management and operations platform, achieving comprehensive business integration covering production, operation, management, analysis, decision-making, and so on.

在光伏电站环节，晶澳已实现大数据采集，通过集控信息的采集、汇总、分析，提供运维人员对电站日常运检工作的判断、决策；通过电站集控平台与电网之间信息、设备的互联互通，达到光伏电站功率预测、远程功率控制的功能；同时结合无人机巡检、机器人清洗，有效的提高了电站运维安全性、可靠性、经济性等。随着信息控制技术的不断迭代，晶澳智能运维将逐渐从大数据、云计算到人工智能等，实现具有晶澳特色的光伏电站智能运维。

As for the PV power stations, JA Solar has achieved big data acquisition. Through acquisition, summarization and analysis of information relating to distributed control systems, JA Solar provides reference data for operation and maintenance personnel to exercise judgement and make decisions in their daily work of operating, maintaining and inspecting power stations. The connectivity of information and equipment between the distributed platforms of power stations and power grid facilitates the forecast of PV power station capacity and remote capability control. The UAV inspection and robotic cleaning effectively improve the safety, reliability, and economic efficiency of power station operation and maintenance. With the continuous iteration of information control technology, JA Solar's intelligent operation and maintenance will gradually transform from big data and cloud computing to artificial intelligence to realize intelligence operation and maintenance of PV power stations with JA Solar's characteristics.



晶澳宁晋基地“基于人工智能的高效太阳能光伏组件数字化车间”入选工信部智能制造试点示范项目

The artificial intelligence-based high-efficient solar energy PV module workshop of JA Solar's manufacturing base in Ningjin was included in the intelligent manufacturing pilot demonstration projects by the Ministry of Industry and Information Technology of China



晶澳扬州基地顺利通过国家信息化与工业化融合管理体系认证，获得“两化融合管理体系评定证书”

JA Solar's manufacturing base in Yangzhou successfully passed the National Integration of Informatization and Industrialization Management System Certification and received the certificate

质量管理

QUALITY MANAGEMENT

晶澳始终把质量放在第一位，致力于做产品质量的“领跑者”。晶澳严格遵守各项法律法规及标准要求，编制下发《质量管理手册》，建立严格的质量保证体系，对产品设计开发、采购、生产、检测、计量、物流等过程进行管控，保证所提供的产品符合相关国家标准。

JA Solar has always put quality first and is committed to displaying leadership in enhancing product quality. The Company strictly abides by the laws and regulations, as well as the requirements of various standards. JA Solar has issued the "Manual on Quality Management," established a strict quality assurance system, and conducted management and control on the processes relating to product design and development, procurement, production, testing, measurement, logistics, and so on, ensuring that its products meet relevant national standards.

公司一直执行硅片、电池、组件环节的质量评比机制，促进内部找到差距，提高产品质量；另外，公司通过建立硅片、电池、组件质量平台，加强总部质量与生产基地质量互动，共同推进过程问题的解决及产品品质的提升。

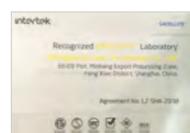
JA Solar has been carrying out quality evaluation mechanism in the aspects of silicon wafers, cells, and modules, aiming at finding any quality gaps through internal inspection and ultimately improving product quality. By establishing quality platforms for silicon wafers, cells, and modules, the Company has enhanced the quality interaction between the headquarters and the manufacturing bases, facilitating problem-solving and product quality improvement.

2017-2018年，晶澳测试认证中心先后获得SEMI（国际半导体产业协会）参标授予证书、TÜV南德及Intertek（天祥集团）的IEC 61215&IEC 61730新标检测的WMP实验室资质，完成CNAS（中国合格评定国家认可委员会）的换证复评工作，并推动TÜV南德和Intertek机构之间互认。

In 2017-2018, JA Solar's Test Center successively received reference standard certificates from Semiconductor Equipment and Materials International (SEMI), and the WMP laboratory qualification certificates for the new IEC 61215 and IEC 61730 standards from TÜV SÜD and Intertek; completed the renewal review work of China National Accreditation Service for Conformity Assessment (CNAS), and promoted the mutual recognition of qualifications between TÜV SÜD and Intertek.

晶澳太阳能始终坚持以客户为中心，建立了“售前、售中、售后”全流程客户服务体系，涵盖了技术咨询、电站现场服务、客户反馈处理等内容。在客户反馈处理方面，晶澳建立了“24小时内响应机制”，以最快速度响应客户需求。

JA Solar has always put customers first, and established the "pre-sale, in-sale, and after-sale" service system for customers, which covers the contents of technical consulting, power station on-site service, customer feedback handling, and so on. As for the customer feedback handling, JA Solar has established a response mechanism to respond to customer needs as quickly as possible (within 24 hours).



晶澳测试认证中心近两年取得的实验室资质认可
Qualification certificates received by JA Solar's Test Center in 2017-2018

客户服务

CUSTOMER SERVICE

2017-2018年晶澳合同/订单评审实现0投诉、0差错，售中异常处理0投诉、0差错，客服售后响应率近100%。

In 2017-2018, JA Solar received no complaints from its customers and made no errors in any aspect of contract or order review; no complaints were received or no errors were made in dealing with in-sale problems; and the after-sale response rate for customers reached nearly 100 percent.

晶澳获得印度BIS认证 CASE: JA SOLAR RECEIVES CERTIFICATION FROM BIS

2018年10月，晶澳获得印度单晶与多晶产品认证（印度新能源和可再生能源部于2017年10月发布BIS强制认证），成为少数获得印度认证的公司。

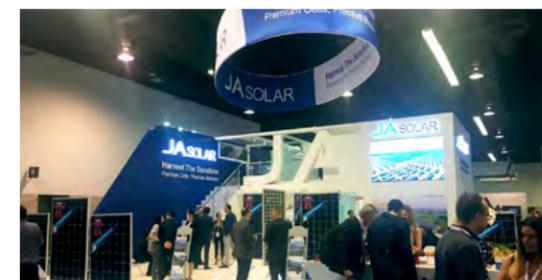
In October 2018, JA Solar received a certification for its mono-crystalline and poly-crystalline products from the Bureau of Indian Standards (BIS), becoming one of the few companies to be certified by the national standards body of India. The BIS compulsory certification was required by the Ministry of New and Renewable Energy (MNRE) of India in October 2017.

自2011年底向印度出货组件以来，晶澳在印度市场迅速扩展，并与当地很多开发商、EPC公司和独立发电企业等建立了稳定的战略合作关系。凭借高品质、高可靠性的组件产品，以及全球化服务网络，晶澳获得了客户的高度认可。截至2018年底，晶澳向印度累计出货超过2.3GW。

JA Solar has developed rapidly in India since it delivered shipments to the country in late 2011. JA Solar has established enduring strategic cooperation relationships with a number of developers, EPC companies, independent power generation enterprises, and so on. With its high-quality and highly reliable module products, as well as a global service network, JA Solar has been highly recognized by its customers. As of the end of 2018, the cumulative shipments of modules by JA Solar into India had reached more than 2.3 GW.



2018德国慕尼黑国际太阳能展
2018 The Intersolar Europe in Munich, Germany



2018美国国际太阳能展
2018 Solar Power International in United States



2018年上海SNEC展
SNEC 2018 International Photovoltaic Power Generation and Smart Energy Exhibition in Shanghai

传播绿电理念

PROMOTING THE IDEA OF GREEN POWER

2017-2018年，晶澳太阳能跨越6大洲，在30多个国家参加90余场展会，例如上海SNEC展、德国慕尼黑国际太阳能展 (Intersolar Europe) 及美国国际太阳能展 (Solar Power International) 等，参展面积超过5,000平米，覆盖专业观众约74万人。

In 2017-2018, JA Solar participated in over 90 exhibitions in more than 30 countries and regions on six continents. The exhibitions included, among others, the SNEC International Photovoltaic Power Generation and Smart Energy Exhibition in Shanghai, China, the Intersolar Europe in Munich, Germany, and the Solar Power International in United States. These exhibition areas covered more than 5,000 square meters, and welcomed about 74,000 trade visitors.

晶澳积极与政府机构、高校等开展合作，通过对外展示、支持竞赛、支持社会实践等，传播光伏理念。

JA Solar has actively established cooperative relations with government agencies and universities, and promotes PV by carrying out exhibition activities and supporting competitions and social practices.



上海电力大学外籍学员到晶澳参观学习
Foreign trainees of Shanghai University of Electric Power conducted a study tour to JA Solar



泰国能源部人员赴晶澳参访考察
Staff members of the Ministry of Energy of Thailand visited JA Solar



“农光互补”在晶澳任县电站开花结果

CASE: PHOTOVOLTAIC AGRICULTURE ACHIEVES RESULTS IN JA SOLAR'S PV POWER STATION IN REN COUNTY

2017年6月，任县电站 75 亩大蒜喜获丰收。任县项目占地 600 余亩，是晶澳首个光伏农业项目。项目还试验种植紫色马铃薯、玉米等作物。种植全过程符合无公害农产品操作标准，确保产品品质和食品安全。

A total of 75 mu (equalling to 1/6 acre) of garlic farms in JA Solar's power station in Ren County, north China's Hebei Province, had a good harvest in June 2017. Covering more than 600 mu of land, the photovoltaic agriculture project, which is a combination of photovoltaic power generation and agricultural activities, was the first of its kind implemented by JA Solar. Purple potatoes, corn and other crops were also planted for trial. The cultivation process of those crops was conducted in strict accordance with the working standards for pollution-free agricultural products to guarantee food quality and safety.

这是对“农光互补”模式的一次探索和实践，除了经济效益，该项目的实施还促进了电站周围村民的就业和增收。光合作用和光伏发电分别是自然界和人类对太阳能利用的典范，农业和光伏的结合可以相互促进，共同发展。

The project aimed at exploring and practicing the concept of photovoltaic agriculture. In addition to economic benefits, the project also created job opportunities for farmers surrounding the power station and increased their incomes. Photosynthesis and photovoltaic power generation are examples of the utilization of solar energy by nature and mankind respectively. With the combination of photovoltaic power generation and agricultural activities, the two can promote each other and develop together.



丰收的“蒜农”笑开了花
A bumper harvest for garlic farmers



聚才，强组织

DEVELOPING THE ORGANIZATION THROUGH TALENT



人才兴，则事业兴。晶澳始终坚持创造员工成长的大平台，健全人才培养机制，给每个人提供施展才能的机会。在这个大平台上，所有晶澳人共创、共享、共赢，实现人生理想。

JA Solar is committed to invigorating the enterprise through human resource development. The Company has been creating the platform for employee growth and perfecting a talent cultivation mechanism to offer opportunities for each according to his or her ability. On this platform, the JA Solar people work together, share together and jointly achieve win-win results, striving to realize their dreams.

晶澳坚持“德才兼备”的用人观，有德有才破格重用，有德无才培养使用，有才无德限制使用，无德无才坚决不用；坚持“价值导向”，“赛马不相马”，能上能下，让奋斗者脱颖而出。

JA Solar adheres to the principle of selecting personnel on the basis of both moral integrity and professional ability, with priority given to integrity, and on the basis of merit regardless of background. JA Solar insists on the value-oriented philosophy, puts people first, lets the talented people exhibit their ideas without inhibiting them, encourages personnel to be adaptive to promotion and demotion, and creates a broad platform for top performers.

基本权益

BASIC RIGHTS AND INTERESTS

晶澳严格遵守《劳动法》《劳动合同法》等法律法规，依法为员工缴纳“五险一金”，并提供补充商业医疗及意外保险。公司与工会签订《集体劳动合同》《工资协商专项集体合同》和《女职工权益保护专项集体合同》，在劳动报酬、工作时间、休息休假、劳动安全卫生、保险福利和职业技能培训等方面充分保障员工权益。晶澳奉行公平、平等的用人政策，遵循按劳分配原则，不因肤色、民族、宗教、性别、年龄和残疾等区别对待。

JA Solar strictly abides by the "Labor Law," "Labor Contract Law," and other laws and regulations. JA Solar pays the "five social insurances and one housing fund" for employees according to law, and offers supplementary commercial medical insurance and accident insurance to them. The Company signs the "Collective Labor Contract," "Special Collective Contract for Wage Negotiation," and "Special Collective Contract for Protecting the Rights and Interests of Female Employees" with the trade union, and fully protects the rights and interests of employees from the aspects of payment of labor, working hours, labor safety and health, insurance and benefits, occupational skills training, and so on. JA Solar pursues a fair and equal employment policy, follows the system of equal pay for equal work, insists on the principle of distribution according to work, and prohibits discrimination based on color, race, religion, gender, age, disability, and so on.

女性员工占比 30%
Proportion of female employees is 30%



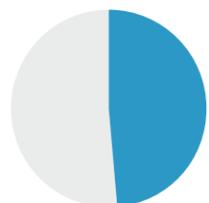
截至2018年底，员工总数20,003人，同比增长约12%；其中女性员工6,022人，占比约30%；正式员工签订劳动合同率为100%。

As of the end of 2018, JA Solar had employed 20,003 people, up 12 percent from a year earlier. Among them, 6,022 or 30% were female. The signing rate of labor contacts among regular employees was 100 percent.

人才招聘

TALENT RECRUITMENT

本地化 (地级市) 雇佣比例为 **48.87%**
The Company's localization rate reached 48.87 % in China's prefectural-level cities



海外基地本地人员占比约 **70%**
Proportion of local people in overseas manufacturing bases 70%



晶澳将人才视为可持续发展的重要驱动因素。为满足公司不断增长的人才需求，我们通过线上、线下等多渠道招揽人才。2017-2018年，晶澳组织校园招聘129场，足迹遍布华东、华中、华南、华北、东北、西北等地区的高等院校，其中包括北京大学、中国人民大学、西安交通大学、哈尔滨工业大学等211、985及双一流高校。

JA Solar sees high-caliber people as an important driving factor for sustainable development. To meet the increasing demands for talent, the Company has opened online and offline channels and expanded its recruiting platform. In 2017-2018, JA Solar organized 129 on-campus recruiting activities covering colleges and universities in east China, central China, south China, north China, northeast China, northwest China and other regions, including the "211" and "985" projects and the Double World Class project such as Peking University, Renmin University of China, Xi'an Jiaotong University, Harbin Institute of Technology.

公司注重人才的本地化，公司本地化 (地级市) 雇佣比例为48.87%，海外基地本地人员占比约70%。2018年，晶澳公司吸纳就业人数较2017年增长3,994人。

JA Solar attaches importance to the implementation of a talent localization strategy. The Company's localization rate reached 48.87 percent in China's prefectural-level cities and about 70 percent in overseas manufacturing bases. In 2018, the number of new hired employees increased by 3,994 people compared to 2017.



晶澳马来西亚基地招聘专场
Special job fair held at JA Solar's manufacturing base in Malaysia

职业发展

CAREER DEVELOPMENT

晶澳员工职业发展通道包括纵向的职级、职务晋升和横向的跨序列拓展。员工可以根据公司需要、个人实际情况及兴趣，在不同通道之间进行转换。通过上述机制，2018年晶澳识别核心人才523名，较2017年的393人增加130人；另外，建立轮岗和竞聘机制，增强组织活力，为员工提供更多职业发展空间和机会。

The career development channels of JA Solar include vertical movement of rank or job promotion and horizontal movement of cross-sequence post or grade promotion. Employees can switch between channels according to the needs of the Company, their actual situation and interests. Through this mechanism, JA Solar confirmed 523 core talents, up by 130 people compared to 2017. The Company has also established job rotation and post competition mechanisms to enhance corporate vitality and to provide more career development opportunities for employees.



员工培训 Employee Training

晶澳每年定期举行重点骨干人员盘点会，选拔优秀年轻员工作为储备人才进行培养，通过《员工职业发展管理办法》《员工轮岗管理办法》《员工外出培训管理办法》等措施进行人才梯队建设，针对不同层级人员实行不同培养方案。2017-2018年，晶澳培训费用投入约586万元，员工参加培训比例为100%。

JA Solar reviews key talent every year, aiming to select young employees with outstanding performance as reserve talent. The Company has introduced measures including "Administrative Measures for Career Development of Employees," "Administrative Measures for Job Rotation of Employees," and "Administrative Measures for External Trainings of Employees" to enhance talent cultivation and echelon construction, and implemented different training programs for personnel at different levels. In 2017-2018, investment for employee training reached about 5.86 million yuan, and the participation rate of employees was 100 percent.

晶澳每周组织员工参加读书学习活动，分享学习经验；同时，晶澳积极组织专业知识学习、学历进修、函授、考取资格证书等活动，并为获取资格证书的人员报销相关费用。

JA Solar organizes employees to participate in reading and learning activities weekly for a shared learning experience. The Company also actively encourages employees to take part in professional continuing education, in-service training programs, correspondence courses, and qualification certificate tests. JA Solar reimburses related expenses for those who achieve diplomas or qualification certificates.

培训费用投入约
Employee training reached about 5.86 million yuan

586 万元

员工参加培训比例为
The participation rate of employees is

100 %



宁晋基地杰出班组长管理能力提升培训
Management enhancement training for leaders of primary teams in JA Solar's manufacturing base in Ningjin



越南基地举行拜师大会
Mentorship conference held in JA Solar's manufacturing base in Vietnam

技能竞赛 Skills Competition

为全面提高员工操作技能，晶澳每年均举办不同类型的劳动技能竞赛，通过岗位技能竞赛活动调动员工的工作热情，检验员工岗位操作要领的执行情况。

JA Solar holds various labor skills competitive activities every year to fully improve the operating skills of employees. The Company also organizes post-based skills competitions to motivate employees and then review the essential points of operation in their work.



宁晋基地成功承办邢台市“晶澳杯”光伏行业职工技能大赛
Xingtai City "JA Solar Cup" Skills Competition for Workers of PV Industry successfully held by Ningjin manufacturing base



燕郊基地第三届职工劳动技能竞赛
The Third Workers' Labor Skills Competition of Yanjiao manufacturing base



奉贤基地开展“工匠精神”岗位技能大赛
"Craftmanship Spirit" Post Skills Competition conducted by Fengxian manufacturing base

人才激励 Talent Motivation

晶澳不断完善长期与短期激励机制，推出核心人才激励计划等有针对性的长期激励计划，以及销售激励政策等短期激励机制，设置了年度评模选优以及其他日常性奖励项目，保证员工的个人价值得到充分认可。

JA Solar constantly improves both the long-term and short-term incentive programs. JA Solar has launched long-term incentive plans including the plan for core talent and short-term incentive schemes such as the sales incentive program. The Company has also launched a "Most Valuable Employee" program and other rewards activities to ensure that the personal value of employees is fully recognized.

在晶澳2018年评模选优中，共有1,767名员工获得个人奖，相对于2017年的1,348人，同比增长31.1%；2018年设有94个团体奖项，共有2015人获得团队奖，相对于2017年的1,484人，同比增长35.8%。

In JA Solar's 2018 "Most Valuable Employee" competition, a total of 1,767 people won individual awards, up 31.1 percent or increasing by 419 people from a year earlier. A total of 2,015 people won the 94 group awards, up 35.8 percent or increasing by 531 people year-on-year.



晶澳2018年度总结表彰暨2019年动员大会
Jinglong & JA Solar 2018 Summary Commendation and 2019 Mobilization Conference

民主管理

DEMOCRATIC MANAGEMENT

共召开职工代表大会和民主会
Held 26 workers' congress meetings and democratic meetings

26次

收集合理化建议
Collecting 1,625 suggestions

1,625条

晶澳提倡“坦诚交流”，积极采取各种措施畅通沟通渠道。晶澳以职工代表大会为民主管理的基本形式，支持职工参与企业管理，维护职工合法权益，构建和谐劳动关系，促进企业持续健康发展。2017-2018年，公司各级工会共召开职工代表大会和民主会26次，收集合理化建议1,625条。晶澳建立完善的员工满意度调查程序，建立内部沟通平台，倾听员工心声，为员工参与民主管理建言献策提供沟通渠道。

JA Solar advocates frank communications between the enterprise and its employees, as well as among employees, and has taken various measures to ensure smooth exchanges and communications. Taking the workers' congress as the basic form of democratic management, JA Solar encourages employees to participate in corporate management, protects their legal rights and interests, constructs harmonious labor relations, and promotes sustainable and healthy development of the enterprise. In 2017 and 2018, trade unions at various levels of the Company held 26 workers' congress meetings and democratic meetings, collecting 1,625 suggestions. JA Solar has formulated complete employee satisfaction survey procedures and established an internal communication platform to enhance exchanges with and listen to employees. The procedures and the platform offer channels for employees to participate in democratic management and to offer advice and suggestions.



晶澳北京总部第一届二次职工代表大会
JA Solar Beijing headquarters held the second session of the first Workers' Congress



邢台基地职工代表大会
Worker's congress meeting held in Xingtai manufacturing base



东海基地职工代表大会
Workers' congress meeting held in Donghai manufacturing base



奉贤基地职工代表大会
Staff symposium held in Fengxian manufacturing base



晶澳越南基地成立工会组织

CASE: TRADE UNION ESTABLISHED AT JA SOLAR'S MANUFACTURING BASE IN VIETNAM

2018年10月19日，晶澳太阳能（越南）有限公司工会正式成立，给越南基地注入更大的生机和活力，有利于越南基地进一步团结员工，鼓励广大员工开拓创新、勤奋工作，助推公司各项工作不断迈向新台阶。

On October 19, 2018, the trade union of JA Solar (Vietnam) Co., Ltd. was officially established, which injected greater vitality and vigor into the manufacturing base. It was conducive for the manufacturing base to bring employees together and to encourage them to work hard and blaze new trails in a pioneering spirit. The establishment of the trade union helped promote new levels of achievement in all kinds of work at the company.



晶澳太阳能（越南）有限公司工会成立
Trade union of JA Solar (Vietnam) Co. established

员工关爱

EMPLOYEE CARE

晶澳坚持以人为本，倡导“快乐工作，感恩生活”。相信并尊重所有员工，以持续提高管理水平为己任，优化考核体系，合理分配任务，致力于营造员工相互尊重和信任的高品质工作环境，并通过为员工提供多项福利措施、开展集体活动、慰问困难员工等方式，提升员工的归属感和幸福感。

JA Solar adheres to the philosophy of putting people first, advocates the idea of being happy at work and being grateful in life, and believes in and respects all of its employees. The Company has made continuous promotions as its mission, optimized the performance appraisal system, and assigned tasks rationally. We are committed to creating a high-quality work environment where employees respect and trust each other. JA Solar has also offered a number of benefits to employees, and enhanced the sense of happiness and sense of belonging of employees by organizing group activities and implementing employee assistance programs.

工会福利 Union Benefits

晶澳工会严格落实中华全国总工会《关于加强基层工会经费收支管理的通知》，在此基础上设置多项福利，如生日祝福卡、节日礼物、女职工特殊福利等，营造温馨愉悦的工作环境，提高员工幸福感和归属感。

The trade unions of JA Solar have strictly implemented the "Notice on Strengthening the Management of Income and Expenditure of Primary Trade Unions" by All-China Federation of Trade Unions, and provided a number of benefits for employees such as birthday cards, festive gifts and special benefits for female employees. A warm and joyful work environment was thus created, which enhanced our employees' sense of happiness and belonging.



员工生日会
Birthday party for employees



三八妇女节插花活动
Flower arrangement activity held by JA Solar on March 8, the International Women's Day

基础设施 Infrastructure & Facilities

晶澳不断完善企业基础设施建设，设置了员工休息室、活动室、医务室、图书馆（读书角）及体育场馆等，为员工业余充电和运动提供便利，营造了良好的劳逸结合的文化氛围。

JA Solar has been upgrading its corporate infrastructure and facilities. JA Solar set up staff lounges, activity rooms, clinic centers, libraries (book corners), and sports venues to help employees to study and enjoy athletics, thus promoting a culture of work/life balance.



活动室
Activity room



室外运动设施
Outdoor sports facilities



职工书屋
Employee library

员工帮扶 Assistance to Employees

晶澳建立了困难员工帮扶机制，关注员工需求，对困难员工给予及时帮扶，提升员工的归属感。2017-2018年，晶澳走访慰问困难员工75人次。

JA Solar has established an employee assistance program to help employees with difficulties in a timely manner. The program focuses on meeting the needs of employees, thus enhancing their sense of belonging. In 2017-2018, JA Solar paid 75 visits to employees with difficulties.



东海基地困难员工慰问
Donghai manufacturing base visits employees with difficulties



合肥基地困难职工慰问
Hefei manufacturing base visits employees with difficulties



宁晋基地困难职工家庭慰问
Ningjin manufacturing base visits families of employees with difficulties

文体生活 Cultural and Sports Activities

晶澳积极组织员工开展各类文体活动，每年参与员工超过1万人次，让每位员工工作在晶澳，愉快在晶澳，幸福在晶澳。

JA Solar actively organizes various cultural and sports activities to encourage employees to enjoy their spare time at work. Every year, more than 10,000 participants take part in those activities.



晶澳“领跑者”杯第八届篮球联赛
JA Solar's 8th "Top Runner Cup" Basketball League Competition



北京总部员工参加垂直马拉松挑战赛
Employees of JA Solar Beijing headquarters participated in a vertical marathon challenge



扬州基地组织“长期贡献奖”员工家属联谊活动
JA Solar's manufacturing base in Yangzhou held a family fellowship activity for the "Long-Term Contribution Awards" winners

聚力，保平安

GUARANTEEING SAFETY WITH CONCERTED EFFORTS



晶澳始终坚持“以人为本”的安全管理理念，严格按照“安全第一、预防为主、综合治理”的指导方针开展安全工作。层层落实责任制，严格执行安全规章制度，切实把安全管理做到万无一失，防范重大安全生产事故。

JA Solar has always insisted on people-oriented safety management, and has implemented a work safety program in accordance with the guidelines of “safety first, prevention first, and comprehensive treatment.” The Company has implemented an effective safety responsibility system, as well as the regulations and rules on work safety. JA Solar has enhanced safety management in a practical manner, preventing the occurrence of major workplace accidents.

安全管理

SAFETY MANAGEMENT

近些年来，随着公司产品不断升级，新基地建设项目接连上马，设备大规模更新换代，安全压力随之增加。面对新形势新变化，公司始终坚持“宁可不生产，不可不安全”的管理理念，将安全生产作为企业可持续发展的头等要务，不断变革创新管理方式方法，强化安全责任部门的管理职责，加大安全培训、风险识别和隐患排查力度，为公司稳定发展保驾护航。2018年未发生与生产相关的重大人员伤亡事故、未发生职业病病例，职业健康安全生产情况不断改善。

In recent years, with the continuous upgrading of products, successive launches of new manufacturing bases, and large-scale upgrading of equipment, JA Solar has been confronted with challenges regarding safety. The Company, in light of new conditions and new changes, has adopted a zero-tolerance attitude towards safety fallings. JA Solar makes work safety a top priority in order to achieve sustainable corporate development, constantly innovates in management styles and methods, and enhances the management responsibility of work safety departments. JA Solar has strengthened safety training, risk identification and checks against hidden dangers, guaranteeing the stable development of the enterprise. There were no major safety accidents and no cases of occupational disease reported in 2018 occupational health and safety in production was continuously improved.



- ◆ 责任制推进。各级管理层现场签署《安全生产目标管理承诺书》，给予全公司及各基地公司极大的鼓舞和信心。

Further promoting the system of safety responsibility. JA Solar signed the "Pledge of Commitment on Management by Objectives for Work Safety" with various levels of its management team. This greatly encouraged and built confidence in the manufacturing bases and employees of the Company.

- ◆ 公司不断加强职业健康安全体系建设。目前合肥基地、奉贤基地、宁晋基地、邢台基地、扬州基地工厂已经通过由TÜV南德认证的OHSAS18001体系审核，并不断扩展其它基地的认证审核。详见下表。

Constantly boosting the construction of our occupational health and safety system. So far, the manufacturing bases of JA Solar in Hefei, Fengxian, Ningjin, Xingtai, and Yangzhou have received the OHSAS 18001 certification from TÜV SÜD, and other manufacturing bases have taken the initiative to prepare for the work of the certification program. See the following table for details.

序号 NO.	公司名称 Name of Company	OHSAS 18001:2007 认证状态 Certification Status
1	北京晶澳太阳能光伏科技有限公司 Beijing JA Solar PV Technology Co., Ltd.	获取证书 Certified
2	晶澳(扬州)太阳能科技有限公司 JA Solar Technology Yangzhou Co., Ltd.	获取证书 Certified
3	上海晶澳太阳能科技有限公司 Shanghai JA Solar Technology Co., Ltd.	获取证书 Certified
4	晶澳太阳能有限公司 JA Solar Co., Ltd.	获取证书 Certified
5	合肥晶澳太阳能科技有限公司 Hefei JA Solar Technology Co., Ltd.	获取证书 Certified
6	晶澳(邢台)太阳能有限公司 JA Solar (Xingtai) Co., Ltd.	获取证书 Certified
7	包头晶澳太阳能科技有限公司 Baotou JA Solar Technology Co., Ltd.	完成审核 Audit completed
8	邢台晶龙电子材料有限公司 Xingtai Jinglong Electronic Materials Co., Ltd.	完成审核 Audit completed
9	宁晋松宫电子材料有限公司 Ningjin Songgong Electronic Materials Co., Ltd.	完成审核 Audit completed
10	晶海洋半导体材料(东海)有限公司 Jing Hai Yang Semiconductor Material (Donghai) Co., Ltd.	完成审核 Audit completed
11	宁晋晶兴电子材料有限公司 Ningjin Jingxing Electronic Materials Co., Ltd.	完成审核 Audit completed

- ◆ 升级安全生产绩效考核机制。加大环境、职业健康安全的考核权重，层层考核，实行“一票否决制”，成效明显。

Upgrading the work safety performance appraisal system: JA Solar has increased the weighting of indicators of environment and occupational health and safety, enhanced the performance appraisal, and introduced a one-vote-down system, thus achieving remarkable results.

- ◆ 全面完善应急管理体系。作为生产制造企业，人员安全、设备安全、消防安全是晶澳最重要的安全风险防范点。晶澳各基地建立应急管理体系，各体系按照综合预案、专项预案、现场处置方案三个层级完善。

Comprehensive refinement of the emergency plan management system. As a manufacturing company, our most important risks are personnel safety, equipment safety, and fire safety. The manufacturing bases of the Company have established an emergency plan management system consisting of comprehensive plans, special plans, and on-site disposal plans.



晶澳合肥基地建立起完善的安防机制

CASE: JA SOLAR'S HEFEI MANUFACTURING BASE ESTABLISHES A COMPLETE SAFETY PROTECTION SYSTEM

晶澳合肥基地安防监控中心包含消防火灾自动报警系统控制主机、厂区重点区域监控平台、动力设施运行监控系统等，实行动力部门24小时值班，安环部门每天定期巡查的工作机制，实时监控厂区动态；同时，在各车间门岗增设车间微型消防站和无线对讲机，安检人员对车间员工开展应急器材的使用及应急救援技能培训，力求做到生产车间、仓库等厂区重点部位出现紧急情况时，能够第一时间组织现场人员和装备形成救援力量。

The Safety Protection Monitoring Center of JA Solar's manufacturing base in Hefei is composed of the control unit of automatic fire alarm system, monitoring platform for key areas of the manufacturing base, operation monitoring system for power facilities, and so on. The power services department is on duty around the clock, and the safety and environmental protection department conducts regular inspection tours every day to guarantee real-time dynamic monitoring of key areas. The gate security room of each workshop is equipped with a mini-fire station and wireless intercom. Training on the use of emergency equipment and on emergency rescue skills for front-line workers has been organized by safety personnel. Thus, rescue efforts can be launched immediately for unexpected accidents that occur in workshops, warehouses, or other key plant areas.



晶澳安防监控中心

Safety Protection Monitoring Center of JA Solar

职业健康 安全培训

TRAININGS FOR OCCUPATIONAL HEALTH AND SAFETY

安全培训次数达
Conducted 1,760 training sessions on safety

1,760 次

参加人数约为
Total participants are 54,000

5.4 万人次

晶澳积极组织安全培训、安全竞赛等活动。2017-2018年，晶澳安全方面培训次数达1,760次，约5.4万人次参加。培训形式包括内训、外训，互为补充、有机结合。

JA Solar actively organizes safety training and competitions. In 2017-2018, JA Solar conducted 1,760 training sessions on safety with 54,000 participants. The training activities included internal and external training, which were complementary and organically integrated.



奉贤基地红十字急救培训

JA Solar's manufacturing base in Fengxian conducted training on medical emergency rescue



包头基地消防知识培训

JA Solar's manufacturing base in Baotou conducted training on firefighting knowledge



燕郊基地邀请河北省安全专家针对隐患排查治理进行现场指导

JA Solar's manufacturing base in Yanjiao invited safety experts from Hebei Province to provide on-site instructions for the investigation and management of safety hidden dangers



杜邦·安全管理工作坊

CASE: DUPONT SAFETY MANAGEMENT WORKSHOP

2017年9月，晶澳组织“杜邦·安全管理工作坊”培训，并聘请杜邦公司专家对公司安全现状进行诊断，效果显著。

In September 2017, JA Solar invited DuPont to conduct an integrated safety management training session for operations managers. JA Solar also invited experts from DuPont to diagnose its safety status. With those measures, remarkable results were achieved.



杜邦安全管理工作坊培训

DuPont safety management workshop training

作为全球化企业，晶澳员工海外活动日益频繁，员工海外安全工作面临着越来越大的挑战。为保证海外员工的人身安全，晶澳初步建立了安全防范与危机应对机制，划分出了高风险地区名录，分别针对社会安全事件、事故灾难、自然灾害、公共卫生等不同类型事件制定了相应的应对措施，联动公司公关、法务、人力、财务、行政、海外分支机构等部门，为海外员工提供全天候安全保障。

As a global enterprise, the overseas activities of JA Solar are becoming increasingly frequent, and the employees working at overseas manufacturing bases are facing increasing work safety challenges. To guarantee the personal safety of employees, JA Solar has preliminarily established a mechanism for safety protection and crisis handling, created a list of high-risk areas, and worked out countermeasures to social security incidents, accidents and disasters, natural calamities, public health issues, and other types of events. The Company has enhanced cooperation among its various departments and divisions including public relations, legal affairs, human resources, finance, and administration, as well as its overseas branches in order to provide a comprehensive safety guarantee for employees.

应急演练

EMERGENCY EXERCISES

晶澳以“建设完善的应急管理机制，打造平安晶澳”为准则，开展涵盖火灾、危险品泄漏、有毒气体泄漏等方面的定期专项应急演练和综合演练，设立24小时应急接警电话，不断总结经验，完善应急预案。

Taking the establishment of a sound emergency management system and the building of a safe JA Solar as the criterion, JA Solar regularly conducts special emergency exercises and comprehensive drills covering firefighting, hazardous materials incidents, and poisonous gas leakages. JA Solar established a 24-hour emergency call system, and worked hard to learn lessons and gain experience to improve emergency plans.



扬州基地开展综合预案应急演练
JA Solar's manufacturing base in Yangzhou conducted a comprehensive emergency exercise



燕郊基地组织宿舍消防演练
JA Solar's manufacturing base in Yanjiao conducted an apartment building-based firefighting exercise

危险化学品管理

HAZARDOUS CHEMICALS MANAGEMENT

对于危险化学品的管控，公司从采购、运输、仓储、暂存、使用、废弃等各个环节，制定了科学完善的流转制度，确保危险化学品管理全流程处于安全可控状态。

JA Solar has formulated a scientific and comprehensive circulation system covering various links of procurement, transportation, warehousing, temporary storage, use, discharge, and so on to guarantee the safety and control of hazardous chemicals.



马来基地化学品管理成功获得第五级（最高级别）证书奖状
CASE: JA SOLAR'S MANUFACTURING BASE IN MALAYSIA RECEIVES SOHELP LEVEL 5 CERTIFICATE



第五级（最高级别）证书奖状

JA Solar's manufacturing base in Malaysia receives SoHELP Level 5 certificate

马来基地严格遵守《危险化学品使用和存放健康标准》、《危险化学品分类、标签和SDS标准》等马来西亚职业安全健康相关法规，持续保持无罚款记录。2017-2018年，在马来西亚职业安全健康部门组织的职业健康安全级别的评比中，晶澳马来西亚基地化学品管理成功获得第五级（最高级别）殊荣。

JA Solar's manufacturing base in Malaysia has strictly abided by the "Use and Standard of Exposure of Chemicals Hazardous to Health," "Classification, Labelling and Safety Data Sheet of Hazardous Chemicals," and other laws and regulations relating to occupational health and safety, and maintained the record of no rule-breaking operations. In 2017-2018, the manufacturing base won the highest honor for chemical management (SoHELP Level 5) in the appraisal activity organized by the occupational health and safety authority of Malaysia.



聚绿，护环境

PROTECTING ENVIRONMENT WITH GREEN INITIATIVES



国家提出了推进生态文明建设，做出发展绿色产业的战略部署。新能源产业既是绿色产业的重要组成部分，又是实现绿色发展的重要保障和支撑，在建设现代化经济体系中有特殊的地位和作用。晶澳积极落实国家战略，致力于让绿色优质能源惠及全社会；力求在提高能效、降低排放、节约资源等方面持续改进，将环保理念落实到每一个生产环节，渗透到每个人生活中。

China has made strategic arrangements to promote ecological progress and develop green industries. New energy is an important part of its green industries, as well as an important support and guarantee to achieve green development, which plays a special role in building our modern economy. JA Solar has actively implemented the national strategies, committing to making green and high-quality energy to benefit society. JA Solar has spared no effort to constantly improve energy efficiency, reduce emissions, and save resources. JA Solar has effectively implemented the concept of environmental protection in the manufacturing process, and enhanced the understanding that the protection of the environment is everyone's responsibility.

环境管理

ENVIRONMENTAL MANAGEMENT

作为清洁能源企业，晶澳不断完善和全面推行ISO14001环境管理体系认证，不断加强和改进环境保护，不仅保持了自身业务的环保特性，同时在产品生命周期各环节均有相应的管理措施和目标。目前晶澳合肥基地、奉贤基地、宁晋基地、邢台基地、扬州基地工厂已经通过由TÜV南德认证的ISO14001体系审核，并不断扩展其它基地的认证审核。

As a clean energy enterprise, JA Solar has constantly improved and comprehensively promoted the ISO 14001 environmental management system certification, and continuously strengthened and boosted environmental protection. While maintaining the environmental protection characteristics of its businesses, JA Solar has formulated corresponding management measures and objectives for each link of the product life cycle. So far, the manufacturing bases of JA Solar in Hefei, Fengxian, Ningjin, Xingtai, and Yangzhou have received the ISO 14001 certification from TÜV SÜD, and other manufacturing bases have taken initiative to prepare for the work of certification program. See the following table for details.

序号 NO.	公司名称 Name of Company	ISO 14001:2015 认证状态 Certification Status
1	北京晶澳太阳能光伏科技有限公司 Beijing JA Solar PV Technology Co., Ltd.	获取证书 Certified
2	晶澳(扬州)太阳能科技有限公司 JA Solar Technology Yangzhou Co., Ltd.	获取证书 Certified
3	上海晶澳太阳能科技有限公司 Shanghai JA Solar Technology Co., Ltd.	获取证书 Certified
4	晶澳太阳能有限公司 JA Solar Co., Ltd.	获取证书 Certified
5	合肥晶澳太阳能科技有限公司 Hefei JA Solar Technology Co., Ltd.	获取证书 Certified
6	晶澳(邢台)太阳能有限公司 JA Solar (Xingtai) Co., Ltd.	获取证书 Certified
7	包头晶澳太阳能科技有限公司 Baotou JA Solar Technology Co., Ltd.	完成审核 Audit completed
8	邢台晶龙电子材料有限公司 Xingtai Jinglong Electronic Materials Co., Ltd.	完成审核 Audit completed
9	宁晋松宫电子材料有限公 Ningjin Songgong Electronic Materials Co., Ltd.	完成审核 Audit completed
10	晶海洋半导体材料(东海)有限公司 Jing Hai Yang Semiconductor Material (Donghai) Co., Ltd.	完成审核 Audit completed
11	宁晋晶兴电子材料有限公司 Ningjin Jingxing Electronic Materials Co., Ltd.	完成审核 Audit completed

为规范和促进环保工作的有序开展,公司先后制定并完善了环境保护管理、环境检测管理、环保事故应急处理、环保教育培训、环保奖惩管理、安全环保检查及隐患整改管理等环境保护制度。为推动环保管理工作,各基地设立了环保管理小组,通过检查考核,加大执行力度,促使各项制度真正落到了实处。

To regulate and promote the orderly implementation of environmental protection work, JA Solar has formulated and improved environmental protection systems including environmental protection management, environmental testing management, emergency treatment on environmental incidents, environmental protection education and training, environmental protection rewards and punishment, inspection of safety and environmental protection, and troubleshooting on hidden risks. To boost environmental protection management, our manufacturing bases have set up management teams to inspect and supervise the implementation of various environmental protection regulations.



晶澳的努力,获得了社会的认可,例如晶澳太阳能有限公司和合肥晶澳太阳能科技有限公司分别获得国家工信部第三批“绿色工厂”荣誉;合肥晶澳太阳能科技有限公司被评为高新区优秀企业“提质增效奖-节能环保奖”和“提质增效奖-安全生产奖”;晶海洋半导体材料(东海)有限公司获得东海县最高等级的“环保信用绿色企业”。

JA Solar's efforts have been recognized by society. For example, JA Solar Co., Ltd. and Hefei JA Solar Technology Co., Ltd. were included in the third cohort of "National Green Plants" by the Ministry of Industry and Information Technology of China; Hefei JA Solar Technology Co., Ltd. won the "Awards for Quality Improvement and Efficiency Enhancement - Energy Conservation and Environmental Protection Prize" and "Awards for Quality Improvement and Efficiency Enhancement - Work Safety Prize" of Hefei National High-tech Industry Development Zone; Jing Hai Yang Semiconductor Material (Donghai) Co., Ltd. won the title of "Green Enterprise with Outstanding Environmental Protection Credit," which was the highest honor for a company in Donghai County in eastern China's Jiangsu Province.

晶澳太阳能有限公司和合肥晶澳太阳能科技有限公司荣登第三批国家级绿色工厂名单
CASE: JA SOLAR CO., LTD. AND HEFEI JA SOLAR TECHNOLOGY CO., LTD. INCLUDED IN THE THIRD COHORT OF "NATIONAL GREEN PLANTS"

2018年11月6日,工信部公布第三批国家级绿色制造企业,晶澳太阳能有限公司和合肥晶澳太阳能科技有限公司同时入榜绿色工厂名单。这是晶澳作为光伏行业先进标杆的体现,更是对制造业绿色升级、智能制造的积极响应。

On November 6, 2018, the Ministry of Industry and Information Technology of China released the third cohort of national green manufacturing enterprises. JA Solar Co., Ltd. and Hefei JA Solar Technology Co., Ltd. were recognized as "National Green Plants," which reflected the leading position of JA Solar in the PV industry, as well as the active response of the Company in promoting green upgrading and intelligent manufacturing in the industry.





晶澳受邀参加第七届世界环保（经济与环境）大会

CASE:JA SOLAR PARTICIPATES IN THE WORLD ECONOMIC AND ENVIRONMENTAL CONFERENCE

2018年1月26日，第七届世界环保（经济与环境）大会——主席团与特邀贵宾圆桌会议在北京全国人大会议中心举行，晶澳受邀参加会议，并就“构建生态经济引领全球绿色低碳发展变革之路”进行发言。

The 7th World Economic and Environmental Conference – Presidium and Invited Guests Roundtable Conference was held at the Conference Center of the National People's Congress in Beijing, the capital of China, on January 26, 2018. Upon invitation, JA Solar participated in and delivered a speech entitled “Building an Ecological Economy and Leading the Way for Global Green and Low-Carbon Development and Change” at the conference.



节能降耗

ENERGY CONSERVATION AND REDUCED CONSUMPTION

晶澳各生产基地持续坚持以建设“资源节约型、环境友好型的清洁能源制造企业”为发展目标，不断加大力度淘汰能耗大、效率低的落后工艺设备，并积极创新节能减排技术，提高环保效果。

Taking as its development objective the establishment of a resource-conserving and environmentally-friendly clean energy manufacturing enterprise, the manufacturing bases of JA Solar have constantly eliminated obsolete processes and equipment with high energy consumption and low energy efficiency, and have actively innovated in energy conservation and emission reduction, thus improving the results of environmental protection.

节约用电 Electricity Conservation

在硅片环节，晶澳不断深化改革和创新，探索和完善一坩多棒、金刚线切割等工艺创新，加大硅片端的生产效率。在电池环节，通过不断研发和创新，升级产品线，不断刷新电池转换效率。在组件环节，通过安装高度自动化设备、优化工艺流程等措施提高产出效率，打造智能工厂，降低能耗。

JA Solar has constantly promoted changes and innovations in the manufacturing process of silicon wafers, and explored and improved new techniques such as the manufacturing of silicon sticks by single quartz crucible and diamond wire sawing, thus boosting the production efficiency of silicon wafers. As for cells, JA Solar has constantly conducted R&D and innovation activities, upgraded production lines, thus continuously setting records in terms of the conversion efficiency of cells. And as for modules, JA Solar has introduced highly automated equipment and optimized techniques and processes to improve output efficiency, build smart plants and reduce energy consumption.

除了各生产环节外，晶澳各个基地还在生产配套环节积极实施节能技改，全面降低能源消耗。2018年，照明、动力系统的创新改善、结构优化和技改项目共29项。

In addition to the manufacturing process, JA Solar's manufacturing bases have also transformed energy conservation and technology in the supporting links of production in order to comprehensively reduce energy consumption. In 2018, a total of 29 projects covering innovation and improvement, structural optimization and technology transformation in aspects of lighting and power systems were implemented.



扬州基地中央空调系统改造

CASE:YANGZHOU MANUFACTURING BASE TRANSFORMS ITS AIR CONDITIONING SYSTEM

整个空调系统不在最佳工况下运行，造成空调系统设备运行能耗高，能耗配比不均匀，使得运行成本高。公司通过将工艺冷冻水和空调系统冷冻水分开运行，并对系统管路进行优化，尽可能使用室外大自然冷源，同时在空调系统上安装人工智能系统对中央空调系统设备进行优化配比控制，使所有设备能够在最佳工况下运行，节约用电量达500万kW·H/年。

The air conditioning system cannot achieve best results under non-optimum operating conditions, resulting in high energy consumption and then high operating costs. JA Solar's manufacturing base in Yangzhou operated the chilled water of the process and the air-conditioning system respectively, optimized the cooling system lines, used outdoor natural cooling sources whenever possible, and installed an artificial intelligence system to control the equipment of the central air-conditioning system, ensuring that all of the equipment and facilities operated under optimum conditions. Those measures could help save five million kWh of electricity per year.



东海基地空压机房压缩空气管道互通

CASE:DONGHAI MANUFACTURING BASE REDUCES AIR COMPRESSORS TO SAVE ELECTRICITY

通过将压缩空气管道互通，减少单个车间空压机运行机台数量，节约电能超166万kW·H/年。

By connecting compressed air lines, JA Solar's manufacturing base in Donghai reduced the number of air compressors in each workshop, which could save 1.66 million kWh of electricity per year.

节约用水 Water Conservation

晶澳积极完善可持续的水资源利用方案，力求持续降低单位用水需求，做环境保护的倡导者和践行者。在生产厂区，通过使用可调节阀门、循环利用、纯水制取、浓缩水循环处理等措施，完善水资源利用方案；在生活区，晶澳倡导全员节约用水，共同建设节水、节能型企业；同时，晶澳积极探索废水回用项目，加大投入，既减少了排放，也节约了用水。晶澳在节约用水方面，取得了良好的经济和社会效益，其中晶澳奉贤基地连续多年被上海市水务局、上海市经济和信息化委员会授予“上海市节水型企业”。

As an advocate and participant of environmental protection, JA Solar has constantly improved the sustainable water resources utilization system and strived to continuously reduce water consumption per unit of production. At JA Solar's manufacturing plants, the Company has adopted various measures including the use of adjustable valves, cyclic utilization of water, pure water production, and circular treatment of concentrated water to improve the water source utilization system. In living areas, the Company promotes water conservation to all of its employees, in order to build a water-conserving and energy-saving enterprise. Furthermore, JA Solar has actively explored waste water reuse projects, and increased investment to reduce water discharge and save water resources. As for water conservation, the Company has achieved good economic and social benefits. For several years in a row, JA Solar's manufacturing base in Fengxian has been recognized as a water-conserving enterprise of Shanghai Municipality by Shanghai Water Authority and Shanghai Economic and Information Technology Commission.

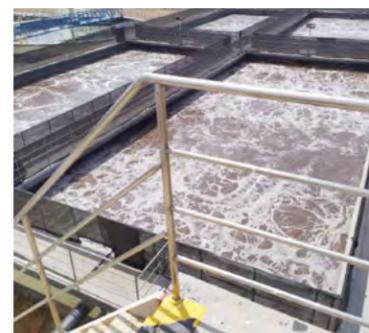
2017-2018年晶澳部分节水项目

Water Saving Projects of JA Solar, 2017-2018

生产基地或公司 Manufacturing base or Company	项目 Project	效果 Results
马来西亚基地 Malaysia manufacturing base	纯水系统浓水回用项目 Reuse of concentrated water from pure water system	回用纯水系统浓水，增加水资源利用率。纯水系统增加浓水回用装置，将浓水通过过滤继续回用，可以每小时回用18立方米水量。 Reuse of concentrated water from the pure water system has increased the utilization rate of water resources. The pure water system reuses the treated concentrated water through newly installed water recycling devices. The amount of treated water reused can reach 18 cubic meters per hour.
东海基地 Donghai manufacturing base	清洗插片回用水项目 Reuse of wafer cleaning waste water	将清洗机溢流水引到室外收集池，从室外收集池缓存后集中供应给其他工艺使用，年节约自来水15.2万立方米。 Wafer cleaning waste water will be collected in outdoor tanks and then reused for other processes. Through this method, a total of 152,000 cubic meters of tap water can be saved per year.
燕郊基地 Yanjiao manufacturing base	回收车间压滤项目 Reuse of waste water by filter presses	利用压滤机设备将废水直接压滤，进入车间二次回用，每天节约自来水200吨。 Using filter presses to directly dewater the sludge of waste water and then reusing the treated water at workshops can save 200 tons of tap water per day.

减少排放

EMISSION REDUCTION



生化池
Biochemical pools

废水处理 Waste Water Treatment

在废水处理方面，晶澳严格执行国家和地方排放标准，并持续优化废水处理工艺，以确保废水排放达标。例如晶澳宁晋基地通过改进生化处理工艺、增加多介质过滤器、增加安邦塔反硝化处理工艺、安装各级处理环节在线水质监测系统，确保废水中主要污染物浓度均达到国家一级A标准。

In the aspect of waste water treatment, JA Solar has strictly followed the national and local waste water discharge standards, and constantly optimized waste water treatment processes, guaranteeing the up-to-standard discharge. JA Solar's manufacturing base in Ningjin has improved biochemical treatment processes, installed multi-media filters and online water quality monitoring systems, and introduced new denitrification processes, ensuring that the concentration of main pollutants in waste water reached the national Level A standard.



废水处理站
Waste water treatment station

废气处理 Exhaust Gas Treatment

晶澳严格遵守国家法律法规的相关要求，针对废气处理配备了酸雾处理塔、碱液吸收塔、有机废气净化塔、粉尘收集装置等，采取碱液喷淋、不锈钢硅烷燃烧塔处理、活性炭纤维有机废气净化处理等先进工艺。同时委托有相应资质的权威第三方对设备进行监测，各种废气排放浓度和速率均低于排放标准。

JA Solar strictly abides by the relevant requirements of national laws and regulations. The Company has installed acid mist purification towers, alkaline solution absorption towers, organic exhaust gas purification towers, dust collectors, and other exhaust gas treatment equipment, and adopted sophisticated processes including alkaline solution spraying, treatment by stainless steel silane combustion tower, organic exhaust gas treatment with activated carbon fiber, and so on. JA Solar has also entrusted authoritative and certified third-party organizations to inspect the operations of equipment; the test results showed that both the emission concentration and rate of various exhaust gases were lower than that of the national discharge standards.



晶澳基地废气净化塔
Exhaust gas purification tower at JA Solar's manufacturing base

2017-2018年晶澳部分废气处理项目

Some of Exhaust Gas Treatment Projects of JA Solar, 2017-2018

生产基地或公司 Manufacturing base or Company	项目 Project	效果 Results
宁晋基地 Ningjin manufacturing base	废气净化塔升级改造 Upgrading and transformation of exhaust gas purification towers	随着电池制造工艺的调整, 宁晋晶澳将二级高浓度废气净化塔升级为三级, 进一步降低污染物排放量。 With the improvement of solar cell manufacturing process, JA Solar's manufacturing base in Ningjin has upgraded the Level-II high concentration exhaust gas purification towers to Level-III ones, further reducing the emissions of pollutants.
邢台基地 Xingtai manufacturing base	燃气锅炉低氮改造 Low nitrogen transformation of gas-fired boilers	为进一步深化锅炉污染治理, 削减氮氧化物排放, 对3台3吨燃气锅炉燃烧器进行改造, 并安装3台氮氧化物尾气分析仪, 实时监测尾气排放数据。经过第三方检测, 大大降低了烟尘、二氧化硫、氮氧化物等尾气排放量。 To further enhance the control of air pollution resulted from boilers, JA Solar's manufacturing base in Xingtai has cut the emission of NOx, and implemented transformation on the three three-ton gas-fired boilers and equipped them with three NOx exhaust gas analyzers to monitor exhaust gas emission data in a real-time manner. The third-party test results showed the emissions of smoke dust, SO ₂ , NOx and other exhaust gases were reduced greatly.
邢台基地 Xingtai manufacturing base	柴油发电机及柴油叉车安装尾气后处理装置改造项目 Installed exhaust gas after treatment systems for diesel generators and diesel forklift trucks	为12台叉车、1台柴油发电机安装了尾气后处理装置, 装置性能满足要求, 降低对环境的污染。 JA manufacturing base in Xingtai has installed exhaust gas after treatment systems for 12 diesel forklift trucks and one diesel generators to reduce the pollution of those equipment to environment.
马来西亚基地 Malaysia manufacturing base	废气净化塔安装在线H ₂ S检测项目 Installed online hydrogen sulfide monitoring equipment for exhaust gas purification towers	为了更好的处理废气并优化加药量, 高效净化塔增加了在线硫化氢检测仪表, 可以帮助分析合理添加药物, 废气处理达标, 美化环境。 To achieve better results on exhaust gas treatment and optimize the doses of chemicals, JA Solar's manufacturing base in Malaysia has installed online hydrogen sulfide monitoring equipment for the high-efficient exhaust gas purification towers. The monitoring equipment can analyze the doses of chemicals used to purify the exhaust gases, enabling more effective air treatment and cleaner environment.

危险废弃物处理 Hazardous Waste Treatment

针对危险废弃物处理, 晶澳按照ISO14001环境管理体系及要求, 依据国家危险废弃物名录和危险特性分类收集危险废弃物, 并根据国家要求执行危险废弃物转移申请和转移联单制度。目前, 晶澳各基地均设置了专门的危险废弃物仓库, 并对其进行了防晒、防渗漏、地面硬化等处理, 不同废弃物分类摆放, 并保持一定间距, 满足存放条件。同时, 晶澳还委托有资质的单位对危险废弃物进行无害化处置。

In the aspect of hazardous waste treatment, JA Solar has implemented the requirements of the ISO 14001 environmental management system, classified and collected hazardous waste in accordance with the national hazardous waste directory and the hazardous characteristic of the waste, and carried out the national requirements for the transfer of hazardous waste. So far, the manufacturing bases of JA Solar have established special warehouses to properly classify and dispose the hazardous waste. JA Solar has also entrusted certified organizations to conduct non-hazardous treatment on the waste.

晶澳部分基地危险废弃物处理措施

Hazardous Waste Treatment Measures Adopted by Some of JA Solar's Manufacturing bases

生产基地或公司 Manufacturing base or Company	效果 Results
宁晋基地 Ningjin manufacturing base	规范了危废暂存场所, 同时安装了危废处理全程监控系统和称重系统, 并实现了远程联网, 使危废处理更加合规、透明。 JA Solar's manufacturing base in Ningjin has regulated the temporary storage areas for hazardous waste, installed full-process monitoring systems and weighing system, and introduced remote networking technology, effectively ensuring the treatment of hazardous waste in a more compliant and transparent manner.
扬州基地 Yangzhou manufacturing base	酸性废水三效蒸发系统工程, 废酸经过处理及蒸发后, 只产生废渣, 降低了浓酸外运量, 使危废产生量大幅降低。 JA Solar's manufacturing base in Yangzhou has introduced the three-effect evaporation systems to treat acid waste water. After treatment and evaporation of waste acid, only waste residue is produced, which reduces the external transportation of concentrated acid and greatly reduces the production of hazardous waste.

绿色办公

GREEN OFFICE PRACTICES



增加绿电供应 Increase of Green Electricity Supply

晶澳部分基地除了生产制造绿色能源发电设备外，积极利用自身闲置房顶、车棚、空地等，通过安装小型地面电站、屋顶分布式、水上悬浮式电站等多种形式，自发自用，余电上网，不仅减少了对传统电力的依赖，还为基地办公、生产、生活供应了清洁的电力，减少了二氧化碳排放。

In addition to the manufacturing and production of environmentally-friendly power generation equipment, some of the JA Solar's manufacturing bases have also taken initiative to fully use the idle rooftops, sheds and open spaces to build small-sized ground-mounted PV power stations, rooftop distributed PV power stations, and floating PV power stations installed above water surface to generate electricity for self-use, while the excess electricity will be transferred to the nearby power grids. This approach has not only reduced the dependence of the manufacturing bases on conventional electricity, but also provided clean electricity for office work, production, and living activities of the manufacturing bases, which decreased the emission of CO₂.

截止2018年底晶澳各基地建有分布式光伏电站情况

Distributed Power Stations of JA Solar's Manufacturing bases (as of 2018)

生产基地或公司 Manufacturing base or Company	分布式电站规模 (MW) Installed Capacity of Distributed Power Plant (MW)	年发电量约 (万度) Amount of Annual Power Generation (10,000 kWh)
合肥基地 Hefei manufacturing base	6.67	650
扬州基地 Yangzhou manufacturing base	2.74	210
邢台基地 Xingtai manufacturing base	2.95	340
宁晋基地 Ningjin manufacturing base	7.30	750
燕郊基地 Yan jiao manufacturing base	0.37	40
奉贤基地 Fengxian manufacturing base	4.88	440
东海基地 Donghai manufacturing base	4.36	450
合计 Total	29.27	2,880



晶澳东海基地分布式电站
Distributed power station at JA Solar's manufacturing base in Donghai



晶澳扬州基地分布式电站
Distributed power station at JA Solar's manufacturing base in Yangzhou



晶澳奉贤基地分布式电站
Distributed power station at JA Solar's manufacturing base in Fengxian



晶澳合肥基地分布式电站
Distributed power station at JA Solar's manufacturing base in Hefei

办公环节注入绿色元素 Incorporation of Green Elements into Offices

晶澳将环保理念贯彻到生产、经营、后勤等各个环节，渗透到工厂的每个角落。公司通过教育培训、媒介宣导等各种方式，教育和影响员工树立积极的环保理念，倡导员工实施“低碳生活方式”，让环保成为员工的一种“习惯”。晶澳各基地均持续开展节能巡检，对工厂各区域照明、空调以及其他电器设备使用情况进行监督，并对张贴提醒标识进行宣导。

JA Solar has integrated the idea of environmental protection across various work functions, including production, operation, logistics, and so on, as well as every corner of the plants. Through conducting educational and training activities and carrying out publicity and advocacy campaigns, JA Solar has promoted employees to establish positive environmental protection idea, and advocated them to practice the low-carbon lifestyle and enhance the efforts for the protection of environment. The manufacturing bases of JA Solar have constantly conducted inspection tours on energy conservation, supervised the use conditions of lighting systems, air-conditioning systems, and other electrical equipment and facilities in plant areas, and implemented publicity activities to enhance the idea of environmental protection of employees.



- ◆ 办公场所的空调温度设定不超过标准；

Temperature setting of air conditioners at office areas shall not exceed the standard;

- ◆ 办公区采用节能灯具照明，做到人走灯灭；

Installing energy-saving lamps and turning off the light when we leave the office;

- ◆ 办公区生活用水回收再利用；

Water used at office areas shall be recycled;

- ◆ 采用电子办公处理系统，推广无纸化办公；

Introducing e-office system and promoting paperless office practices;

- ◆ 提倡打印、复印、传真纸张双面使用，循环利用纸张；

Promoting double-sided printing, copying, and faxing, and use of recycled paper;

- ◆ 办公垃圾科学分类；

Implementing scientific sorting of waste;

- ◆ 推行视频、电话会议，减少员工出行。

Promoting video conferencing and teleconferencing, and reducing unnecessary business trips.



无烟文化在晶澳马来基地蔚然成风

CASE: MANUFACTURING BASE IN MALAYSIA PROMOTES SMOKE-FREE CULTURE

晶澳马来西亚基地于2017年5月31日世界卫生组织发起的第30个“世界无烟日”起，全厂禁烟，成为马来西亚为数不多的无烟工厂之一。无烟文化利司利民，为员工、为晶澳公司创造更加健康、绿色、舒适、安全的生产经营环境，对于推动晶澳公司安全生产、规范管理，乃至正能量传播都有重大意义。

On May 31, 2017, the 30th World No Tobacco Day of World Health Organization, JA Solar's manufacturing base in Malaysia implemented the smoke-free workplace system, becoming one of the few smoke-free manufacturing bases in Malaysia. The smoke-free culture benefits both the company and the employees, and has facilitated to the construction of a healthier, greener, more comfortable and safer manufacturing and operations environment, which is of great importance for JA Solar to enhance work safety, streamline operations and deliver positive energy.



马来西亚基地行政办公楼
Administrative office building of JA Solar's manufacturing base in Malaysia



马来西亚基地行政办公楼大厅
Administrative office building hall of JA Solar's manufacturing base in Malaysia

聚能，汇合作

ACHIEVING COMMON DEVELOPMENT WITH COOPERATION



青山绿水、无污染世界的构建与落地需要整个生态圈的共同努力。晶澳坚持开放边界，与世界握手，与合作伙伴一起建立“互生、共生、再生”的产业环境和共赢繁荣的商业生态体系，共同促进美丽中国、生态世界的加速发展。

The realization of lucid waters and lush mountains and a pollution-free world calls for collective efforts of the whole ecosystem. JA Solar insists on the open-minded attitude and the going global strategy, and has been committed to building the industry environment featuring mutual benefits, shared value and continuous value creation and the win-win and prosperous business ecosystem, jointly promoting the construction of a beautiful China and an eco-world with partners.

供应商合作

COOPERATION WITH SUPPLIERS

晶澳已经实现垂直一体化的产业链，保证了上游供应和质量的稳定性。在采购方面，公司制定了统一集采原则及工作机制，采取运输方式优化、内外信息共享等多种模式推动成本、质量的有效管控。

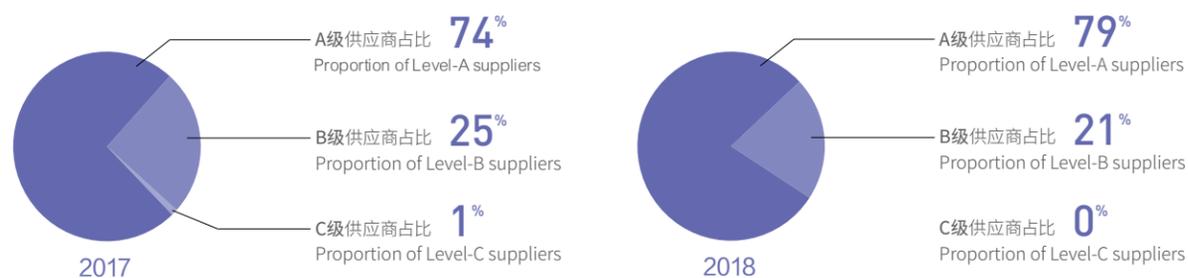
JA Solar has established the vertical integrated industry chain, ensuring the stability of product delivery and product quality. As for procurement, the Company has insisted on the principle of centralized procurement and established a corresponding mechanism. JA Solar has effectively managed and controlled the costs of procurement and quality of products by optimizing transportation model, promoting internal and external information sharing, and so on.

在供应商开发和结构优化方面，晶澳开发引入性价比较高的供应商，建立起适合企业需要的供应商队伍，使晶澳的供应链更加完善健全。晶澳注重供应商能力提升，按优质程度由高至低将供应商分为A、B、C、D四个等级，与供应商共同推动QCC（质量控制圈）活动。通过对供应商开展业务辅导，严格审核所供应的材料质量，供应商供应货品质量不断提升。2018年晶澳各环节A级供应商均有不同比例的上升。

In the aspects of supplier development and supplier structure optimization, JA Solar has introduced highly cost-effective suppliers, and established a supplier team that is suitable for corporate demands, further improving and perfecting the supply chain. JA Solar has emphasized the ability enhancement of suppliers, and according to the quality level, has classified suppliers into four categories of A, B, C, and D, of which the ranking is from higher to lower. While jointly promoting quality control circles (QCCs) with suppliers, the Company has also conducted business coaching for suppliers, implemented strict review on the quality of supplied materials, and constantly promoted them to improve product quality. In 2018, the proportion of Level-A suppliers increased by varying degree in various manufacturing and operations links of the Company.

组件材料供应商占比变化情况

Change in proportion of module material suppliers



晶澳供应商战略

JA Solar's Strategy for Suppliers

- 通过建立准时化采购策略，促进供应商提高对行业变化的适应性，增强供应链的整体竞争力；

Establishing JIT procurement strategy, boosting the adaptability of suppliers to industry changes, and enhancing the overall competitiveness of supply chain;

- 长期的信任合作取代短期的合同，以提高效率、降低交易与管理成本；

Replacing short-term contracts with long-term trusting partnerships, and striving to improve efficiency and to reduce transaction costs and management costs;

- 对供应商给予协助，帮助供应商改进质量、加快产品开发进度；

Giving assistance to suppliers, and helping suppliers improve product quality and accelerate product development progress;

- 建立长效信息交流沟通机制，联合研发推进产业进步。

Establishing long-term mechanism for information exchanges and communication, and conducting joint R&D activities to boost industrial progress.

晶澳供应商合作交流

Cooperation and Exchanges of JA Solar and Suppliers

- 邀请供应商来晶澳进行新设备、新技术情况方面的交流；
Inviting suppliers to JA Solar to share insights on new equipment and new technologies;
- 邀请供应商对现场设备运行情况进行诊断；
Inviting suppliers to conduct on-site diagnosis on operating conditions of equipment;
- 邀请供应商对晶澳相关员工进行专题培训。
Inviting suppliers to conduct special-topic trainings for relevant personnel of JA Solar.



2018晶澳电池辅材技术交流会在晶澳宁晋基地召开

CASE: 2018 JA SOLAR TECHNOLOGY CONFERENCE ON SUPPORTING MATERIALS OF CELLS HELD IN NINGJIN MANUFACTURING BASE

2018年8月1-2日，“战略合作·创新共赢”晶澳电池辅材技术交流会在宁晋基地召开。晶澳的浆料、网版等战略供应商应邀参会。

The 2018 Technology Conference on Supporting Materials of Cells themed “Strategic Cooperation, Innovation and Win-Win Results” was held in JA Solar’s manufacturing base in Ningjin, August 1-2, 2018. Strategic suppliers of cell paste, cell screen and other supporting materials were invited to participate in the conference.



本次会议旨在建立供需双方的长效技术交流机制，搭建资源共享平台，贯通“市场牵引、采购导入、供应主体、工艺助推、合作共赢”的供需服务链。晶澳与供应商一起进行了深入交流，双方达成了工艺路线、降低成本等方面的诸多共识，此次交流为更快速地提升晶澳电池转换效率打下了坚实基础。

The objectives of the conference included: (i) establishing the long-term mechanism for the Company and its suppliers to conduct technology exchanges, (ii) building the resource sharing platform, and to join the supply and demand service chain covering market, procurement, supply, processes and cooperation. JA Solar and the suppliers conducted in-depth exchanges and reached consensus in the aspects of process route, cost reduction, and so on, laying a solid foundation for JA Solar to effectively improve the cell conversion efficiency.

客户合作

COOPERATION WITH CUSTOMERS

晶澳秉承“以客户为中心”的服务理念，不断完善客户服务体系建设，规范客服合作过程管理，有效保证客户对产品和服务满意。晶澳不仅为客户创造价值，同时积极协助客户创造价值，与客户建立长期的合作关系。2017-2018年，晶澳分别与华东勘测设计研究院、中国电建贵州工程公司、中国电建江西电力建设有限公司、韩国Woolim E&M公司、三星物产(SAMSUNG C&T)、中国能建山西院、中国能建天津电建、江西火电等建立战略合作关系。

With a strong focus on customer service, JA Solar has constantly improved the building of customer service system, and regulated the management of customer service cooperation process, effectively guaranteeing the satisfaction of customers with products and services. Through establishing long-term cooperation relations, JA Solar has not only

created value for customers, but also taken the initiative to assist customers to create value. In 2017-2018, JA Solar established strategic partnerships with PowerChina Huadong Engineering Corp., PowerChina Guizhou Engineering Co., PowerChina Jiangxi Electric Power Construction Co., Woolim E&M of Korea, Samsung C&T Corp., China Energy Engineering Group Shanxi Electric Power Engineering Co., China Energy Engineering Group Tianjin Electric Power Engineering Co., and Jiangxi Thermal Power Construction Co. and others.

晶澳保证客户信息安全，保证客户的知情权，为客户全面了解公司提供便利条件。截止到2018年底，公司未发生客户信息泄露的情况。

JA Solar guarantees the customer's information security and their "right to know", providing customers with full access to the Company's information. As of the end of 2018, no accidents relating to customer information leak had been reported.

晶澳与中国能建山西院建立战略合作关系
JA Solar established strategic cooperation relations with Shanxi Electric Power Engineering Co.



晶澳与江西省火电建设公司签订战略合作协议
JA Solar signed strategic cooperation agreement with Jiangxi Thermal Power Construction Co.



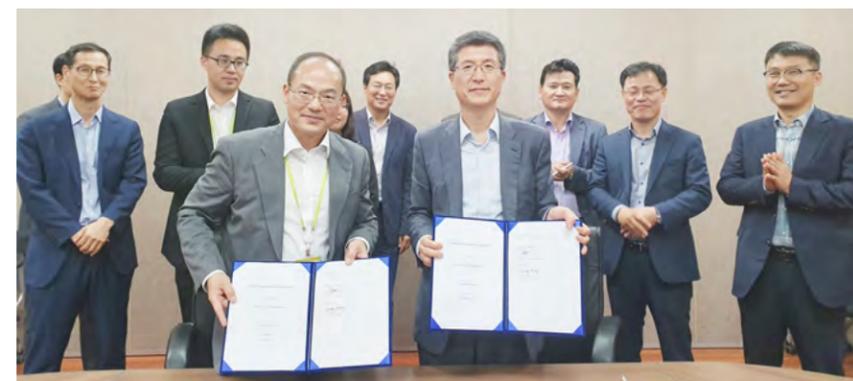
晶澳与华东勘测设计研究院签订合作协议
JA Solar signed cooperation agreement with PowerChina Huadong Engineering Corp.



晶澳作为发起人之一成立新能源国际投资联盟
As one of the initiator JA Solar established IIARE



晶澳与韩国 woolim 集团签署战略合作协议
JA Solar signed strategic cooperation agreement with Woolim E&M



晶澳与三星物产签署全球战略合作协议
JA Solar signed global strategic cooperation agreement with Samsung C&T Corp.



晶澳日本公司成立六周年，产品受到日本客户的认可

CASE: JA SOLAR JAPAN CO. WINS RECOGNITION FROM JAPANESE CUSTOMERS

2018年11月30日，晶澳日本公司在东京举办六周年庆典，靳保芳董事长参加庆典活动并致辞，日本市场重要客户出席庆典活动。靳董事长在致辞中表示，晶澳已成为日本市场领先的组件供应商之一，多年来日本市场占有率位居前列。未来希望与客户进一步加强合作，共同发展，在获取更高市场目标的同时，为人类做出更大的贡献。客户表示，由于晶澳严格生产、稳定供给，在日本市场得到高度认可，希望未来能与晶澳继续同心协力，再创辉煌。

JA Solar Japan Co. held the ceremony for the 6th anniversary of its establishment in Tokyo, November 30, 2018. Jin Baofang, Chairman of JA Solar, attended and addressed the ceremony. Major customers in the Japanese market also participated in the ceremony. In his speech, Chairman Jin said JA Solar has become one the leading suppliers of modules in Japanese market, ranking among the top suppliers in the industry in terms of market share. He said he hopes to further strengthen cooperation with customers in the future and achieve common development, jointly making more contributions to the people around the world. The customers said the strict manufacturing standards and stable product deliveries of JA Solar have been recognized by Japanese market, adding that they hope to work together with JA Solar to continue to make great glories in the future.



靳保芳董事长在日本公司成立6周年庆典上致辞

Chairman Jin Baofang attended and addressed the ceremony for the 6th anniversary of the establishment of JA Solar Japan Co.

经销商成长

COMMON GROWTH WITH DEALERS

晶澳经销商，主要包括海外产品销售经销商、国内户用式产品销售经销商和海外户用系统推广经销商。在经销商管理方面，晶澳对渠道产品进行分类，形成不同产品组合，以满足不同市场不同订单需求；同时，晶澳力求保障渠道的供货时间及供货量、保证渠道常规产品型号的稳定性，并加大对渠道商的支持力度，促进晶澳与经销商协同发展，实现共赢。

The dealer network of JA Solar is mainly composed of overseas product sales dealers, domestic household product sales dealers, and overseas household system promotion dealers. In the aspect of dealer management, JA Solar has classified the channel products to form different product portfolios, so as to meet the demand of different orders from different markets. JA Solar has also tried its best to guarantee the stability of schedule of product deliveries and shipments, as well as the stability of conventional products of various channels, and enhanced the support for channel partners, striving to promote coordinated development and achieve win-win results with dealers.



晶澳经销商峰会暨2017年表彰大会在安徽合肥召开

JA Solar Dealer Summit and 2017 Commendation Conference held in Hefei, east China's Anhui Province

聚善，洒温暖

CONTRIBUTING TO SOCIETY WITH CHARITABLE ACTIVITIES



晶澳一直致力于公益事业，是中国光伏扶贫联盟的发起人之一，并联合晶龙集团先后发起三大惠民工程：“百所希望小学捐建工程”“万名贫困学子助学工程”和“救助贫困白内障患者光明工程”。在灾害救助、扶贫救济、助学助教以及城市环境建设等方面累计向社会捐助物资超亿元人民币，不断将阳光温暖和正能量传递至更多地区。

JA Solar has always been committed to promoting public welfare. As one of the organizers of China PV Poverty Alleviation Alliance, JA Solar cooperated with Jinglong Group launch three major projects designed to benefit the people: Donation Project for Building of more than 100 Hope Primary Schools, Assistance Project for 10,000 Students from Impoverished Families, and Sight Project for Poor Cataract Patients. In the aspects of disaster relief, poverty alleviation, assistance to education and schools, construction of urban environment, and so on, JA Solar has donated over 100 million yuan of materials, benefiting more people and more areas.

光伏扶贫

POVERTY ALLEVIATION THROUGH PV PROJECTS

2017-2018年，晶澳继续发挥清洁能源产业优势，积极响应国家“精准扶贫”号召，利用自身产业优势，先后在宁夏盐池、河北临城和康保等地帮助建设光伏扶贫电站共计107.55MW。截止到2018年底，这些项目为当地提供扶贫资金累计为2,510.1万元，涉及4,055户贫困家庭，成为当地脱贫攻坚的重要力量；晶澳还积极开展援藏项目，2018年向西藏日喀则市谢通门县塔定乡普村捐建13套3KW 离网光伏发电系统和1套3KW备用发电系统，为无电地区藏民送去光明和温暖。

In 2017-2018, JA Solar continuously leveraged its advantages in clean energy industry, actively responded to the national call of targeted poverty alleviation, and helped build a number of PV power stations with a total installed capacity of 107.55 MW in, among others, Yanchi County of northwest China's Ningxia Hui Autonomous Region, Linkang County and Kangbao County of north China's Hebei Province. As of the end of 2018, those projects provided 25.101 million yuan of poverty alleviation funds for local areas, benefiting 4,055 impoverished families, and had played an important role in helping local authorities to fight against poverty. As for the implementation of assistance projects for Tibet, JA Solar donated 13 sets of 3 KW Off-grid systems and one set of 3 KW backup power generator systems to Pucun Village, Tading Town, Xietongmen County in Shigatse City, southwest China's Tibet Autonomous Region, sending light and warmth to Tibetans in areas without electricity.

为当地提供扶贫资金累计
Provided 25.101 million yuan of poverty
alleviation funds for local areas

2,510.1 万元

涉及贫困家庭
Benefiting 4,055 impoverished families

4,055 户



临城下峪42MW光伏扶贫发电项目
Poverty alleviation project: 42 MW PV Power Generation Project in Xiayu Village, Lincheng County of Hebei



宁夏盐池5.551MW光伏扶贫试点项目
Poverty alleviation pilot project: 5.551MW PV Power Generation Project in Yanchi County of Ningxia



张家口康保20MW光伏扶贫项目
Poverty alleviation project: 20 MW PV Power Generation Project in Kangbao County, Zhangjiakou City of Hebei



精准扶贫情暖藏民

CASE: TARGETED POVERTY ALLEVIATION PROJECT BENEFITS TIBETAN PEOPLE

2018年11月9日，晶澳太阳能光伏发电系统捐赠仪式在日喀则市举行，晶澳向西藏日喀则市谢通门县塔定乡普村捐建13套3KW离网光伏发电系统和1套3KW备用发电系统（合计42KW），满足了当地村民日常生活用电。本次捐建的离网发电系统，阴雨天也可以保障用电，有效改善了当地村民的生活条件，也为山区的孩子创造更好的家庭学习环境。

The ceremony of donating PV power generation systems by JA Solar to Tibet was held in Shigatse City, southwest China's Tibet Autonomous Region, November 9, 2018. At the ceremony, JA Solar donated 13 sets of 3 KW Off-grid systems and one set of 3 KW backup power generator systems (42 KW in total) to Pucun Village, Tading Town, Xietongmen County in Shigatse City, solving the issue of daily electricity use of local villagers. With those donated Off-grid systems in place, the use of electricity can be guaranteed on rainy days, which effectively improved the living conditions of local villagers and created a better family environment for children to learn.



晶澳向西藏日喀则市谢通门县塔定乡普村捐建光伏发电系统
PV power generation systems donated by JA Solar to Pucun Village, Tading Town, Xietongmen County in Shigatse City, southwest China's Tibet Autonomous Region

三大惠民工程

THREE MAJOR PROJECTS FOR PEOPLE'S BENEFITS

百所希望小学捐建工程

Donation Project for Building of more than 100 Hope Primary Schools

晶澳公司创始人、董事长靳保芳先生长期关注和支持基础教育，持续实施“百所希望小学捐建工程”。“百所希望小学捐建工程”自2007年启动以来，捐建工作有条不紊推进。2017-2018年，靳保芳先生以晶龙集团、晶澳太阳能和个人名义在河北省黄骅市、迁安市、东光县、平山县、赞皇县、赤城县、陕西延安柳林镇等捐建了7所希望小学。截至2018年底，晶龙晶澳累计捐建希望小学总数达到65所；此外，晶澳为8所困难小学捐赠了光伏发电系统。

Jin Baofang, founder and Chairman of JA Solar, has long been engaged in and supporting basic education, and constantly implemented the Donation Project for Building more than 100 Hope Primary Schools, which has achieved stable progress since its launch in 2007. In 2017-2018, Chairman Jin, on behalf of Jinglong Group and JA Solar Co. and in his own name, donated seven hope primary schools in Huanghua City, Qian'an City, Dongguang County, Pingshan County, Zanhuang County, and Chicheng County in Hebei Province, and Liulin Town of Yan'an City in Shaanxi Province. As of the end of 2018, Jinglong Group and JA Solar had donated a total of 65 hope primary schools, and JA Solar had donated PV power generation systems to eight primary schools with financial difficulties.

累计捐建希望小学总数达到
Donated a total of 65 hope primary schools

65 所

收到光伏发电系统捐赠的困难小学达到
Donated PV power generation systems to 8 primary schools with financial difficulties

8 所



捐建黄骅市大寺希望小学
Dasi Hope Primary School donated by JA Solar in Huanghua City

万名贫困学子助学工程

Assistance Project for 10,000 Students from Impoverished Families

帮扶的寒窗学子超过
Help over 1000 poor students

1,000 名



靳保芳董事长长期关注贫困学子就学问题，持续以各种形式资助、鼓励成绩优秀的贫困学子，帮助他们完成学业。2017-2018年，仅在晶澳发源地宁晋县，靳保芳董事长就以晶龙晶澳和个人名义先后为57名学习成绩优秀的贫困学子发放奖助学金，帮助他们圆了求学梦。晶澳各生产基地也在当地开展各种形式的助学奖教活动，助力当地教育事业。截至2018年底，“万名贫困学子助学工程”活动帮扶的寒窗学子超过1,000名。

Chairman Jin Baofang has long been engaged in the education of students from impoverished families, and constantly provided financial support for high-achieving students from poor families, helping them pursue education. In 2017-2018, Chairman Jin, on behalf of Jinglong Group and JA Solar Co. and in his own name, provided scholarships and grants for 57 achieving students from poor families in Ningjin County, the birthplace of the JA Solar, helping them realize the dream of schooling. The manufacturing bases of JA Solar has also conducted education support activities, helping foster the development of local educational cause. As of the end of 2018, Assistance Project for 10,000 Students from Impoverished Families had helped over 1,000 poor students.



“助学奖教”金颁奖仪式
Awarding ceremony of scholarship for study and teaching



宁晋基地举行2018年度“阳光奖学金”发放仪式

CASE: NINGJIN MANUFACTURING BASE HOLDS 2018 AWARDING CEREMONY OF SUNSHINE SCHOLARSHIP

2018年8月28日，晶澳2018年度“阳光奖学金”发放仪式在宁晋晶澳隆重举行。宁晋基地员工子女朱倩茹等荣获2018年度“阳光奖学金”，每人奖励5,000元。2017年开始，晶澳设立了“阳光奖学金”，助力第一批被本科院校录取的优秀学子完成学业。截至2018年底，累计资助29名优秀学子。

The 2018 awarding ceremony of Sunshine Scholarship was held grandly in JA Solar's manufacturing base in Ningjin. Zhu Qianru, child of an employee of the manufacturing base, and other high-achieving students won the 2018 Sunshine Scholarship of JA Solar, and each of them received 5,000 yuan of allowance. The Sunshine Scholarship was established by JA Solar in 2017, and aimed at supporting the outstanding newly-admitted college students. As of the end of 2018, the scholarship had provided financial support for 29 high-achieving students.



“阳光思源”奖教金捐赠

CASE: SCHOLARSHIP FOR EXCELLENT TEACHERS HELD IN XINGTAI

2017年10月15日，“领跑者杯”晶澳太阳能第七届篮球联赛在邢台基地成功举办，借助本届篮球联赛在邢台举办的机会，公司“饮水思源”，向提供本次比赛场地的邢台市开发区思源实验学校提供“阳光思源”奖教金，捐赠奖教金5万元。

The 7th “Top Runner Cup” Basketball League Competition was successfully held in JA Solar's manufacturing base in Xingtai, October 15, 2017. Taking the holding of this as an opportunity, JA Solar leveraged the league competition as an opportunity to donate 50,000 yuan to Siyuan Experimental School to establish a scholarship for excellent teachers. The school, which is located in Xingtai Economic Development Zone, provided the venue for the basketball league competition of JA Solar.



救助贫困白内障患者光明工程
Sight Project for Poor Cataract Patients

累计帮助白内障患者
Helped restore vision for over
800 cataract patients

800 余名

“救助贫困白内障患者光明工程”旨在“复明一个人，幸福一家人”，减轻贫困白内障患者的就医负担，解决因白内障致盲、致贫问题，带动更多社会力量参与慈善公益事业。截至2018年底，晶澳先后在江苏省东海县、河北省宁晋县实施该工程，累计帮助800余名白内障患者分担就医费用，帮助他们重返光明。

The Sight Project for Poor Cataract Patients aims to reduce the medical burden of poor cataract patients, solve the issues of blindness and poverty resulted from cataract, and drive more social forces to participate in charitable and public welfare activities. As of the end of 2018, JA Solar had implemented the project in Donghai County of Jiangsu Province and Ningjin County of Hebei Province, helping relieve the medical costs and restore vision for over 800 cataract patients.



宁晋基地2018年度“救助贫困白内障患者光明工程”启动仪式

2018 launching ceremony for the Sight Project for Poor Cataract Patients held in Ningjin base

支持高等教育

SUPPORT FOR HIGHER EDUCATION

晶澳积极响应国家科技兴国号召，推动校企合作，联合培养光伏人才。目前，公司已与北京大学、河北科技大学、河北工业大学、上海应用技术学院、上海电力学院、邢台现代职业学校等十余所高校建立了长期的人才战略合作关系；自2010年以来，晶澳先后在北京大学、浙江大学、合肥工业大学、河北工业大学、南昌大学等国内多所高等院校设立了奖学金或人才培养专项资金等，合计近400万元。

JA Solar actively responds to the national call of achieving prosperity through advance in science and technology, and has promoted university-enterprise cooperation to jointly cultivate talent for PV industry. So far, JA Solar has established long-term strategic cooperation relations with more than 10 colleges and universities including Peking University, Hebei University of Science and Technology, Hebei University of Technology, Shanghai Institute of Technology, Shanghai University of Electric Power, and Xingtai Modern Occupation School. Since 2010, JA Solar has set up scholarships and special funds for talent cultivation in Peking University, Zhejiang University, Hefei University of Technology, Hebei University of Technology, Nanchang University, and other domestic colleges and universities, and the size of scholarships and special funds has totaled nearly four million yuan.



晶澳联合北京大学开展太阳能光伏发电系统暑期实践班

CASE: JA SOLAR, PEKING UNIVERSITY JOINTLY CONDUCT SUMMER VACATION PRACTICAL ACTIVITY ON SOLAR PV POWER GENERATION SYSTEM

北京大学与晶澳联合培养合作始于2017年，目前已举办两期，旨在为北大学生提供一个教学实践的平台，也为公司全面培养具有创新意识和创新能力的人才。通过多种形式的培训、课程及实践活动，使学生们更深入的了解了太阳能光伏发电的原理和技术，并且进一步加深了晶澳与北大的合作关系，一起“收获更多阳光”。

Starting in 2017, the joint cultivation program conducted by Peking University and JA Solar aims at offering a teaching and practice platform to students and teachers of Peking University and cultivating talented people with innovation consciousness and capability for JA Solar. So far, the program has held two sessions. Through diversified trainings, courses, and practical activities, the program has facilitated the students to learn the principles and technologies of solar PV power generation, and further enhanced the cooperation between JA Solar and Peking University, optimizing productive results.



另外，自2011年以来，晶澳先后赞助同济大学、北京大学、清华大学、北京交通大学等多所知名院校参与国际太阳能十项全能竞赛，帮助参赛队伍了解太阳能光伏前沿技术，促进太阳能光伏建筑一体化的发展。

Since 2011, JA Solar has sponsored Tongji University, Peking University, Tsinghua University, Beijing Jiaotong University, and other leading colleges and universities to take part in International Solar Decathlon, helping the participating teams learn the cutting-edge solar PV technologies, and promoting the integrated development of solar PV and buildings.



晶澳支持国际太阳能十项全能竞赛

CASE: JA SOLAR SPONSORS 2018 INTERNATIONAL SOLAR DECATHLON

2018年8月3日，晶澳赞助清华大学队、同济大学-达姆斯塔特工业大学联队、上海工程大学-华建集团联队参加“2018太阳能十项全能竞赛 (Solar Decathlon, SD)”，为三支队伍提供高性能光伏组件。

On August 3, 2018, JA Solar sponsored the team of Tsinghua University, joint team of Tongji University and Darmstadt University of Technology, and joint team of Shanghai University of Engineering Science and Arcplus Group to participate in the 2018 Solar Decathlon. High-performance PV modules were provided for the teams by JA Solar.



晶澳赞助清华大学“新朝阳族之家”
WHAO House (Tsinghua University) sponsored by JA Solar



晶澳赞助同济大学-达姆施塔特工业大学“正能量房4.0”
Energy Plus Home 4.0 (Tongji University and Darmstadt University of Technology) sponsored by JA Solar



晶澳赞助上海工程技术大学“光影律动”
Light Dancing (Shanghai University of Engineering Science) sponsored by JA Solar

志愿者活动

VOLUNTEER ACTIVITIES

晶澳以分享阳光、传递爱心为出发点，组织志愿者团队开展了拜访敬老院、慰问孤儿院、慰问福利院、资助社区教育、志愿献血等多种形式的志愿爱心活动，为构建和谐友爱的社会贡献了一份力量。

JA Solar is committed to spreading joy and love to the society. The Company has organized volunteer teams to visit senior homes, orphanages, and welfare homes, provided financial support for community education, and organized blood donation activities, enabling the creation of a harmonious and friendly society.



扬州基地慰问扬州特殊教育学校
JA Solar's manufacturing base in Yangzhou visited local special education school

合肥基地参加“同心·送温暖”敬老院慰问活动

JA Solar's manufacturing base in Hefei visited local care home for the elderly



邢台基地员工志愿服务国际自行车大赛

Employees of JA Solar's manufacturing base in Xingtai provided volunteer service for the International Road Cycling Race

马来基地员工到槟城济世之家残疾人康复中心服务

JA Solar's manufacturing base in Malaysia participated in volunteer activity at the Disabled Rehabilitation Center of Penang Cheshire Home



奉贤基地无偿献血活动
JA Solar's manufacturing base in Fengxian organized voluntary blood donation activity



巴西公司为亚马逊社区的学校捐赠组件
Branch office in Brazil donated PV modules to local Amazon community



光伏点亮开山岛

CASE: PV POWER LIGHTS KAISHAN ISLAND

2018年8月13日，晶澳东海基地各部门负责人来到“时代楷模”王继才同志生前守护的开山岛缅怀英雄，同时维护晶澳捐建的光伏发电系统。

On August 13, 2018, department heads of JA Solar's manufacturing base in Donghai visited Kaishan Island to recall its militia sentry director Wang Jicai, who dedicated his life to watching over China's east coast, as well as to maintain the PV power generation system donated by JA Solar.

2015年3月22日，东海基地首次组织员工上岛慰问王继才夫妇，同年6月为开山岛捐建了5KW光伏电站；此后，每年组织员工上岛慰问。

On March 22, 2015, employees of the Donghai manufacturing base paid their first visit to Wang Jicai and his wife Wang Shihua on Kaishan Island, and in June the same year the manufacturing base donated a 5 KW PV power station on the island. Since then, they have visited the island every year.



晶澳东海基地组织慰问开山岛
Employees of JA Solar's manufacturing base in Donghai visited Kaishan Island



晶澳对捐赠给开山岛的光伏电站进行维护
An employee of JA Solar conducted maintenance work on the PV power station donated by JA Solar on Kaishan Island

专题

FEATURES

做“一带一路”的绿色使者

BEING GREEN AMBASSADOR OF BELT AND ROAD INITIATIVE



2017年5月14-15日，“‘一带一路’国际合作高峰论坛”在北京召开，晶澳董事长靳保芳受邀出席论坛，并接受媒体采访。

The Belt and Road Forum for International Cooperation was held in Beijing, capital of China, May 14-15, 2017. Chairman Jin Baofang attended the forum and gave an interview to media.

中国光伏产业作为中国对外的一张名片，成为“一带一路”优势产业走出去的重要组成部分，在沿线国家和地区的可再生能源应用上起到了巨大推动作用。晶澳把全球化战略作为公司重要战略之一，尤其是把在“一带一路”沿线国家和地区的产业拓展和市场布局作为重中之重。

As a business card of China to the world, the PV industry has played an important role in implementing the “going global” strategy under the Belt and Road Initiative and in promoting the use of renewable energy across different countries and regions along the Belt and Road. JA Solar has taken globalization as one of its important strategies, and attached great importance to market expansion and industrial layout in the countries and regions along the Belt and Road.

晶澳致力于做“一带一路”的绿色使者，采取市场布局与产业拓展同步进行，生产经营与文化融合有效结合的方式。晶澳先后在马来西亚槟城和越南北江省建立生产基地，逐步构建集硅片-电池-组件于一体的完整的海外产业链。2018年，晶澳向“一带一路”沿线33个国家和地区供货超过2GW，占2018年晶澳全部出货量的25%左右。除了生产经营之外，晶澳还不断加强“一带一路”人才队伍建设和文化交流，力争促进晶澳生产运营的本地化。

JA Solar is committed to serving as a green ambassador of the Belt and Road Initiative. The company has paid close attention to market layout and industrial development, and effectively integrated production and operations with corporate culture. JA Solar has successively set up manufacturing bases in Penang of Malaysia and Bac Giang of Vietnam, gradually establishing a complete industry chain covering silicon wafers, cells, and modules in overseas market. In 2018, the shipments of products to the 33 countries and regions along the Belt and Road reached over 2 GW, taking about 25 percent of JA Solar's total shipments of the year. In addition to production and operations, JA Solar has strengthened its talent team and cultural exchanges, striving to promote localization of production and operations of the Company.

产业布局 Industrial Layout

“一带一路”倡议的提出，给企业“走出去”带来了新机遇。为建立全球化供应链，更好地开拓国际市场，晶澳于2014年开始筹划在“一带一路”沿线投资设厂，被誉为“东方硅谷”的马来西亚槟城进入了晶澳的视野。

The Belt and Road Initiative has brought new opportunities for companies to go global. To build global supply chain and further develop international market, JA Solar has planned to build manufacturing bases in the countries and regions along the Belt and Road since 2014. Penang, a coastal state of Malaysia, is recognized as the “Silicon Valley of the East,” has been included in the list of sites to be considered.

作为晶澳“走出去”的首步棋，2015年10月23日，晶澳马来西亚基地建成投产。截止2018年底，该基地电池产能已超1.2GW。基地还与当地高等学府、研究机构等建立了长期合作关系，推动产学研互动互进，帮助马来西亚员工提升对光伏的认知和研发能力，不仅带动了当地就业和税收增长，同时也为当地发展注入了新动能。

As the first step of JA Solar in implementing the going global strategy, the construction of the Company's manufacturing base in Malaysia was completed and put into operation on October 23, 2015. As of the end of 2018, the production capacity of cells of the manufacturing base reached 1.2 GW. The manufacturing base has also established long-term cooperation with local colleges, universities and research institutes, promoted industry-university research collaboration, and helped improve the cognitive competence and R&D ability of Malaysian employees for PV technologies. JA Solar has also created job opportunities for local people, increased tax revenue for local governments, and injected new energy into the development of local economy.



马来西亚基地
JA Solar's manufacturing base in Malaysia

在马来西亚基地取得良好的经济和社会效益之后，2016年，晶澳在越南北江省开工建设“晶澳公司越南1.5GW光伏制造项目”，并于2018年生产出了越南历史上首根单晶硅棒，该项目已经被列入“一带一路”国家重大建设项目库。

After achieving good economic and social benefits from the manufacturing base in Malaysia, JA Solar started to construct the 1.5 GW PV manufacturing base project in Bac Giang of Vietnam in 2016, and the first monocrystalline silicon ingot was successfully manufactured by the manufacturing base in 2018. The project was included in the list of China's national major construction projects under the Belt and Road Initiative.



晶澳越南基地生产出第一根单晶硅棒
The first monocrystalline silicon stick manufactured by JA Solar's manufacturing base in Vietnam

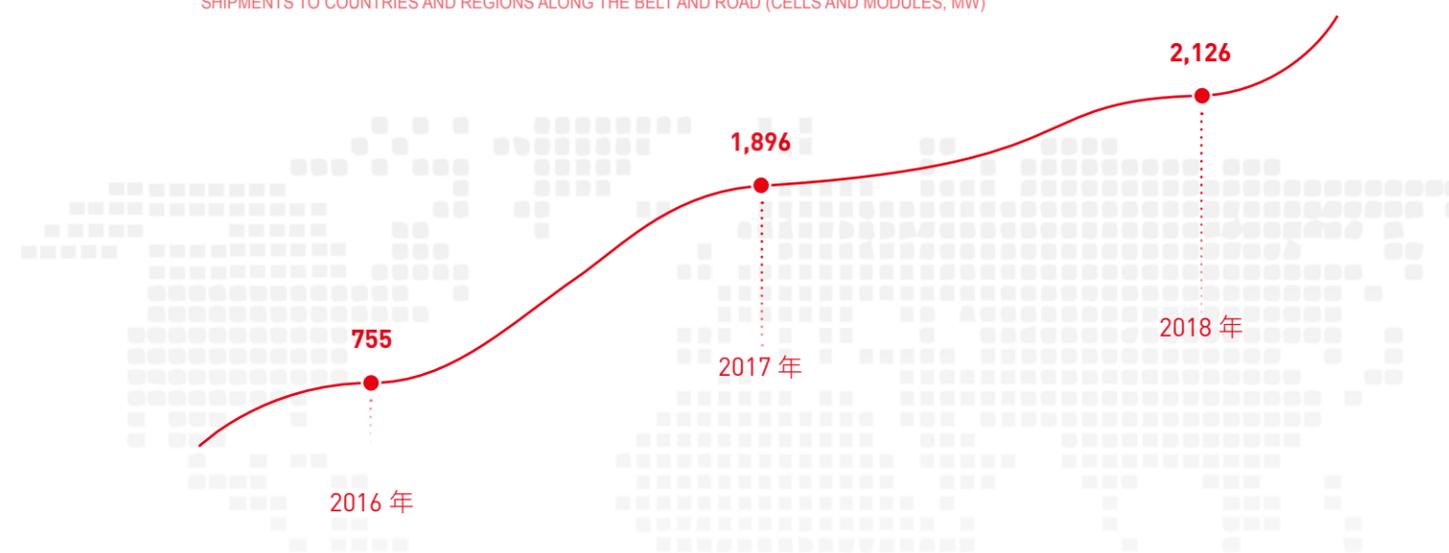
市场拓展 Market Expansion

“一带一路”沿线国家和地区大多日照资源丰富，适合应用光伏发电。同时，这些地区高温、高湿、盐碱、高紫外线的自然环境，也非常需要具有高可靠性的优质光伏产品。晶澳除了在“一带一路”沿线国家投资设厂外，近年来不断完善“一带一路”新兴市场的销售和服务网络，加速推动光伏产品出口。

On the one hand, the countries and regions along the Belt and Road have rich solar resources, which are suitable for the development of PV power generation projects. On the other hand, the natural conditions of those countries and regions are characterized by high temperature, high humidity, salinized soil, and high ultraviolet radiation level, which means reliable and high-quality PV products are badly needed. In addition to the manufacturing bases invested and built by JA Solar in the countries and regions along the Belt and Road, the Company has also improved the sales and service network in emerging markets in recent years, accelerating the export of PV products.

"一带一路" 出货量 (组件 + 电池, MW)

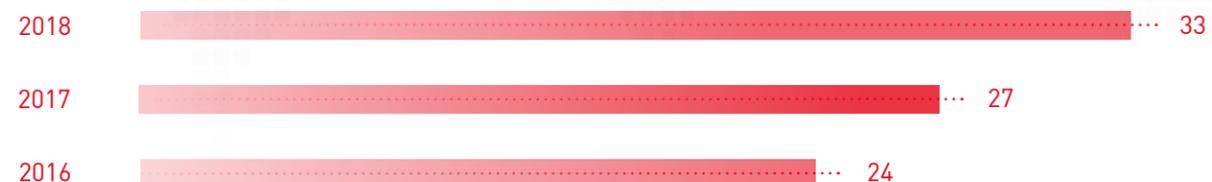
SHIPMENTS TO COUNTRIES AND REGIONS ALONG THE BELT AND ROAD (CELLS AND MODULES, MW)



"一带一路" 出货国家和地区数量 (个)

NUMBER OF COUNTRIES AND REGIONS ALONG THE BELT AND ROAD WITH PRODUCTS SOLD IN (NOS.)

单位：年
UNIT: YEAR





晶澳助力兴建中东和北非地区最大的单体屋顶太阳能项目

CASE: JA SOLAR HELPS BUILD THE LARGEST SINGLE-ROOFTOP SOLAR PROJECT IN MENA

晶澳为阿联酋迪拜Aramex公司3.2MW屋顶光伏项目供应全部单晶PERC组件。该项目位于迪拜物流城，是目前中东和北非地区最大的单体屋顶太阳能项目。预计每年发电量将达500万千瓦时，可满足Aramex公司物流设施60%的电力需求，同时每年可减少二氧化碳排放3,000吨。

JA Solar supplied all mono-crystalline PERC modules for a 3.2MW rooftop solar project of international express, mail delivery and logistics services company, Aramex. Located in Dubai Logistics City, United Arab Emirates, the single-rooftop solar project, the largest one in the Middle East and North Africa (MENA) region to date, is expected to generate 5 million kWh of electricity per year, accounting for 60 percent of the electricity needs of Aramex's logistics facilities, and to reduce emission of CO₂ by 3,000 tons per year.



合作伙伴和荣誉奖项 Partners and Awards & Honors

凭借雄厚的实力，晶澳先后与Engie、Multi Aquecimento、中国能建等一大批全球性的大型地面电站开发公司、EPC企业及分销商建立了合作伙伴关系，在“一带一路”地区的市场份额名列前茅。

JA Solar has demonstrated its strength and established partnerships with Engie, Multi Aquecimento, Energy China Group, and other global leading ground-mounted power station construction companies, EPC companies and distribution companies, and ranked among the top in the industry in terms of market share in the countries and regions along the Belt and Road.

同时，晶澳的表现也受到了“一带一路”沿线客户及各类机构的肯定。2017年荣获中国新能源海外发展联盟颁发的“一带一路新能源国际发展突出贡献奖”。2018年5月30日，第十二届国际太阳能光伏与智慧能源（上海）展览会暨论坛（SNEC）现场揭晓了一带一路“开拓者杯”奖项，其中涉及晶澳的奖项有：

JA Solar's performance has been recognized by its customers and various kinds of organizations in the countries and regions along the Belt and Road. In 2017, the Company received the "Belt and Road Outstanding Contribution Award for New Energy International Development" from China New Energy International Alliance. On May 30, 2018, the 12th (2018) International Photovoltaic Power Generation and Smart Energy Exhibition & Conference unveiled the Pioneer Cup of Solar PV Projects along the Belt and Road, and the awards involving JA Solar were as follows:

- 晶澳独家供货的以色列沙漠光伏电站荣获“一带一路”国际建设“太瓦级辉煌奖”；

Solar PV Projects along the Belt and Road Terawatt Award – Glory Award for Israel's Ashalim solar project, which used JA Solar's modules
- 晶澳PERC双面双玻组件荣获“吉瓦级金奖”；

JA Solar's bifacial PERC double-glass modules were awarded the Gigawatt Award – Gold Award
- 晶澳供货的新加坡滨海湾金沙大酒店屋顶光伏电站、巴基斯坦旁遮普省100MW光伏电站、埃及红海柴油混合发电光伏电站摘获了“一带一路”国际建设大奖。

The rooftop PV power station of Marina Bay Sands, Singapore, the 100 MW PV power station in Punjab, Pakistan, and the solar-diesel hybrid project in the governorate of the Red Sea, eastern Egypt won the International Construction Awards; all of the three projects used the modules supplied by JA Solar

人才培养和文化交流 Talent Cultivation and Cultural Exchanges

晶澳重视与“一带一路”沿线国家和地区文化的交流，尊重当地人文风俗，积极招聘当地优秀人才，并加以培养。同时，晶澳结合海外基地实际情况，在越南基地成立工会组织，在马来西亚基地建立祈祷室等，拉近晶澳与当地员工、民众的距离，促进晶澳文化与当地文化的融合。

JA Solar has a strong focus on cultural exchanges with the countries and regions along the Belt and Road, respects the habits and customs of local people, and takes the initiative to recruit and cultivate talented people. The localization rate of personnel of JA Solar's overseas manufacturing bases has so far reached about 70 percent. JA Solar, in line with the actual situations of overseas manufacturing bases, has set up trade union and prayer room at the manufacturing bases in Vietnam and Malaysia respectively, which brought JA Solar closer to its local employees and the public, and promoted exchanges and communication of both corporate and local culture.

2017年5月8日，晶澳与上海电力大学建立校企长期战略合作，面向“一带一路”沿线国家定向培养专业光伏人才。

On May 8, 2017, JA Solar established long-term strategic cooperation relations with Shanghai University of Electric Power to cultivate professional PV talent for the countries and regions along the Belt and Road.

2018年5月31日，由晶澳参与承办的“一带一路上的企业家精神”中越商贸促进交流会在越南北江省成功举办，共有来自中国、越南以及东南亚地区的500位企业家参会，为中国与东南亚各国构建了“民心相通”的桥梁。

On May 31, 2018, the China-Vietnam Economic and Trade Promotion Conference themed the “Entrepreneurship along the Belt and Road” undertaken by JA Solar was held successfully in Bac Giang, Vietnam. A total of 500 entrepreneurs from China, Vietnam, and South-East Asia Region attended the conference, which enhanced the relationships between the Chinese people and the people of South-East Asia Region.

2018年6月1日，晶澳越南小四合院（世界优秀文化学习殿堂）建设成立，通过文化护航，为晶澳全球化运营提供精神原动力。

On June 1, 2018, JA Solar's Small Quadrangle Courtyard (World Excellent Culture Lecture Hall) was established in Vietnam. The cultural exchanges and communication provided positive energy for JA Solar to conduct global operations.



越南国家妇女节活动
Activity held to celebrate the Women's Day in Vietnam

公益活动 Public Welfare Activities

晶澳在发展壮大的同时，还热心公益志愿事业，积极参与到当地公益活动中去，彰显了晶澳良好的企业形象。

In addition to business development, JA Solar is enthusiastic about public welfare cause, and has actively participated in local charitable activities, highlighting the good corporate image of the Company.



晶澳员工参加槟城济世之家公益活动
JA Solar's manufacturing base in Malaysia participated in public welfare activity at Penang Cheshire Home



晶澳员工参加槟城爱老协会志愿者活动
JA Solar's manufacturing base in Malaysia participated in volunteer activity organized by Penang Senior Citizen Carers' Association



越南基地向越南北部山区灾民捐款
JA Solar's manufacturing base in Vietnam donated money to storm-stricken people in the country's northern mountainous area

晶澳“一带一路”经典案例（供货项目）

Typical Cases Regarding Belt and Road Initiative (Projects with Modules Supplied by JA Solar)

巴基斯坦巴哈瓦尔布尔100MW地面电站

项目地点: 巴基斯坦·巴哈瓦尔布尔 项目规模: 100MW

组件类型: 晶澳多晶组件 竣工时间: 2015年2月

100 MW ground-mounted power station in Bahawalpur, Pakistan

Project site: Bahawalpur, Pakistan Installed capacity: 100 MW

Type of modules: JA Solar's poly-crystalline modules

Completion time: February 2015



菲律宾Cadiz132.5MW地面电站

项目地点: 菲律宾 Cadiz 项目规模: 132.5MW

组件类型: 晶澳多晶组件 竣工时间: 2016年

132.5 MW ground-mounted power station in Cadiz, the Philippines

Project site: Cadiz, the Philippines Installed capacity: 132.5 MW

Type of modules: JA Solar's poly-crystalline modules

Completion time: 2016



阿联酋迪拜Aramex公司3.2MW屋顶光伏电站（分布式）

项目地点: 阿联酋迪拜物流城 项目规模: 3.2MW

组件类型: 晶澳单晶PERC组件 竣工时间: 2018年

3.2MW rooftop(distributed) power station in Dubai Logistics City, United Arab Emirates

Project site: Dubai Logistics City, United Arab Emirates

Installed capacity: 3.2 MW

Type of modules: JA Solar's mono-crystalline PERC modules

Completion time: 2018



以色列Ashalim35MW地面电站

项目地点: 以色列Ashalim 项目规模: 35MW

组件类型: 晶澳单晶组件 竣工时间: 2017年

35 MW ground-mounted power station in Ashalim, Israel

Project site: Ashalim, Israel Installed capacity: 35 MW

Type of modules: JA Solar's mono-crystalline modules

Completion time: 2017



越南富安华会257MW地面电站

项目地点: 越南富安 项目规模: 257MW

组件类型: 晶澳单晶PERC组件 竣工时间: 2019年

257 MW ground-mounted power station in Phu Yen, Vietnam

Project site: Phu Yen, Vietnam Installed capacity: 257 MW

Type of modules: JA Solar's mono-crystalline PERC modules

Completion time: 2019



孟加拉国特克纳夫28MW地面电站

项目地点: 孟加拉国特克纳夫 项目规模: 28MW

组件类型: 晶澳多晶组件 竣工时间: 2018年

28 MW ground-mounted power station in Teknaf, Bangladesh

Project site: Teknaf, Bangladesh Installed capacity: 28 MW

Type of modules: JA Solar's poly-crystalline modules

Completion time: 2018



马来西亚沙巴50MW地面电站

项目地点: 马来西亚沙巴 项目规模: 50MW

组件类型: 晶澳单晶PERC组件 竣工时间: 2018年

50 MW ground-mounted power station in Sabah, Malaysia

Project site: Sabah, Malaysia Installed capacity: 50 MW

Type of modules: JA Solar's mono-crystalline PERC modules

Completion time: 2018



未来展望

FUTURE PROSPECT

2019年，晶澳将秉持“开发太阳能、造福全人类”的企业使命，继续将“真诚、质朴、敬畏、感恩”的企业精神融入到社会责任履行和企业生产实践当中，加强责任管理，加快建设具有全球竞争力的世界一流光伏企业。

In 2019, JA Solar, adhering to the corporate mission of “develop solar power to benefit the entire human race,” will continue to integrate the corporate values of “sincerity, simplicity, reverence, gratitude” into social responsibility performance and manufacturing activities, and strengthen corporate management, accelerating the mission to become a global leading PV company with international competitiveness.

“堂堂正正做人、兢兢业业做事”，晶澳将始终遵循这一信念，以履行社会责任为己任，为“做一个伟大的企业”而不断努力。

JA Solar will always follow the corporate belief of “act honorably, work conscientiously,” take the performance of social responsibility as its duty, and spare no effort to make a great company.

以客户为中心提升服务意识

倡导“以客户为中心”的企业文化，不仅为客户创造价值，同时积极帮助客户创造价值。价格最优、质量最好、服务最周到，是晶澳始终不移的目标和方向。

Centering on customers and enhancing service awareness

JA Solar will advocate the customer-oriented corporate culture, not only creating value for customers, but also actively helping customers create value. The highest value, the highest quality and the best service will be, as always, the clear objectives and firm direction of JA Solar.

产业创新铸就品质

坚持自主研发，加强产学研合作，不断推进产品智能智造，做光伏产业技术创新领跑者；坚持高质量发展，提升产品全流程质量管控水平；坚持客户至上，继续优化全流程客户服务体系，维护客户权益，为客户创造更大的价值。

Developing innovative products and improving product quality

JA Solar will pursue independent research and development, and constantly promote smart and intelligent manufacturing, striving to be a leader of the PV industry in terms of science and technology innovation. The company focuses on developing high-quality products and improving quality control of its total product solution. JA Solar also emphasizes the principle of customer first, optimizes the total customer service system, and protects the rights and interests of customers, creating greater value for customers.

以人为本集聚人才

加强海内外优秀人才招聘力度，提升人才储备，提高企业竞争软实力；保障员工基本权益，进一步完善人才培养、考核、晋升评价机制；加强对员工职业健康安全、民主沟通、生活品质的关注力度，为员工提供更多的关爱。

Putting people first and strengthening talent pool

JA Solar will enhance the efforts to recruit talented people, broaden the talent pool, improve the soft skills relative to market competition. The company will guarantee the basic rights and interests of employees, and further cultivate its talent, refine its performance appraisal and promotion mechanism. JA Solar will enhance occupational health and safety management, adopt democratic approach to communicate with employees, improve their quality of life, and strengthen employee care.

开放合作布局全球

持续推进产业链一体化进程，优化管理模式，凸显竞争优势，与合作伙伴协同发展；持续优化产业布局，拓展海外市场，加快本地化运营和文化融入，提升合作伙伴关系，加速推动光伏产品出口，为“一带一路”建设贡献更多的力量。

Promoting open cooperation and developing global market

JA Solar will constantly promote the integration process of industry chain, optimize management model, enhance competitive strength, achieve coordinated development with partners. The company will optimize industrial layout, expand its presence in overseas markets, accelerate localized operations, promote cultural exchanges and communication, enhance its relationships with partners, and facilitate the export of PV products, and contribute more to the construction of the Belt and Road.

绿色环保节能生态

深化公众对清洁能源的认知，逐步打造节能生态；继续做好节能减排新技术推广应用，加大节能减排资金投入，完善安全环保应急管理体系；继续推动企业绿色运营与绿色办公，为环境保护做出更好的表率。

Protecting environment and conserving energy

JA Solar will enhance the awareness of the public to clean energy, and gradually build energy-saving ecosystem. The company will continue to promote the technologies that conserve energy and reduce emission, increase investment in energy-conservation and emission reduction, and further refine the emergency management system on safety and environmental protection. JA Solar will promote green operations and green office practices, and set a better role model for environmental protection.

感恩奉献共促和谐

继续发挥清洁能源产业优势，积极参与光伏扶贫，助力贫困地区基础电力建设；继续加强社会公益慈善活动，推进三大惠民工程顺利实施，打造晶澳公益品牌，为社会回馈更多温暖。

Contributing to community and jointly building a harmonious society

JA Solar will continue to leverage the industrial advantages of clean energy, actively participate in poverty alleviation campaign through PV projects, and support the construction of electric power infrastructure in poverty-stricken areas. The company will take the initiative in participating public welfare and charitable activities, promote the successful implementation of the three major projects designed to benefit the people, build the public welfare brand of JA Solar, and make significant contributions to the society.

附录

APPENDIX

关键绩效表 Key Performance Indicators

指标 Indicator	单位 Unit	2016	2017	2018
员工人数 Number of employees	人 Person	17,083	17,816	20,003
识别核心人才数目 Number of core talent identified	人 Person	390	393	523
培训费用投入 Investment in trainings	万元 10,000 Yuan	206.02	241.23	344.35
员工参与培训比例 Proportion of employees participating in trainings	%	100	100	100
获个人奖员工人数 Number of employees receiving individual awards	人 Person	1,334	1,348	1,767
获团体奖员工人数 Number of employees receiving group awards	人 Person	1,659	1,484	2,015
男性员工人数 Number of male employees	人 Person	11,769	12,442	13,981
女性员工人数 Number of female employees	人 Person	5,314	5,374	6,022
研究生及以上学历人数 Number of employees with a master's degree or higher	人 Person	249	238	231
本科学历人数 Number of employees with a bachelor's degree	人 Person	1,873	1,887	2,001
大专学历人数 Number of employees with a junior college degree	人 Person	3,546	3,624	3,684

指标 Indicator	单位 Unit	2016	2017	2018
中专及以下学历人数 Employees with vocational level educational background or below	人 Person	11,415	12,067	14,087
<30岁员工数量 Number of employees aged below 30	人 Person	9,734	9,625	10,488
30-39岁员工数量 Number of employees aged 30-39	人 Person	6,578	7,311	8,563
40-49岁员工数量 Number of employees aged 40-49	人 Person	664	770	827
≥50岁员工数量 Number of employees aged 50 or above	人 Person	107	110	125
客户投诉解决率 Solving rate of customer complaints	%	100	100	100
年度光伏组件出货量 Annual shipments of modules	兆瓦 MW	4,606.7	7,143.1	8,060.4
光伏电站开发容量 Development capacity of PV power stations	兆瓦 MW	280.81	117.10	42.36
产品出口国家数 Number of countries with products sold in	个 Nos.	56	69	85
经销商数量 Number of dealers	个 Nos.	235	419	511

指标索引 Indicator Index

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意见反馈 Suggestions and Feedback

本报告是晶澳太阳能有限公司向社会公开发布的第二份企业社会责任报告，为持续改进公司社会责任工作，不断提高履行社会责任的能力和水平，我们非常希望倾听您的意见和建议。恳请您协助完成反馈意见表中提出的相关问题，并选择以下方式反馈给我们。

This report is the second corporate social responsibility report released to the public by JA Solar Co., Ltd.. For the purpose of continuously improving the corporate social responsibility work and constantly enhancing the capability and level of corporate social responsibility performance, we are looking forward to listening to your opinions and suggestions. Please assist us to complete the relevant questions in the feedback form. You may choose the following options to contact us.

☎ 联系电话: 010-63611888

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您的信息 Your information

姓名: _____ 工作单位: _____
Name: _____ Company/Organization: _____

职务: _____ 联络电话: _____ 电子邮件: _____
Title: _____ Tel: _____ E-mail: _____

1、您对公司社会责任报告的总体评价是

1. What is your overall assessment of this corporate social responsibility report?

好 Excellent 较好 Good 一般 Fair

2、您认为本报告是否能反映公司对经济、社会和环境的重大影响

2. Does this report fully and accurately reflect the major impacts of the Company on economy, society, and environment?

高 Excellent 较高 Good 一般 Fair 较低 Poor 低 Very Poor

3、您认为本报告所披露信息、数据、指标的清晰、准确、完整度如何

3. Does this report disclose clear, accurate and complete information, data, and indicators?

好 Excellent 较好 Good 一般 Fair 差 Poor 不了解 No Idea

4、您最满意本报告哪一方面？

4. What do you think is the most satisfying part in this report?

5、您希望进一步了解哪些信息？

5. What kinds of information would you like to learn more about?

6、您对我们今后发布报告还有哪些建议？

6. What kinds of information would you like to learn more about?