

2016联合国契约组织年报

UNITED NATIONS GLOBAL COMPACT COMMUNICATION ON PROGRESS 2016





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高管致辞 Speech by Managing Director

2016年，受国际经济形势总体复苏较慢、国内经济三期叠加的压力以及结构性调整等因素的影响，国内经济增长总体上呈现下行的态势。在这样的大环境下，我们秉承着“坦诚、务实、合作、进取”的企业精神，在做好主营业务的基础上，适时调整并积极开拓新的业务领域及市场，依靠前瞻性的战略能力和对市场行业的准确把握，实现了企业的可持续发展。

In 2016, as the impact of an uncertain outlook for the global economy and the pressure of three periods of domestic economic superposition and structural adjustment, the domestic economic growth generally shows a downward trend. In such circumstances, we still uphold the “frank, practical, cooperate and progressive” as our spirit of enterprise. Therein, we are not only to achieve the main business but also timely adjust and actively explore new areas of business and market. After then, we have realized the sustainable development of the enterprise relying on the forward-looking strategic capability and the accurate grasp of the market.

2016年，我们继续恪守并履行“全球契约”在尊重人权、劳动权、环保等方面的十项原则，将十项原则作为我们履行社会责任与义务的参考标准，并将其融入到企业的日常生产经营管理之中。一直以来，我们实行人性化管理模式，使人才与公司成为利益共同体和事业共同体，并致力于上升到精神共同体。我们一直在努力把我们的企业打造成国际化企业，自2009年3月加入联合国契约组织后，2010年6月成为了联合国工发组织国际小水电中心控制设备制造基地；参加2016年二十国集团工商峰会（B20峰会），并参与全球经济治理和国际经贸规则制定的研讨；截止到2016年年底，我们已为包括欧美在内的全球三十三个国家6000余厂站提供优质的产品和服务，并得到了用户的一致好评；此外，在国家“一带一路”战略构想的指引下，2016年我们牵头搭建“能创国际”的平台，启动以EPC和机电分包形式来开拓更多国际市场，树立中国制造新形象。

In 2016, we continue to fulfill the ten principles of the Global Compact in respect of human rights, labor rights and environmental protection. These ten principles are used as reference standards for our social responsibility and obligation, and incorporate them into the daily production management of enterprise. We have been implementing a humanized management model to make talents and companies a community of interests and a community of business, and committed to a spiritual community. Moreover, we have been trying to make our enterprise as an international enterprise. Since we joining the United Nations contact organization in March 2009, we have become globally unique control equipment manufacturing base under UNIDO ICSHP, we have participated in the 2016 B20 Summit and also participated in global economic governance and international economic and trade rules. By the end of 2016, we have provided high-quality products and services to more than 6000 plants in 33 countries, and






received favorable comments from users. In addition, under the national “Belt and road” of strategic vision, we led in 2016 to build “International Energy Creation” platform, which launched in the form of EPC service and mechanical and electrical subcontractor to develop more international market, and establishing the new image of China.

作为联合国契约组织的企业，我们的目标是：打造一个足够优秀、值得尊敬的高技术领域大型企业，在自动化产品制造、服务及其紧密相关领域持续努力，创造价值，满足客户、员工、管理者、股东以及政府等等各利益相关方的期待。我们将用我们的实际行动去影响我们的合作伙伴，让全球契约原则影响更广泛。

As a member of Global Compact, our pursuit is to create an excellent and honorable technical enterprise. For this aim, we make continuous efforts to create value in the automatic control field and hope to achieve the expectations of all interested parties, like our clients, staff, managing person, shareholder, government and others.

为此，我们义务接受公众对我们的监督，我们将以公开的形式，报告我们履行“全球契约”的进展情况。

Therefore, we are willing to accept the public supervision and we will report in public the progress of our “Global Compact” .

总裁： 

President: Xiaobing WANG

2017年6月

June, 2017



公司简介 Company Profile



作为联合国工业发展组织国际小水电中心水电控制设备制造长沙基地的承载主体，长沙华能自控集团，创建于 90 年代，现已成为一家集科技、文化、教育为一体的投资管理公司。集团下属三家企业：华自科技股份有限公司、长沙华自投资管理有限公司和长沙华源文化传播有限公司。

Founded in the early 1990s, Changsha Huaneng Automatic Control Group is the Hydropower Equipment Manufacturing Base authorized by UNIDO International Center on Small Hydropower. Nowadays, Changsha

Huaneng Automatic Control Group has become an investment management company involved in science and technology, culture and education. There are 3 subordinate companies of this Group, and they are: HNAC Technology Co., Ltd., Changsha Huazi Investment Management Co., Ltd. and Changsha Huayuan Culture Communication Co., Ltd.

长沙华自投资管理有限公司经营范围为企业投资管理；长沙华源文化传播有限公司经营范围为大型文化艺术活动的组织、策划，图文设计制作，生态环境信息咨询等。长沙华能自控集团核心企业——华自科技股份有限公司，作为集团最大的经营实体，是湖南省和长沙市政府重点支持的上市企业，其主要情况如下：

Moreover, the Changsha Huazi Investment Management Co., Ltd. is engaged in the investment management of enterprise. Changsha Huayuan Culture Communication Co., Ltd. undertakes the organization, planning, graphic design and production of large-scale cultural and art activities, eco-environmental information consulting service, etc. The core enterprise--- HNAC Technology Co., Ltd. as the biggest operational entity of the Group, it also is the listed company supported by the government.

华自科技股份有限公司（股票代码：300490），主营业务为水利水电自动化系统、变配电保护及自动化系统、水处理及其他工业自动化系统等的研发、制造、销售及设备安装和技术服务。公司的主要产品为：水电站自动化系统、泵站自动化系统、水利信息化系统、变电站保护测控系统、智能配电自动化系统、水处理自动化系统、工业过程控制系统应用解决方案等；是联合国工业发展组织国际小水电中心水电控制设备制造示范基地、国家火炬计划软件产业基地骨干企业、重点工业产品质量分类监管AA类（最高等级）企业；是电站控制设备等领域的国家及行业标准的主要参与编制单位；自成立以来，先后获批成立院士专家工作站、工程技术中心，获得了国务院颁发的国家科学技术进步二等奖等多项殊荣，至今为止已为全球三十多个国家六千余厂站提供了高效优质的产品与服务；其中中小水电站自动化控制设备市场占有率位居全国第一，泵站自动化系统也具有优势市场地位。

HNAC Technology Co., Ltd. is a public company (Stock code:300490). It is mainly involved into the water conservancy and hydropower automation system, electric transformer and distribution automation system



protection and automation system, water treatment and other industrial automation system of research and development, manufacture, sales and installation of equipment and technical services. Moreover, HNAC's main products include: hydropower plant and pump station automation system, water conservancy informatization system, substation monitoring and control protection system, intelligent power distribution automation system, water treatment automation system, application solutions for industrial process control system, etc. HNAC has obtained a large amount of qualification certificates. For example, HNAC is the globally unique control equipment manufacturing base under UNIDO ICSHP, the backbone enterprise of national torch program software industry base, the quality classification of key industrial products regulates AA (the highest level) enterprise, the compilation unit into the state and industry standards of the power station control equipment. Since the establishment of HNAC, HNAC has been approved and established academician or expert workstation and engineering technology center, and the state council also awarded the second prize of national science and technology progress to HNAC. Up to now, HNAC has provided the effective and superior products and services to more than 30 foreign countries and over 6000 plants. Thereinto, HNAC's hydropower automatic control equipments take the first market throughout China and even the world, and the pumping station automatic system also ranks in the top position.

2016年，公司实现营业收入5.6亿元，同比增加22.87%，公司加大海外市场投入力度，营收增幅超过140%。

2016年，公司收购长沙中航信息技术有限公司，加强信息化领域的核心竞争力，逐步涉足航空、军工领域；成立湖南华自售配电有限公司、深圳前海华自投资管理有限公司、华自国际(香港)有限公司，产业布局进一步明晰。

In 2016, HNAC has realized operating revenue of CNY560 million, an increase of 22.87% year on year, and HNAC also increased its investment in overseas market and revenue increased by more than 140%. In the same year, HNAC acquired China Aviation Information Science & Technology Co., Ltd. It aims to strengthen the core competitiveness of the information field and gradually dabble in aviation and military industry. After then, the following branch companies have been established, and they are HNAC Electric Power Co., Ltd., Shenzhen Qianhai HNAC Investment Co., Ltd. and HNAC International (Hong Kong) Co., Ltd. The industrial layout is further clarified.

公司不断进行核心技术研发，近三年投入销售收入6%以上作为研发经费；2016年10月同湖南大学信息科学与工程学院成立“监控与信息化技术联合实验室”；同年通过CMMI（软件能力成熟度集成模型）3级认证；

HNAC continues to carry out the core technology research and development, and it has invested more than 6% of the last three years sales revenue as research and development funds. In October 2016, HNAC has established the “joint laboratory for monitoring and information technology” with the college of information science and engineering, Hunan university. In the same year, HNAC has passed the CMMI (Capability Maturity Model Integration) level 3 certification.

在此期间，公司进一步加强与完善知识产权工作体系和管理制度，制定和运用知识产权战略促进专利技术在企业产业结构和技术升级中的优化作用，专利年申请量较2015年增长30%以上。积极参与行业标准编制工作，推动行业健康发展，公司牵头编写的《NB/T 42074-2016 无人值班小型水电站安全运行规范》、《NB/T 42075-2016 无人值班小型水电站监控技术规范》等标准



顺利发布。

In the meanwhile, HNAC further strengthened and improved the intellectual property work system and the management system, and also formulated and applied the intellectual property strategy to promote the optimization of patent technology in the enterprise' s industrial structure and technology upgrading. The number of patent applications increased by more than 30% in 2015. In addition, HNAC actively participated in the industry standard preparation work to promote the healthy development of the industry. For example, HNAC is leading the preparation of “NB/T 42074-2016 Unattended Small Hydropower Station Safety Operation Specification” and “NB/T42075-2016 Unattended Small Hydropower Station Monitoring and Control Technical Specification” has been released successfully.



环境绩效

Environmental Performance



一、承诺与制度Commitment and system

为进一步提高产品（服务）质量、生产环保意识、职业健康安全管理水平，为推动经济社会可持续发展、改善区域环境质量作出自身应有的贡献，我公司承诺：

In order to promote the sustainable development of economic society, keep improving the regional environmental quality, further upgrade the product quality, environment and Occupation Health Safety Management level and strengthen the environmental

awareness of all staff, we hereby committed:

1) 深入开展环境宣传教育，倡导科学发展观，贯彻“环境为源，和谐共创”的环境体系方针，坚持“既要金山银山又要绿水青山”的发展理念，牢固树立环保意识；

To conduct deeply in environmental publicity and education and propose the scientific development theory by building the enterprise culture and implement the environmental system policy. We adhere to strengthen the environmental protection in enterprise development and to promote the enterprise development during the process of environmental protection.

2) 坚决遵守环境保护政策法规和标准，严格执行排污申报和排污收费等制度，自觉遵守建设项目环境影响评价和“三同时”规定，积极主动接受环境现场执法检查 and 监督管理，坚决做到无环境污染事故发生，为环保事业添砖加瓦；

To implement the environmental protection policies and criterion, the pollution discharge declaration and pollution charges policy, we will consciously abide by construction project environmental effect evaluation and relative stipulations and positively study the site inspection and supervision management, so as to ensure no environmental pollution accident and a improved environmental quality.

3) 公司将加大节能减排投入和生产设施改造力度，加强污染治理设施的管理；主动淘汰落后产能，发展循环经济、绿色经济；提高资源利用率，减少污染物的排放。完善突发环境事件应急预案，并组织应急演练，确保环境安全事故能得到有效及时处理；

To reinforce the input and technical renovation in energy saving and emission reduction invest, the operation management of pollution regulation facilities. We take the initiative action in closing down outdated production facilities and technologies, playing an active role in implementing clean production, developing circular economy, increasing resource utilization rate and decreasing the discharge of contaminant. We also perfected the reserve plan for environmental emergencies, organized the emergency excise to ensure the safety environment.



4) 加强企业诚信体系建设，强化诚信意识，将诚信理念贯穿于企业生产经营全过程。主动处理好企业与员工及各利益相关方的关系，自觉维护员工及各利益相关方的环境权益，自觉接受社会各界监督。

To strengthen the enterprise environmental management and the honest awareness, in order to make the concept of credit during the whole process of production management. We take the initiative action in balancing the relationship between enterprise, staff and the interested parties, maintain their environmental benefits and accept the supervision of the public and media.

二、体系与政策System and policy

GB/T24001-2004环境管理体系在公司得到有效运行，并于今年顺利通过监督审核。公司结合实际，为环保和可持续发展工作配备了充足的人力、物力、财力以及相关技术支持，建立、实施、保障和改进一系列环境保护政策执行体系。

The GB/T24001-2004 Environment Management System was conducted in HNAC effectively and we have got the approval for updating the certificate. According to the specific situation, we have nominated the representative for environmental and occupation health safety affairs and built the related environmental protection system.

2016年环境目标为无环境污染，废水、废气、噪声排放达标：1、废水排放符合《污水综合排放标准》（GB8978-1996）表4三级排放标准；2、废气排放符合《大气污染物综合排放标准》（GB 16297-1996）表2新污染源大气污染物排放限值 无组织排放监控浓度限值；3、噪声排放符合工业企业厂界环境噪声排放标准（GB 12348-2008）表1中三类区标准。

Our environmental objective in 2016 is no environmental pollution, the waste water, waste gas and noise emissions reach the national standards; 1. Waste water discharge meets the table 4 in the integrated wastewater discharge standard "(GB8978-1996); 2. Waste gas discharge meets the table 2 in the comprehensive atmospheric pollutant discharge standard "(GB 16297-1996); 3. Noise emissions meet the table 1 in industrial enterprise environmental noise emission standards (GB 12348-2008)

2016年的内审和监督审核都重点审查和强调了安全和环境，进一步明确公司根据国家现行有关法律法规和其它要求，结合以往安全生产经验，对公司环境、安全生产过程中的环境因素、危险源进行重新识别和评价，列出一般环境因素、重要环境因素，一般危险源、重大危险源，涵盖了公司各项活动和过程，为公司环境因素、危险源的有效控制提供了依据。公司针对识别出的重要环境因素、重大危险源，结合公司施工生产特点和安全生产经验，修订和完善了专项应急救援预案、管理方案及管理制度。各项预案、管理方案和管理制度针对性强，可操作性强，为各项活动的开展起到了指导作用。公司每月组织专人对质量、安全、环境进行检查，共下发7项整改通知，各责任部门、单位针对问题责任到人，分工明确，制定相应的预防/纠正方案，并在规定期限内整改完成。

The 2016 internal audit and surveillance audit both emphasized the safety and environment. Based on present laws and regulations and other requirements, combing with previous experience of safety production, we re-identified and evaluate the environmental factor and source of danger during the process of safety production implementation. We have listed general environmental factors, important environmental factors, general sources of danger, and important sources of danger, which covered every aspect of the company activities and provided a basis for the effective control of these sources of danger. On above basis, we have revised the special emergency



rescue plans, management plans and management policies, which have strong pertinence and operability. We also organized a monthly inspection on the quality, safety and environment and release 7 notices for rectification. The problems aroused have clear division of labor and responsibility and are rectified within prescribed time limit.

三、工作成果Achievement

1) 环境目标的实现情况：各类重要环境指标控制在标准范围内，未发生有毒有害物质泄漏等污染事故；生产现场厂界噪声排放达标；原材料使用符合环保要求；固体废弃物分类管理，处置率100%；废气、废水、废渣排放达标；重大环境污染事故为零。并于2016年3月14日通过广州计量检测（湖南）有限公司的检测，氨氮参考《污水排入城市下水道水质标准》CJ343-2010表1B等级标准限值，其他污染物参考《污水综合排放标准》GB8978-1996中表4三级标准限值；无组织废气参考《大气污染综合排放标准》GB16297-1996中表2新污染源大气污染物排放值无组织标准，均符合标准限值。

Implementation of environmental objectives: All kinds of important environmental factor are controlled within a standard range. There is no pollution accident on poisonous and harmful substance leakage. The noise emission within production area reached the standard. The raw materials used meet with the environmental protection requirement. We had a classified management on the solid wastes and had a 100% disposal rate. The emission of waste gas, waste water and waste residue are standard. And there is no major environmental pollution accident. We have passed the inspection tests of GRGTEST On March 14, 2016 according to standards such as CJ343-2010 "Wastewater Quality Standards for Discharge to Municipal Sewers" standard limited value in list 1B for ammonia nitrogen detection, GB8978-1996 "Integrated Wastewater Discharge Standard" standard limited value Level 3 in List 4 for other pollutants and GB16297-1996 List 2 for Atmospheric Pollution Integrated Discharge Standard" for disordered exhaust gas detection.

2) 职业安全健康目标的实现情况：公司根据统一要求，对员工每两年进行一次体检，对从事有毒有害岗位的特种作业人员每年进行一次体检，无重大安全伤亡事故发生，重大危险源得到有效控制。于2016年3月2日对存在职业危害因素的工作场所进行了检测，检测的生产性化学因素检测值均符合职业接触现实要求；为防患于未然，避免长时间接触生产性化学元素对人体造成的损害，公司向员工发放了工作服、防尘口罩、防毒口罩、手套等防护用品，并督促佩戴到位；对存在噪声的设备进行了隔离处理，如对铝门制作机器人加装了防护墙，其他噪声岗位虽然在标准范围内，也为员工配备了防噪声耳塞；在2016年10月8日组织的职业健康体检中，长沙市疾控中心对我公司从事锡焊、电焊、铜排打磨、冲剪四个存在职业危害因素岗位的18名员工进行了全面体检，无一例职业禁忌症和职业病。

Implementation of occupational safety and health objectives: The staff will have the health examination once every two years. Each special operations personnel will have once each year to guarantee there is no occupational disease and major security accident. The major hazard sources are effectively control by the management. On March 2, 2016, the workplaces with occupational hazards were tested; the detected chemical factors are in line with the professional requirements of occupational exposure. To avoid the prolonged exposure to the damage caused by the production of chemical elements to the human body, we have distributed the uniforms, dust masks, anti-virus masks, gloves and other protective equipment. The equipments with noises are isolated. For other noise posts in



the standard range, the anti-noise earplugs are provided to the employees. During the occupational health examination in October, 2016, all employees working in positions with hazardous factors have conducted a comprehensive physical examination, no occupational contraindications and occupational diseases were founded.

3) 公司根据环境管理体系的要求, 通过对环境管理体系覆盖范围内的环境因素的识别, 对识别的环境因素进行了重新评价, 确定了重要环境因素, 并建立《重要环境因素清单》; 重新整理了法律法规和其他要求文件, 更新了《法律法规和其他要求清单》, 按《合规性评价控制程序》对环境、能源、“三废”、噪声等污染项目进行了合规性评价, 均符合公司前文所述承诺。

According to the requirement of environmental management system, we have re-evaluated the recognized environmental factors and confirmed them as the great important and established the “List of important environmental factor”. We rearranged regulations and other documents and updated “List of laws, regulations and other requirements”. The environment, energy, waste water, waste gas, noise and solid wastes are evaluated according to Compliance Evaluation Control Procedures.

4) 公司自主研发的HZES3000企业能源管理系统起到发挥良好作用。

Good performance of HNAC self-developed HZES3000 Enterprise Energy Management System

HZES3000企业能源管理系统采用自动化技术、网络通讯技术等多种技术多措并举, 对企业“电、水、气、热、风、油”等能源介质的生产、输配和消耗及供能、用能设备状态实施集中、扁平化的动态监控和数字化管理; 借助智能数据采集传输网络对企业能源系统各环节实施动态监控和信息化管理。2016年共用水1.59万立方米, 月平均0.13万立方米, 用电1.55万度, 月平均0.1295万度, 用气2.1623万立方米, 月平均0.18万立方米。

HZES3000 Enterprise Energy Management System adopts automation technology, networks communication technology, real-time database technology, data analysis and predict technology to monitor and control the production, transmission, distribution and consumption of the energy mediums like electricity, water, gas, heat, wind, oil, etc. With the help of intelligent data network, HZES3000 obtained the parameters, information and energy data during production process, so as to implement the dynamic monitoring and management, perform energy efficiency analysis and evaluation, and further make the optimal dispatching plan. According to data collected by HZES3000, a total of water 15,900m³, monthly average 1,300m³; electric power 15,500 kWh, monthly average 1,295 kWh and natural gas 21,623m³, monthly average 1,800m³ were used in 2016, which were all lower than the previous.

建立能源管理系统, 实时进行能效分析与评价, 制定能源优化调度策略和方案, 实现了管控一体化, 消除生产、管理、控制过程中的信息孤岛, 提高资源利用率、降低生产成本。

The energy management system is established to perform energy efficiency analysis and evaluation in a real-time manner, develop optimized energy dispatching policies and plans to achieve the unified management and control, eliminate the information islands during production, management, and control, make full use of the resources, reduce waste and reduce production costs.

建立能源管理体系的目的是完善能源信息的采集、存储、管理并获得第一手运行工艺数据, 实时掌握系统运行情况、及时采取调度措施, 使系统以最佳状态运行, 并将事故影响最小化。



This system aims to improve the acquisition, storage, and management of energy information, and with the use of optimized energy information acquisition system, it will be easy to get first-hand operation and process data, monitor the real-time operation conditions of the system, and take dispatching measures in a timely manner, so as to ensure that the system can operate under optimal conditions and minimize the impact of accidents.

建立能源管理体系有利于推进国家能源方面法律法规、政策、标准和其他要求的实施；也有利于将企业现有的能源管理制度与现行能源法律法规政策、能源标准有机结合，进而形成规范合理的一体化推进体系。使公司能够强化能源科学管理，降低能耗和提高能源利用率，实现节能减排目标承诺。

It helps promote the implementation of China's energy related laws, regulations, policies, standards, and other requirements. The established energy management system standards can effectively and organically combine the existing energy management system of the enterprises with the energy related laws and regulations, incentive policies for energy saving, energy standards, such as energy efficiency standards, energy consumption limits, measurement and monitoring standards, as well as other energy management requirements, so as to form a normalized and reasonable system for all-round improvements. This system allows the organization to properly enhance the energy management and reduce energy consumption and improve energy use efficiency, which help the organization to save energy and reduce emissions.

建立能源管理体系有利于组织能将节能工作落到实处。由于传统的能源管理方式只解决了“谁来做、做什么”的问题，而“如何做”、“做到什么程度”则主要由执行者凭个人的经验甚至意愿来决定，导致有些节能工作达不到预期效果。通过系统地建立一套科学合理的能源管理体系来约束工作中的随意性，可有效提高节能工作整体效果和效率。

This system also helps the organization to implement the measures for energy saving. This is due to the fact that the traditional energy management mode only defines “who to do it and what to do”, whereas “how to do” and “to what extent” will be determined by the personal experience or even the will of the performer. As a result, some energy saving measures cannot achieve the desired results. By establishing a set of scientific, reasonable, and operable energy management system, the procedure for taking energy saving measures will be well controlled, which will improve the overall effectiveness and efficiency of energy saving measures.

建立能源管理体有利于及时发现能源管理工作中的问题，同时为建立和完善高效率的能源管理组织结构提供了保障。通过挖掘节能潜力以及发现节能管理工作中的问题，来促使企业持续改进、不断降低能源消耗、从而实现企业节能减排目标。

This system helps to clearly identify the responsibilities for energy management and find any problems about the division of responsibilities in time, and provides guarantee for establishing and improving the organizational structure of energy management that is interrelated, mutual restrictive, and promotes each other. By identifying the potential for energy saving and problems during the energy saving management, and with continuous improvements and reduction of energy consumption, this system will ensure that energy related policies and goals of the organization can be fulfilled.

5) 分布式太阳能光伏发电项目

Distributed solar photovoltaic power generation project in HNAC



该项目投运时间为2015年7月，2016年度总发电量为417,359.25 kWh，日平均发电量1,270.5kWh。共节省标准煤162,770kg，减排CO₂ 459,095kg、SO₂ 3,756kg、NO_x 1,836kg、粉尘939kg。

This project was put into operation in July 2015. The total power generation in 2016 is 417,359.25 kWh, daily average power generation 1,270.5kWh, saving a total of 162,770 kg standard coal and reducing the emissions of 459,095 kg CO₂, 3,756 kg SO₂, 1,836kg NO_x, and 939kg dust.



开发太阳能资源是寻求可持续发展时代背景下的大势所趋，世界各国都在加紧制定能源替代战略，以求得在日后的发展中占得先机。而不断恶化的环境状况也向我国社会发展敲响了警钟，转变经济发展方式也日益迫切。提高可再生能源利用率，尤其发展清洁能源是改善环境现状的有效途径。

The development of solar energy resources is to seek a sustainable development in the context of the trend of the times. The world is stepping up efforts to develop energy alternative strategy, in order to achieve the future development. And deteriorating environmental conditions have also sounded the alarm to the development of our society, change the mode of economic development is also increasingly urgent. Increasing the utilization of renewable energy, especially the development of clean energy is an effective way to improve the environmental status.

光伏发电相较于燃煤发电有着无与伦比的优势。大力发展太阳能发电，减少对矿物质能源的依赖，将有力推动建设环境和谐社会进程。

Photovoltaic power generation has an unparalleled advantage over coal-fired power generation. The vigorous development of solar power will reduce dependence on mineral energy, thus effectively promote the construction of a harmonious society environment.

环境管理体系的建立运行，使各级人员认识到环保事业无小事，也他们认识到这是一项功在当代、利在千秋的光荣事业。我们也相信在该体系的规范指导下，我们公司的环保工作将会百尺竿头更进一步，回报给广大人民一个更加美丽的中国！

By implementing the environment management system, the employees at all levels will have more clear understanding of the environment protection and shoulder more responsibilities in environmental protection so as to achieve the environmental performance goals and make improvements year by year.

四、反馈与评价Feedback and evaluation

1) 废水（生活污水）的排放，通过广州广电计量检测股份有限公司的监测达到《污水综合排放标准》和《污水排入城镇下水道水质标准》要求。

The discharged wastewater (domestic sewage) meets the requirement of relative standards, which is



supervised by Guangzhou Guangdong Metering and Inspection Co., Ltd.

2) 废气通过通风，隔离达到要求。

The exhaust gas meets with requirement through ventilation and isolation.

3) 噪声通过合理布置各种设备，加隔音板，戴防声耳罩，并对高噪声源有针对性地采取措施，实现了厂界达标，确保各项目噪声影响满足相关要求。通过长沙市疾病预防控制中心的监测，达到了排放指标。

Through the reasonable location of each equipment, adding acoustic panel and wearing noise-proof earflap, and the measures on high noise source, the noise level within the factory has reached the standard. The discharge index is reached through the monitoring of Changsha Center for Disease Control and Prevention.

4) 固体废弃物：分为一般固废和危险废弃物。一般固废由废品公司回收综合利用。危险废弃物送有资质的单位处置。按法律法规和相关要求进行控制。

Solid waste: general solid wastes and dangerous solid wastes. The general solid wastes are recycled by the waste company for integrated utilization. The dangerous solid wastes will send to special unit with qualification for disposition.



人权绩效 Social Performance

2016年作为上市后的第一年，为适应企业的专业化和多元化发展，在人才队伍提升和建设上，相比往年投入了更多的人力物力和精力。

The year of 2016 is the first year after the listing of HNAC. In order to adapt to the professional and diversified development of enterprises, we have invested more man power, material resources and energy in improving our team than previous years.

一、员工保障 Security for Staff

2016年平均员工数738人，年度平均员工年龄34.5岁，干部平均年龄40岁。员工持有各类个人技术资质证书覆盖率82%。员工离职率: 14.31%，员工队伍总体相对趋于稳定*¹。薪酬增长幅度近12%，高于国内平均水平*²。

In 2016, we have an average number of 738 employees. The average age of them is 34.5-year-old, and for management team, the average age is 40. More than 82% of the employees have the technical certificates. The demission rate is 14.31%, which is relatively stable*¹. The salary growth rate is 12%, higher than domestic level.*².

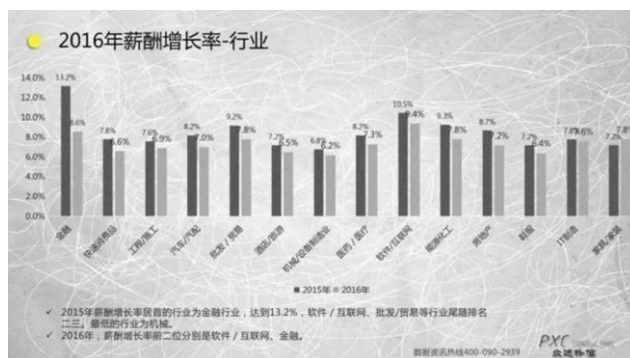
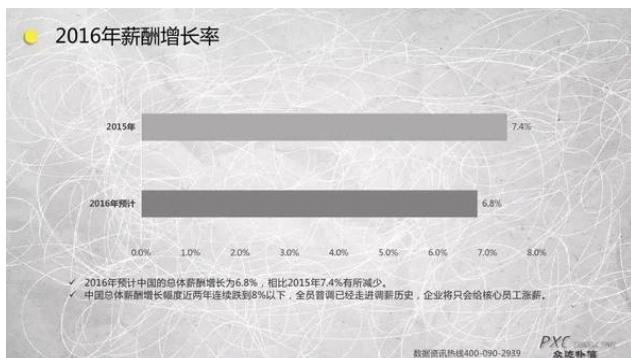
*¹ 【<http://finance.sina.com.cn/roll/2016-12-16/doc-ifxytkcf7816614.shtml>新浪财经】、《2017离职与调薪调研报告》（前程无忧）2016年度中国企业员工平均离职率上升至20%。

【<http://finance.sina.com.cn/roll/2016-12-16/doc-ifxytkcf7816614.shtml>新浪财经】、《Survey on Demission and Salary Adjustment 2017》(51job) The average demission rate of Chinese enterprise rising to 20% in 2016



*² 【<https://wenku.baidu.com/view/c4d437dbac51f01dc281e53a580216fc700a53e5.html> 2016年度中国薪酬白皮书】大数据：2016年中国总体薪酬增长6.8%。

【<https://wenku.baidu.com/view/c4d437dbac51f01dc281e53a580216fc700a53e5.html> 2016 China Salary White Paper】Big data: In 2017, China salary growth is 6.8%



二、员工关爱 Staff care

通过定期的总经理与新员工座谈交流会、董事长就公司发展趋势与全员交流等，拉近高层与基层员工的距离，让员工亲近企业发展、了解战略动态。

通过人力资源部的各种形式的交流，如新人迎新会、聚餐、户外拓展、个人谈话等，走进员工的内心世界，与员工成为朋友和伙伴，并帮助他们解决工作发展上的各种困扰和问题，共同成长。

通过群团组织的各项企业文化建设活动、春节员工家属走访慰问等，丰富员工业余生活、关注员工生活状态。

Through the regular discussion and exchange meeting between new staff and executives, the employees have a better understanding of the development of enterprises, and the strategic dynamics.

HR also arranged various forms of communication, such as newcomers' party, dinner, outdoor extending activities and personal conversation, to create a friendly environment and help our employees solve the problems during the work so as to make common progress.

The corporate mass organization has organized the corporate culture construction activities, family visits during Spring Festivals to enrich the staff amateur life and also caring about the lives of employees.





三、员工培训 Staff training

为做好人才储备和梯队建设，2016年度举行了较大规模的全国校园招聘活动，录取到来自全国各地高校的电气及理工类应届毕业生40余名，并举办了“卓越人才培班”，分五个不同阶段，以循序渐进的方式规划军训、课程培训、各部轮岗/项目现场实践等环节，并在各阶段配备专业导师，辅导与指导新人尽快走进并胜任岗位。截止至2016年底留用率达75%，且100%顺利到达目标岗位。

In order to do a good job of talent pool and talents team construction, we held a large-scale national campus recruitment activities in 2016, which have attracted thousands of students have employed more than 40 graduates of electrical and science and engineering. We also well planned and held the "Outstanding Talent Training Program" to assist and guide our new employees better adapt to working environment and the new post. As of the end of 2016, the retention rate has reached 75%, and 100% new employees successfully reach the target position.





四、员工发展Staff development

2016年底，为适应公司发展的需要，提高管理层工作主动性与协作性，促进任职干部任职承诺和管理目标的实现，推行干部“竞聘上岗”、“能上能下”的风气，公司进行了管理层换届聘任工作（任期2017.1.1-2018.12.31）。

为了让有能力、有责任的人才有更多机会和平台，本次换届重点鼓励员工申请新设或自创岗位（包括建议机构调整后的新岗位）。通过换届及组织机构的再造，重新唤起了管理干部的创业激情，提高了管理层工作主动性与协作性，并成功吸引与选拔到了有能力、有责任的人才进入到公司管理团队中。

At the end of 2016, in order to meet the needs of company development and improve the management initiative and cooperation, we have proposed the "competition for posts" to select our management team. And we have carried out the recruitment of management level (service term 01/01/2017-31/12/2018).

In order to provide more opportunities and platforms to who have the responsibility and abilities, we encouraged employees to propose and apply for new or self-created posts. Through the general election and organization reconstruction, we have re-evoked the entrepreneurial passion of management cadres, improved the management of the initiative and collaboration, and successfully attracted and selected the competent and responsible personnel into the company management team.

五、员工反馈Staff feedback

围绕“公司发展、个人发展”两大主题，2016年底，我们以“企业发展”、“工作氛围”、“个人薪酬与发展”、“本部及个人工作目标”四项指标，进行全员认知度/满意度测评。通过宣传与发动，我们使用OA协同、纸质投票形式，共收到来自24个部门528份有效问卷的反馈，调查覆盖率达全员的67%。

Around the topic of "Company Development, Personal Development", we had a full awareness Degree / satisfaction evaluation focus on four indexes "Corporate Development", "Work Atmosphere", "Personal Emolument and Development" and "Dept. and personal work objectives". Through OA and paper voting form, we have received a total of 248 effective questionnaire feedbacks from 24 departments, covering 67% of the employees.

1、关于企业发展：

1)、数据：

公司发展前景：34%的员工选择很有信心，47%的员工选择有信心，18%不确定，1%选择没有信心。

归属及认同感：28%的员工选择非常有归属及认同感，60%的员工选择基本有，8%不确定，4%选择没有。

2) 分析：

80%的投票员工对公司发展充满信心，88%的投票员工对公司有归属感及认同感。员工士气高、有斗志，看好公司发展前景并大部分愿意共同发展。管理过程中更需要通过丰富多元的激励措施、发展机会二次激活大家的激情与动力，助推公司发展再向新高。

1. Corporate development

1) Data

Development prospect: 34% very confident; 47% confident; 18% not sure; 1% no confidence.

Sense of belonging & identity: 28% strong sense; 60% basic sense; 8% not sure; 4% no sense.

2) Analysis

80% voted employees is very confident for corporate development and 88% has a sense of belonging and identity of the company. The employees have high morale and strong will. They are optimistic about the company's development prospects and planned to strive for the common development. We will arrange abundant incentive methods and development opportunities to reactivate their passion and impetus, thus to promote the development of the company.

2. Work atmosphere

1) Data

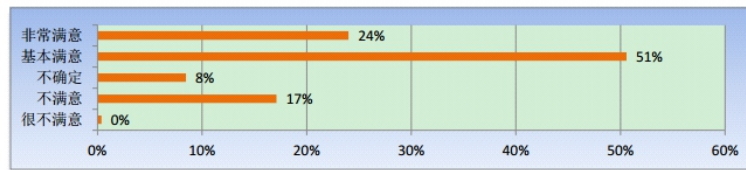
Executive force: 63% satisfied; 37% not sure or unsatisfied

Communication: within department 75% satisfied, 25% not sure or dissatisfied; between departments 59% satisfied, 41% not sure or dissatisfied.

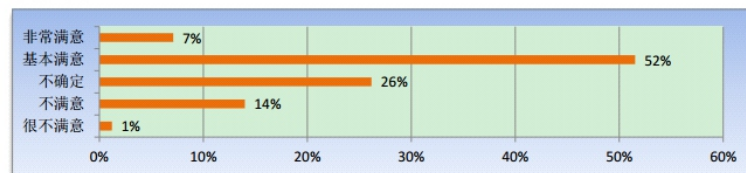
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※ 沟通：

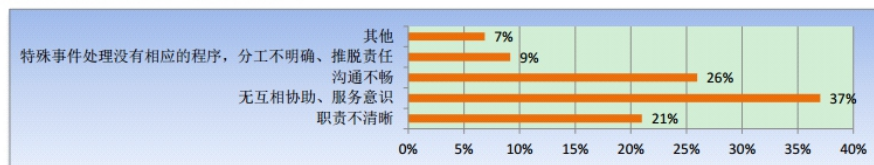
部门内沟通：共522人作答，75%选择基本满意及以上，25%不确定或不满意。



跨部门沟通：共493人作答，59%选择满意，41%不确定或不满意。



※ 跨部门协作不畅原因（524人作答）：



Leader sense of service: 11% very satisfied; 66% satisfied; 15% not sure; 7% dissatisfied; 1% very dissatisfied.

2) Analysis

在管理层推行岗位目标承诺考核机制中，对干部有一项“首问负责制”，要求对公司任意员工报请需解决的问题，只要有部分属本人管辖范围内工作，实行“首问负责制”，全面负责落实解决问题，并及时反馈。全不属本人管辖范围内工作，告知明确的移转理由并指明如何解决。以提出人得到本人的落实结果回复及时或对告知移转理由清楚了，并结合公司各高层领导主观考评为考核依据。从调查结果来看，效果还需进一步提高，各管理干部需进一步提高行动力和落实及解决问题的能力。

In the assessment mechanism of job target commitment, there is an item called “First inquiry accountability” .

It is required that for any problem proposed by the staff, is there is any part within limits of management, the first inquired manager should be in charge of solving the problem and give feedback. If it is not in the first inquired management range, it should be clearly show the reason of transferring the problem and indicated how to solve this. Seeing from the questionnaire, the effect of the first inquiry accountability should be improved. And the management team should further improve the ability of implementation and the ability of solving problem.

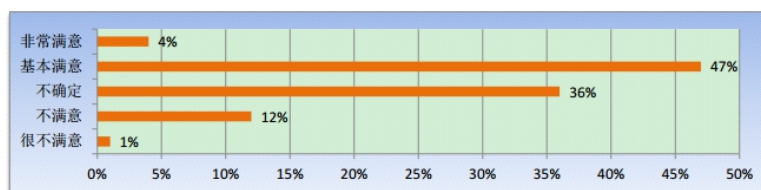
3. Personal Emolument and Development

1) Data

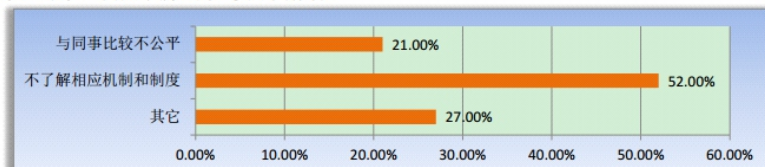
For personal emolument, 44% of voted staff is satisfied (27% not sure, 26% dissatisfied and 3% very dissatisfied). For occupational promotion and development, 51% of voted staff is satisfied (36% not sure, 12% dissatisfied and 1% very dissatisfied). The main reason of above dissatisfy is that 52% voted staff not understand the mechanism and system; 21% selected not fair comparing with other staff; 27% selected other reasons.

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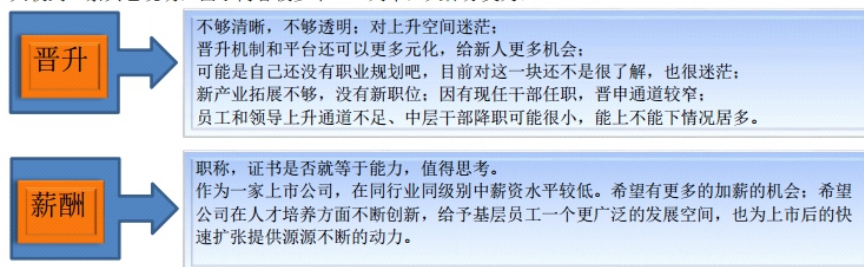
※ **晋升和发展**:共517人作答，51%选择满意，49%选择不确定或不满意。



※ 324位员工就以上两点不满意的主要原因作答：



共收到43条其它说明，由于内容较多不一列举，大体分类为：



2) Analysis

薪酬与发展，是员工工作激情与动力的来源。52%的员工对公司现有薪酬、晋升机制不够了解，人力资源部需要通过多平台、多渠道来宣贯和普及，同时用人部门经理也应起到宣贯和普及的桥梁作用。照本宣科、会议念读无法将制度真正送入员工心里，人力资源部和各管理层均需认真思考创新宣贯方法，在学习中增加员工代入感、提高参与感，让员工乐于了解、接受并积极参与互动。



Emolument and personal development are the passion of works and source of power. About 52% voted staff is not clear about the current salary and promotion mechanism. So that HR should popularize it through multiple platforms and channels. At the same time, the directors of each department should also take part in this.

4. Dept. and personal work objectives

1) Data

97% voted staff clearly understand the work objectives; 37% voted staff has opportunities to freely communicate with leaders.

2) Analysis

Staff: clear about work objectives, but not very clear about the annual objectives of the dept. There is a might of limitation of thoughts or thinking rigidity

Management team: the annual objectives of the dept. should be promoted and implemented through various channels, so as to increase the sense of participation and mission of the staff.



经济绩效和未来愿景 Economic Performance & Future Vision

一、管理方法 Management policy

1、目标和绩效 Purpose and performance

华自科技以“连续多年国内中小水电自控领域市场占有率第一的地位，在经营过程中讲信用、守承诺、公开透明，在不损害社会利益的前提下追求公司价值最大化；从长远发展的角度思考和讨论问题，寻求互惠互利的合作方案，保持与客户、员工和合作伙伴诚实互信的关系；以“坦诚、务实、合作、进取”的企业精神和“以质取信、以信取胜”的企业理念，立足于水电、水利、电力三大现有主业优势，积极拓展军工、智能制造、轨道交通、环保水处理等行业领域，加强国际市场的延深拓展，让华自科技成为具有高度社会责任感、较强国内、外竞争力的环保能源智能控制及运营服务整体方案解决提供商。

HNAC continuous occupy a highest position in the domestic small and medium hydropower automatic supervision industry market for many years, we pay attention to credit, keep promise, open and transparent in the process of operation, and pursue the maximization of the value of the company without damaging the social benefits; Consider and discuss problems from a long-term perspective, seek mutually beneficial cooperation programs, and maintain honest, mutual trust with customers, employees and partners; Under the guidelines of “Frankness, Practicality, Cooperation and Enterprising”, and following the enterprise philosophy that “Win the trust by quality and gain the contract by the trust”, based on three existing main advantages of hydropower, water conservancy and electric power, actively expand the military industry, intelligent manufacturing, rail transportation, environmental protection and water treatment industries, strengthen the international market deepening development, HNAC has become a high degree of social responsibility, a strong domestic and international competitiveness of the environmental protection energy intelligent control and service provider operations.

2、政策和规定 Policy and regulation

华自科技通过优化配置资源，不断提升企业价值，增强主营业务及相关拓展业务优势，争取核心产品在国内市场的话语权，积极拓展国际市场。在保持管理体系的基础上，不断完善企业内控体系，实现风险管理、控制决策和运营风险的全面防控，推进精准管理，优化业务流程，降低运营成本。

By optimizing the allocation of resources, HNAC constantly enhances the enterprise value. For example, HNAC is going to strengthen the main business and related development business advantages, seeks the right of the core products in the domestic market, and actively expands the international market. Moreover, on the basis of maintaining the management system, HNAC also keeps improving the internal control system, such as to realize the comprehensive control of risk management, to do the prevention of decision control and operation risk, to promote accurate management system, and to optimize business process and reduce operating costs.

华自科技按全球契约组织和可持续发展管理体系的要求，不断丰富三大管理体系内涵，截止2016年度，在质量、环境、职业



健康安全等方面的管理体系得到了进一步的提升。

According to the requirement of Global Compact and sustainable development management system, HNAC is constantly enriching the three main management systems. By the end of 2016, HNAC's management system of quality, environment, occupational health and security has been further improved.

同时，华自科技高度重视利益相关方的管理，综合运用全面风险管理的方法，对公司的各种风险进行系统的识别和评估，采取有效控制措施，避免或降低各种风险的影响。公司董事会办公室负责与投资者的沟通，通过相关网站、年报等方式，建立与利益相关方的沟通渠道，及时通报或披露利益相关方关注的信息。

At the same time, HNAC pays high attention to the management of stakeholders or interested party and use the method of comprehensive risk management. To systematically identify and evaluate the various risks of the company, HNAC takes effective control measures to avoid or reduce the impact of various risks. In addition, the board of directors of company is responsible for the communication with investors and establishing of communication channels with interested party through related websites, annual reports, etc. And then timely do notification or disclosure of information with interested party.

3、组织和责任 Organization and responsibility

公司董事会负责年度经营目标的制定、分解、下达，管理。行政中心负责职能管理体系的发布与落实，并将决策和管理职能通过《岗位任职目标承诺书》形式落实到各个职能部门；财务中心对公司全年预算进行统筹、规划与考核；对销售、研发、技术、生产、售后考核均有量化的指标，定期考核，形成有效的管理闭环。

The company's board of directors is responsible for formulation, decomposition, release and management of the annual business objectives. The administrative department of HNAC is responsible for the functions of the management system of the issued and implemented, and the decision-making and management functions through "the post goal commitment" to implement each functional department; The financial center will overall plan and evaluate for the whole the company annual budget. To do the regular assessment for the sales, research and development, technology, production, after-sales evaluation with quantified target, which can form effective chain of management process.

为确保各项指标的顺利达成，华自科技已建立起了一套完整的绩效考核和监督管理体系，通过自评、他评等多种手段，不断提高绩效管理、风控管理和监督管理机制的准确性、及时性、科学性和有效性，为企业的可持续发展保驾护航。

In order to ensure the successful conclusion of various indicators, HNAC has established a complete set of performance appraisal and supervision and management system. To achieve the sustainable development of enterprise, HNAC has improved its performance management and the accuracy, timeliness, scientificity and effectiveness of risk control management and supervision through the self-assessment or other assessments.

企业信息化建设是提高企业经济效益和核心竞争力的重要手段。2016年，华自科技进一步推进信息化的深入建设，开始试运行手机OA、网上报帐等即时信息化系统，更好的提升工作效率，支撑生产经营工作的开展。

Enterprise informatization construction is an important method to improve the economic benefit and core competitiveness of enterprise. In 2016, to further promote the deepening of informatization construction, HNAC



has been experimenting with information software such as OA in mobile version and online reimbursement system, which can improve work efficiency or production and operation.

公司在沟通过程中，充分体现股东、管理者和员工三者权利，体现员工是企业的重要组成部分，建立了职工代表大会制度，不定期召开职工代表大会，听取和反映员工的意见、要求和建议，参与行政制订有关方案，对有关问题进行审议，提出对某些问题调查研究的报告。

In the course of the communication, HNAC sufficiently empower the shareholder, the managing personnel and the staff. To guarantee the right of the staff, HNAC builds the system of workers and staff congress, and hold the non-scheduled meeting of workers and staff to listen to their voice, and then involve their advice, requirements and suggestions into the administrative system, or review relevant problems.

4、培训和学习 Training

华自科技现已建立规模的可持续发展的培训和学习机制，精心策划全方位的可持续发展周期性系列培训，从公司的发展战略、业务发展需要、员工的基本情况以及职业发展等方面出发，识别员工的培训需求，每年制定详实的培训计划、建立机制、投入资金、开展多种形式的培训，并通过包括各种会议、内部信息网络、内刊、公众平台等多种形式进行各层次间的沟通。各相关职能部门在公司年度培训基础上，结合各自部门实际制定内部培训计划并组织实施，针对性的提升员工的业务素质和工作技能，保障公司整体战略和目标的有效实现。

HNAC has already established the sustainable training system which well planned the overall periodic and systematic training for all staff. Starting from the company's development strategy, business development needs, the staff of the basic situation, and career development, identification of staff training needs, a year to develop a detailed training plan, establish mechanisms, investment funds, carry out various forms of training, which is included various meetings, internal information network, publications, public platform for communication between different levels. On the relevant functional departments in company annual training combined with their respective departments practical development of internal training plan and organize the implementation, to improve staff professional quality and work skills, security and target of the company's overall strategy and effective implementation

2011—2016年间，华自科技承办了6期科技部中小水电援外技术国际培训班，参与学习与交流的外籍代表近200名，促进彼此了解之时将中国优秀的技术推广至国外，提升中国水利水电事业在国际上的话语权。同时，作为中国水利发电协会指定的培训单位，我们已为全国2000多名水利水电方面的工作人员提供了培训，现已形成了较为完善的国内自控技术培训体系。

During 2011 to 2016, HNAC has undertaken 6 periods international training workshop sponsored by the Ministry of Science and Technology, which has already had more than 200 foreign delegates attended it by now. Through the communication in the workshop, the advanced technology in China has been promoted to the foreign countries and the voice from China in the hydropower and the hydroelectric industry are listened worldwide. Meanwhile, as the pointed training organization of the Chinese Association of Hydroelectric Power, HNAC had provided training for more than 2,000 personnel in this industry, and now the national training system for the automatic technology is completed.



同时，公司也通过内部网、电子刊物等宣传全球契约和可持续发展的意义和基本要求，大家共同研讨和解读全球契约和可持续发展工作的要求。

At the same time, HNAC uses OA system and the electronic publications to broadcast the Global Compact and the meaning of the sustainable development, so that everyone can study and discuss the requirements on the Global Compact and the sustainable development together.

二、表现指标 Performance indicator

1、创造的直接价值 Direct value created

华自科技近三年业绩呈稳步上升趋势，除传统业务市场份额不断攀升，经营战略所瞄准的目标领域业绩也不断增长，在中小水电自控领域细分市场领域依旧保持全国领先地位。公司主营业务持续增长表明公司的发展情况良好，产品和服务市场竞争力强，预示着公司主营业务的发展潜力较强、市场前景广阔。

The last three years performance of HNAC showed a trend of steadily rising. Not only the traditional business market share is rising but also the performance of target domain is growing. In the field of small and medium-sized hydropower control segment field, HNAC remains the country's leading position. Due to the continuous growth of the company's main business and the competitiveness of the product and service market is improved, it indicates that the company's main business has a strong development potential and the market prospect is broad.

主营领域的四大产品水利水电自控系统，变配电保护及自动化系统，水处理及工业控制自动化系统，信息化服务、PLM、应用软件产品较之2016年均不同幅度的增长，在业界树立了中国自控领域的品牌形象，公司近3年的营业收入情况如下：

The main business fields in water resources and hydropower automatic control system, variable power distribution protection and automation system, water treatment and industrial automation control system, information service, PLM, and application software products that all have been increased or enlarged compared with year of 2016. The company's sales revenue for nearly three years as follows:

指标名称/年份 Indicator/year	2014	2015	2016
营业收入（元） The sales revenue (RMB YUAN)	356,900,000	41,932,000	51,523,000

2、经营成本 Operating cost

华自科技以全面预算管理为抓手，强化成本预算刚性执行理念，继续推行精细化管理。采取的主要措施包括：

HNAC takes the comprehensive budget management as the premise, to strengthen the rigid execution idea of cost budget and continue to carry out the refined management. The main measures include:

(1) 继续做好原材料、办公用品及各类物资的采购成本控制工作；

We will continue to control the purchasing cost of raw materials, office supplies and other materials.

(2) 继续推进销售成本费用控制；



We will continue to control the cost of sales.

(3) 严格控制行政类经费，加强相关办公用品及纸张的重复利用率；

We will continue to strictly control the administrative funds and strengthen the reusing of related office supplies and print paper.

(4) 绿色经营理念贯穿生产与生活之中：作为市“两型”企业，生产过程低能耗、低污染；生产设备智能化；照明灯具、洁具均采用节能型产品。

We will run the green business philosophy throughout production and life. For example, to ensure the production process with low energy consumption and low pollution, to use the intelligent production equipment, and to use energy efficient products of lighting fixtures and sanitary fittings.

3、员工的工资和福利 Salary and welfare of staff

华自科技严格按照国家法律、法规要求和相关的政策规划，结合行业和企业实际，建立合理的工资和福利制度，维护员工根据利益：

HNAC has established a reasonable salary and welfare system to guarantee the fundamental interests of staff strictly accordance with national laws, regulations and related policy planning, combining the reality of industries and enterprises

(1)公司在获得良好经济效益的同时，努力改善广大员工的工资和福利待遇，提高员工对企业的认同感，增强企业的凝聚力；

We have gained good economic benefits, at the same time we keep improving the salary and benefits of our staff. This made our staff heartily acknowledge and trust us and strengthened company coherence.

(2)公司依法为员工建立各种社会保险、涵盖养老、医疗、工伤、生育、失业保险以及住房公积金等项目，确保员工的合法权益；

HNAC provides staff with various social insurance, which covers endowment insurance, medical insurance, employment injury insurance, maternity insurance, unemployment insurance and housing funds, etc. to ensure their legal interest.

(3)除上述各项社会保险外，公司还为车间相关人员、驾驶员及驻外人员购置额外保险。

Besides above social insurances, HNAC offered the workers, drivers and overseas officials with extra insurance.

4、向政府的支出 Government spending

2016，公司向政府缴纳税收总额为4588万元；公司近3年缴税情况如下：

In 2016, HNAC has the total spending of taxes to the government is CNY45.88 million. The taxes spending in the last three years as following:

指标名称/年份 Indicator/year	2014	2015	2016
纳税总额（元） Total tax (RMB YUAN)	35,620,000	43,170,000	45,880,000



5、社会投资和投入 Social investment and input

华自科技积极承担社会责任，支持社会投资事业，积极从事社会投资、慈善和公益事业，以实际行动回馈社会环境。

HNAC played an active role in undertaking social responsibilities, social investment, charity and social and public welfare undertakings.

除对建设的华自希望小学每年提供必要的资助和扶助时，更不忘其它社会各项事业的积极参与，如员工个人投入到社会慈善事业中，捐助山区孩子的学业和生活。

Besides our donation and support teaching for HNAC Hope Primary School each year, our staff also engaged in all kinds of social charities to support the study and living of mountainous children.

6、政府给予的重大资金与政府扶持 Financial support and government support from government

2015年，“非有效接地电网故障的安全防护与自愈控制智能化技术及成套装备”项目获中国电工技术学会科学技术奖三等奖；“中小型水电站完全无人值班运行模式技术研究及应用”项目获湖南省科技进步三等奖。还有以下荣誉及奖项与大家分享：

In 2015, the project of “the safety protection and the self-healing control intelligence technology and complete equipment of the non-effective grounding power network fault” has won the third prize in the science and technology award of China electrical technology association. In addition, the project of “the unattended small and medium-sized hydropower station operational mode technology research and application” has won the third prize of science and technology progress in Hunan province. The other honors and awards are shared as following:

(1) “水利水电在线监控服务与运维平台”获批省信息产业和信息化专项；

The “water conservancy and hydropower online monitoring service and operation platform” has been approved as major project by provincial information industry and informatization organization.

(2) “航空发动机叶间隙在线监测控制系统”获省级产学研结合（长株潭国家自主创新示范区）专项；

The “Online monitoring and control system of blade gap of aero-engine” has been approved as major project by the combination of provincial-level production and research organization (ChangZhuTan national independent innovation demonstration zone).

(3) “基于IPV6的水利水电在线监控服务与运维平台”被列入省2016年度“+互联网”重点项目名录；

The “online monitoring service and operational platform of water conservancy and hydropower based on IPV6” has been listed on the “+ Internet” priority list of 2016.

(4) 通过水利建设市场主体施工信用评价AA级施工单位；

Obtain the construction unit with AA construction credit of the main body of water conservancy construction market

(5) HZOP3000P光伏发电优化运行系统、环境与设备监控系统、高、低压开关柜、微机保护测控装置等8项产品被纳入长沙市两型产品目录，根据长政办函[2015]99号文件精神，结合采购项目点，对价格、技术和商务项分别给予总分值4%--8%不等的加分，工程采购类项目给予1—3分的加分，综合运用10%价格扣除等优惠措施优先采购两型产品。

The HZOP3000P photovoltaic power generation optimize operation system, environment and equipment monitoring system, high/low voltage switchgear cabinet, digital protection and monitor device, and other 8



products to be included in the product catalogue of Changsha city. According to the [2015]99 document authorized by Changsha government, the government gives a score of 4%-8% on price, technology and business items, 1-3 bonus points for project procurement projects, 10% price deduction, and preferential procurement and other preferential policies.

8、当地供应商和采购政策 Local supplier and purchasing policy

华自科技积极响应上级主管部门的采购配套政策，确定本土化采购可成为保障供应、稳定当地经济的一项策略，与当地供应商建立长期可持续性战略合作，带动相关业务的供应链健康发展。除本土化外，公司也走出去，与世界级优秀厂商建立合作关系，以确保某些指定产品质量，如ABB、施耐德、西门子等。

To positively respond to the purchase supporting policy of the higher authorities, HNAC confirms that the local purchasing is a policy that can well guarantee the supply and stabilize the local economy; therefore, we have established the long-term sustainable strategic cooperation with the local supplier to drive the development of the related supplying chain. In the meanwhile, HNAC has cooperated with the well-known international manufacturers to ensure the product quality, such as ABB, Schneider, Siemens and so on.

2013年，本公司牵头组建长沙市智能电力设备产业技术创新战略联盟，现有一、二次设备生产厂家、高校、科研院所等30余家成员单位，联盟内成员单位正在逐步实现“一站式”绿色采购，打造智能电力设备产业的集成式发展，争取打造长沙又一个千亿产业集群。2016年，该联盟吸收了省内几家设计院的加入，并积极申请省级联盟，为湖南省的电力产业协同创新发展共同努力。同年，联盟的平台公司湖南能创国际工程有限公司成立。

In 2013, HNAC took the leadership in the foundation of Changsha Technology Innovation Strategic Alliance of Smart Power Equipments Industry, and the alliance has more than 30 members units such as primary, secondary equipment manufacturers, universities, research institutes, etc. The members of Alliance are gradually achieved "one-stop" Green procurement, building integrated development of smart power equipment industry and seek to build a multi-billion industry cluster in Changsha. In 2016, this Alliance has absorbed several provincial design institutes to join the team and actively to do the applying to be the provincial alliance, which has positive influence for collaborative innovation and development of electric power industry in Hunan province.

8、重大间接经济影响 Significant indirect economic impact

华自科技重视科研工作开发，建有省级企业技术中心，是省水利水电自动化控制工程技术研究中心的组建单位，2012年，获批省院士专家工作站，现有进站院士2名，在近三年的工作评选中，均获评优秀工作站。自2013年以来，年科研经费营业收入的比例达6%以上，2016年投入的研发费用为3319万元，占营业收入比例的6.44%。2016年，本公司执笔的水轮机调节系统设计与应用导则、无人值班小型水电站安全运行规范、无人值班小型水电站监控技术规划等3项行业标准发布并实施。

HNAC paid a special attention to the scientific research and development. We have the provincial enterprise technical centers, which is the formation unit of provincial water conservancy and hydropower automation control engineering technology research center. In order to ensure the gradual growth in R & D, breaking the bottleneck related technology research and development. In 2012, HNAC was approved provincial academicians and experts' workstations in measurement and controlling field and there are two existing two academicians in workstations,



besides, in recently three years annual Award, we were honored as outstanding workstation. Since 2013, the annual research expenditure has proportion to total sales revenue more than 6%. In 2016, the research and development cost is CNY33.19 million and achieved 6.44% of operating income ratio in this year. In the same year, the three industry standards that prepared by HNAC are issued and implemented, and they are design and application of hydraulic turbine governing system, unattended small hydropower station safety operation specification, and unattended small hydropower station monitoring technology planning.

截止2016年底，公司共授权专利138项，其中发明专利11项；当年提交国知局并受理的专利27项，其中发明专利21项；拥有软件著作权55项，科研成果转换成生产力，产生了较好的社会和经济效益。

By the end of 2016, HNAC has 138 patents, in which 11 are patents for innovation; in this year HNAC submitted to the state intellectual property office about 27 of patents, of which 21 invention patents; Now, HNAC owns totally 55 software copyrights. The scientific result was successfully transformed into the production force, generating sound social and economic benefits;

企业信息化是利用现代管理科学和信息技术建立现代信息网络系统，使企业管理活动各个环节通过信息的快捷流通和有效服务，实现资金流、物流、工作流和信息流的整合，达到企业资源的优化配置，提高企业管理的效率和水平，进而提高企业经济效益和核心竞争力的过程信息化是帮助企业提高管理水平的重要手段，2016年，公司在原有办公自动化基础上，已在试运行手机OA、网上报帐系统等信息化即时手段。

Enterprise informatization is make use of modern management science and information technology to establish the modern information network system and make the enterprise management activities of each step through information flow and effective services to implement workflow and the integration of information flow, cash flow, logistics, optimize the enterprise resource allocation and improve the efficiency and level of enterprise management and improve the core competitiveness of enterprise economic benefit and process informatization is the important way to help enterprises to improve management level. In 2016, on the basis of the original office automation, HNAC has been experimenting with information software such as OA in mobile version and online financial reporting system.

2、创造的就业机会 Employment opportunities

2016年，华自科技凭借不断优化产品品质和结构，积极争取相关政策，拓展业务发展领域，同时也创造了更多的就业机会，截止年底，拥有员工784人。

Depending on optimizing product quality and structure, HNAC actively seeks relevant policies and expand its business in 2016. Meanwhile, HNAC created more employment opportunities. By the end of 2016, we have a number of over 784 staff.

三、获奖情况 Honors and awards

1、“非有效接地电网故障的安全防护与自愈控制智能化技术及成套装备”项目获中国电工技术学会科学技术奖三等奖；

The project of “the safety protection and the self-healing control intelligence technology and complete equipment of the non-effective grounding power network fault” has won the third prize in the science and



technology award of China electrical technology association.



2、中小型水电站完全无人值班运行模式技术研究及应用”项目获湖南省科技进步三等

The project of “the unattended small and medium-sized hydropower station operational mode technology research and application” has won the third prize of science and technology progress in Hunan province.



3、通过水利建设市场主体施工信用评价AA级施工单位；

Obtained the construction unit with AA construction credit of water conservancy construction.



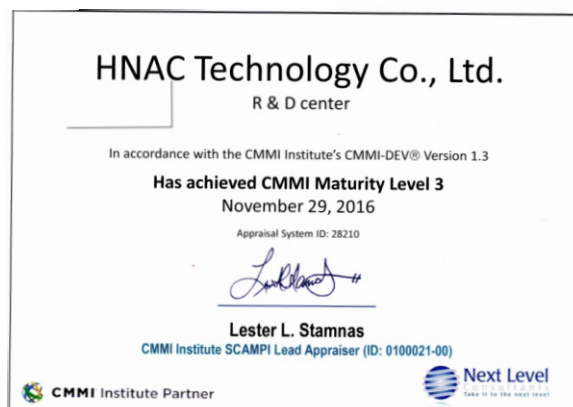
4、获信息系统集成及服务资质壹级证书。

Obtained the Grade 1 certificate of information system integration and service qualification



5、获CMMI3级证书

Obtained the CMMI Maturity Level 3 Certificate





社会绩效

Social Performance

一、承诺与制度Commitment and system

企业发展的不同阶段，所承担的社会责任也不一样。我们公司的责任就是公司经营行为的社会责任、800余员工所支撑的家庭责任以及对客户群体的服务责任。而“安全为根，重在预防；质量为本，精益求精；环保为源，和谐共创”二十四字方针是对公司所应承担责任的最好诠释。

The enterprise undertakes different social responsibility at its different stage of development. For HNAC, the responsibility we are undertaking is not only the service for existing and potential customer, but also the families of over 800 staff and our business activities to the society. Our quality, environment and occupation health and safety policy is “Based on safety and we focus on prevention; founded on quality we focus on improving; sourced from environmental protection we create harmony”. This is also an explanation of our responsibility to clients, staff and society.

二、体系与政策System and policy

为了实现我们的承诺，我公司不断完善售后服务体系，及时了解市场需求并提供优质服务，尽好对客户责任；不断完善内部管理制度，实施人性化管理，打造企业“家文化”，尽好对员工的责任；持续依法经营、诚信经营，做好环境保护、节能减排，不断降低单位产值能耗，尽好对社会的责任。

In order to realize our commitment, HNAC keeps improving our after service system and develop the new products, so as to timely understand the demands of the marketing and provide high-quality services. We are perfecting our internal management policies and carrying out human-based management to create “Family Culture” in our company and try our best to be responsible for our employees. We continue legal operation & honest operation to make better environment protection, energy conservation and emission reduction. We continue to lower the energy consumption during production process and undertake the responsibility for the society.

三、工作与成果Work and achievements

“民企联村，精准扶贫” Targeted poverty alleviation

为深入贯彻落实中央关于全力推进精准扶贫的指导要求，积极响应长沙市工商联《“民企联村精准扶贫”活动工作方案》号召，公司成立了以党总支书记黄文宝为主管领导，胡兰芳为组长的8人扶贫小组。从公益、教育、就业、产业、商贸五个方面制定了详细的帮扶方案。主动与宁乡县青山桥镇花园村（原永锋村）结成帮扶对象。

In order to fully implement the guidance of CPC on the promotion of targeted poverty alleviation, HNAC has set up an 8-people poverty alleviation group that led by Secretary of CPC General Branch Mr. Huang Wenbao and team leader Ms. Hu Lanfang. The Group has made detailed support plan covering public benefit, education, employment, industries, business and trade. We started our targeted poverty alleviation with Huayuan Village (Yongfeng

Village), Qinghshanqiao Town, Ningxiang County.

本公司结合实际，积极参与到“民企联村，精准扶贫”工作中来。2016年度，我公司对该村完成农副产品采购10余次；开展多场招聘会，提供多个就业岗位，扶贫效果显著。

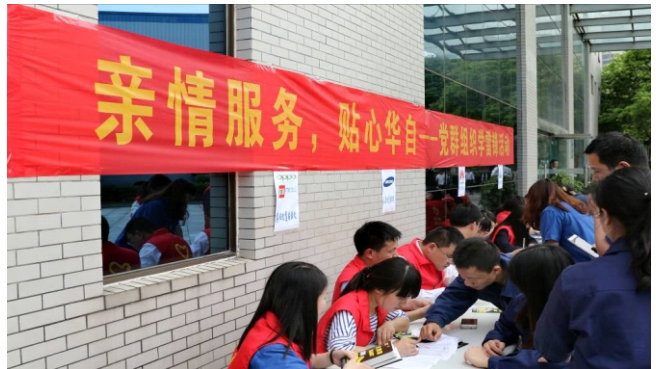
HNAC plays an active role in the target poverty alleviation combining with it practical experience. In 2016, we have purchased the subsidiary agricultural products from this village for more than 10 times. Meanwhile, several times of job fairs are held to provide more employment positions for the villagers. The efficient of poverty alleviation is remarkable.

贴下一张膜，温暖一颗心 Mobile phone screen protector film stick service

2016年4月13日，以“亲情服务，贴心华自”为主题的党群组织免费贴膜活动在华自科技股份有限公司展开。活动不仅落实了主题，也落实了“建好群众之家，当好群众之友”的组织理念，

On April 13, 2016, we provided the free screen protector film sticking service for mobile phone of our staff. The activity not only fulfills the subject of “cordial service to warm HNAC employee” but also reflects organization idea of “Build the home of the mass and become the friend of the mass” .

活动本着方便广大员工且不影响正常工作的原则，把时间安排在了用餐及午休时间，但这并没影响参与服务党群成员的服务热情。同时，为了尽可能提供满意服务，党群成员对缺货和少见的手机膜进行登记并及时补购，同时提供上门贴膜服务。在22名党群成员的努力下，三天活动共完成了324台手机的贴膜服务，员工纷纷为此点赞。



In order to provide convenience to most employees, this activity was arranged during lunch time and lunch break. At the same time, in order to try best to satisfy most employees, the organizer especially observed some stock out and rare files and bought in timely and supplied the door to door service. With hard working of 22 volunteers, a total of 324 screen protector films are been placed on the mobile phones within 3 days. Most of employees were satisfied with this activity.

本次手机免费贴膜活动用实际行动诠释了雷锋精神，也是华自科技党群活动的一个缩影。

The spirit of Lei Feng is explained in this activity and it is an epitome of more activities in HNAC.

母乳喂养周，科普大讲堂 Breast feeding week, the lecture of popularization of science

2016年8月1~7日是第24个世界母乳喂养周，为提倡母乳喂养，营造一个支持母乳喂养的良好企业氛围，华自科技联合联组

企业共同组织了母乳喂养公益讲座。

1st -7th August 2016 is the 24th World Breast Feeding Week. In order to promote the breast feeding and create a good environment for breast feeding, HNAC united with other companies in Changsha Hi-tech Industrial Zone to organize a public lecture of breast feeding.

为了宝宝的健康，职场宝妈在紧张快节奏的生活工作之余应坚持合理母乳喂养，为宝宝提供天然营养，这也有利于展现新时代女性“喂爱接力”的精神风貌。希望通过此次讲座宝妈们对母乳喂养有更加全面的认知，鼓励职场妈妈母乳喂养自家宝贝。讲座现场，培训老师通过各种形式帮助宝妈们学会更好地母乳喂养，树立母乳喂养的意识。

For the health of babies, working mothers insist on breast feeding to supply nature nutrition after hard works. HNAC organizes this lecture for working mothers to encourage them to continue this mode and helps them to establish healthy breast feeding awareness.

高温慰问“送清凉” Bring cool and refreshing to employee under high temperature

立秋时节，酷暑依旧，闷热的车间考验着每一位坚守在生产一线的职工。2016年8月17日，受公司领导委托，由公司副总经理喻江南等干部代表组成的慰问组深入生产车间，慰问坚守在生产一线的同事，送上解暑饮品，并代表公司领导致以亲切的问候。

On August 17th 2016, HNAC Deputy General Manager Mr. Yu Jiangnan led some representatives to workshop to comfort our colleagues who worked in the first production line. They brought some cold drinks to them and express our heartfelt thanks to them for their hardworking on the ordinary posts.

慰问组亲切提醒一线职工要注意防暑降温，保重身体。同时嘱托车间负责人做好安全生产工作；将防暑降温措施落到实处，为职工创造安全舒适的工作环境。

The delegation kindly reminded the first production line employees of heatstroke prevention and entrusted the principal of the workshop to arrange the safety work and create a comfortable working places for most employees.





慰问组将解暑饮品发放到职工的手里
The first production line workers are enjoying the cold drinks

除发放解暑饮品外，公司还采取了发放冷饮券、车间摆放冰块等措施给一线职工带去清凉。慰问组的关怀使一线工人清凉在身、温暖在心！也激发了一线职工们的工作热情，大家纷纷表示齐心协力，克服酷暑，保质保量完成工作。

Except for dispatching the summer-heat relieving drinks, we also adopt some other methods such as issuing cold drink ticket, laying ice block in workshop and so on. All these made the first line workers feel cool but warm in heart. Most of employee expressed the determination to overcome hot summer to ensure to finish their works with high quality and efficiency.

由工会委员会牵头组织，邀请高管及干部代表组成慰问组下一线慰问职工已形成每年7、8、9月份的工作惯例，这也是公司实施人性化生产管理的生动写照。

The similar activity was formed work rule in the 3rd quarter in every year. It is also a vivid portrayal of the company's humanized production management.

“冬天的邂逅”联谊活动 “Meeting by chance in winter” fellowship activity

2016年11月19日，为了让员工感受到组织的温暖，解决单身青年职工交友问题，扩大交友圈。公司党工团组织携手湘雅三医院工会、国网长沙供电分公司在千龙湖景区共同举办“冬天的邂逅”联谊活动。公司共25名单身男女参加此次活动。



On December 19th, 2016, In order to let staff feel the company's warm and resolve the single young staff making friends problem, HNAC Party organization cooperated with the Third Xiangya Hospital Work Union and the State Grid Changsha Power Supply Subsidiary Company to organized the “Meeting by chance in winter” fellowship activity in Qianlong Lake scenic spot. Totally 25 staffs of HNAC took part in this activity.

联谊活动由多个活动环节组成。活动前，参与者互换个人信息，知己知彼才会有戏。活动中，通过模特步亮相及自我介绍、“七拼八凑动脑筋”、“纸袋圆圈”、“合影分享”“爱情圈圈”等系列互动游戏加深彼此了解，活动现场气氛活跃。为方便下一次的“邂逅”，活动后大家组建了联谊微信群。

The activity consisted of many parts. Participants have exchanged their personal information before the activity. Through showing of catwalk, self-introduction and some other interactive games during the activity, they understand each other and made a chance for next unexpected meeting in future.

这次活动体现了公司“以人为本”的管理理念，也让参与活动的员工体会到了公司关心解决员工实际问题的真诚情怀。今后，公司将根据实际情况，不断丰富活动内容，优化活动平台，为解决单身员工个人问题创造更多、更好的机会。

This activity reflected the company's "people-oriented" management philosophy and let participant staff feel company's warming. HNAC will bases on the physical truth to riches the activity contents and optimize the activity platform to resolves personal problems of single staff and create more chances for them.

“麓谷领跑” 冬季长跑暨 “志愿者在行动” 公益长跑活动

Winter running activity in Lugu

12月3日，长沙高新区2016年“麓谷领跑” 冬季长跑暨 “志愿者在行动” 在尖山湖公园鸣枪开赛，吸引了来自辖区内企事业单位员工、居民及社会各界近4000名长跑爱好者参赛。

The Winter Running Activity is held on December 3rd 2016, which absorbed many staff of HNAC to join, a total of 4,000 staff, residents and long-distance race fan have joined the game.

此次赛程全长8.5公里，经过尖山湖公园、青山路、尖山路岳麓大道辅道、东方红路等互联网产业集聚区，路线沿途凸显了麓谷的创新创业新气象。经过激烈地你追我赶，湖南农业大学体艺院学生魏郭超与辣跑团54岁的陈灿如分别以27分21秒、34分20秒的成绩拿下男女组冠军。

The total distance of the race is about 8.5 Km along Jianshanhu Park, Qingshan Road, Jianshan Road, Yuelu Road and Dongfanghong Road. The activity showed the new atmosphere in Lugu district. The best records for Men's Champion and Women's Champion are 27m21s and 34m20s respectively.



我公司共33名运动员，5名志愿者参加了此次活动。其中技术一部苏诚获得了男子组第41名，所有参与运动员良好表现充分展现了华自风采。此次活动公司获“最佳组织单位奖”

A total of 33 staffs of HNAC and 5 volunteers have joined the activity. Suchen, who came from the 1st Technical Department, have obtained the 41st and HNAC obtained the Best Organization Unit Award in the activity.



四、反馈与评价Feedback and evaluation

2016年我公司在社会工作方面获评 “2016年度长沙高新区先进基层工会” 及 “2016年度长沙高新区安全生产工作先进单位” 。这两个荣誉称号的获评是社会对我公司在社会工作方面取得的显著成就的肯定与赞赏。

HNAC was crowned the “2016 advanced basic-trade union in Changsha Hi-tech Industrial Development Zone” and “2016 Advanced Unit in Safety Production in Changsha Hi-tech Industrial Development Zone”

Above two honorary titles are affirmation and appreciation from society to our company' s achievements on social activities.



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