



This is our Communication on Progress
in implementing the principles of the
United Nations Global Compact.

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联合国全球契约组织



2010年度进展报告

UNITED NATIONS GLOBAL COMPACT COMMUNICATION ON PROGRESS 2010

长沙华能自控集团有限公司
CHANGSHA HUANENG AUTOMATIC CONTROL GROUP

2011.06

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高管致辞

Statement of Managing Director

如果说 2009 年是中国经济最艰难的一年，那么 2010 年就是最复杂的一年，走向复苏的宏观经济环境面临了许多的变量。回顾这一年，我们积极应对跌宕起伏的经济形势，全力把握好企业的航向，适时调整经营思路和策略，扎实有效推进各项工作，基本实现了年度主要任务，产业结构、组织构架等也实现了预期的目标。

While the year 2009 is the most difficult year for China's economy, then the year of 2010 is the most complicated year as the resurgent macroeconomic environment still changes and evolves. Looking back the year 2009, we positively responded to the ups and downs of world economic situation, fully grasped the orientation of the enterprise, adjusted management mentality and strategy in time and promoted each work effectively. The major annual tasks are basically fulfilled; and the expected goals regarding industrial structure and organization chart are realized.



经过多年发展，公司逐步成长为国内最大的中小型水电、水利综合信息处理及自动化控制系统的产研机构，在中小水电、水利自动化控制设备领域，产品位居全国市场占有率第一。2010年 6月 11日，由国际小水电中心、长沙市政府共同创建的“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”落户公司，成为中国水电控制设备制造领域打造的首个国际化平台、国际小水电中心在全球创建的首个水电控制设备制造基地。

With development over dozens of years, HNAC gradually grows to the largest domestic R&D institution regarding integral information process and automatic control system in the fields of medium-and-small hydropower and water conservancy, taking up the largest domestic market share in automatic control equipment in the fields of medium-and-small hydropower and water conservancy. On June, 11, 2010, the UNIDO ICSHP hydropower control equipment manufacturing Changsha base, jointly founded by ICSHP and Changsha municipal government, settled in HNA, becoming the first international platform for hydropower control equipment manufacturing industry in China and the first hydropower control equipment manufacturing base established by ICSHP around the world.

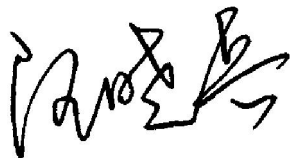
随着全球水电开发进入绿色电力时代，水电成为目前第一大清洁能源，基地的落成对于公司发展具有重大意义。它将推动我们以推广中国小水电的成熟经验和先进设备为己任，为全球小水电事业、环保事业的进一步发展贡献更大的力量。

As global hydropower development enters into the green power era, hydropower now becomes the largest clean energy. The establishment of the base is of great significance to the development of HNAC. It drives us to contribute more to the further development of global small

hydropower and environmental causes, and to undertake the task of promoting the proven experience and advanced equipment in small hydropower industry in China.

新的一年孕育着新的生机、新的希望。2011 年将是公司发展关键的一年，我们承诺将继续遵守全球契约组织的十项基本原则，以“坦诚、务实、合作、进取”的工作作风提升企业和个人的双重成长，为实现水电设备制造行业的中国名牌而不懈努力！

The new year breeds new hope and vitality. 2011 will be a critical year for the development of HNAC. We promise to continue adhering to the 10 base principles of global compact, and improve the growth to the industry as well as individuals under the guidelines of frankness, practicality, cooperation and enterprise, and strive to become the brand name in the hydropower equipment manufacturing industry in China.



总经理：汪晓兵

Managing Director: Wang Xiaobing

2011.6

企业简介

About Us

名 称 Name	长沙华能自控集团有限公司 Changsha Huaneng Automatic Control Group Co., Ltd (HNAC)
成立日期 Established on	1993.9.25 Sep.25th 1993
法人代表 Legal Representative	黄文宝 Huang Wenbao
主营业务 Main Businesses	计算机系统控制工程、电力系统智能化产品、电工器材及电子新产品的制造与销售，自营和代理各类商品和技术的进出口。 Computer system control projects, electric power system intelligent products, manufacturing and sales of electrical materials, electronic products, self-operation and agency of all kinds of goods and technology import and export.
公司地址 Address	中国长沙高新区麓谷工业园麓松路 Lusong Rd., Lu Valley, National High-tech Industrial Development Zone, Changsha, Hunan Province, China
联系电话 Telephone	+86-731-88238888
传 真 Fax	+86-731-88907777
公司网址 Website	www.cshnac.com
电子邮箱 E-mail	overseas@cshnac.com, joy_leng@cshnac.com

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：

Brief introduction of UNIDO ICSHP (United Nations Industrial Development Organization

International Center on Small Hydropower) Hydropower Control Equipment

Manufacturing Changsha base:



(2010年6月11日基地庆典现场)

Awarding Ceremony of UNIDI-ICSHP Changsha Base dated on June.11th 2010



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，是由国际小水电中

心，长沙市人民政府和长沙华能自控集团共同创建的，基地位于国家级长沙高新技术产业开发区麓谷园区。

UNIDO ICSHP hydropower control equipment manufacturing Changsha base, jointly founded by ICSHP, Changsha municipal government and Changsha huaneng automatic control group, is located in Changsha national high-tech industrial development zone, at Lu valley.

作为长沙基地的承载主体，长沙华能自控集团，创建于1993年，2010年6月被正式挂牌成为联合国工业发

展组织国际小水电中心在全球唯一的水电控制设备制造基地。集团核心企业，湖南华自科技有限公司，是湖南省和长沙市政府重点支持的拟上市企业。

As the barrier of Changsha base, Changsha huaneng automatic control group, established in 1993, was officially awarded in June, 2011 as the globally unique hydropower control equipment manufacturing base under UNIDO ICSHP. Hunan Huazi Science & Technology Co., Ltd, as the group core enterprise, will be listed on the stock market

under the full support of Hunan provincial government and Changsha municipal government.



公司生产基地位于长沙市高新区麓谷工业园内，占地 80000 平方米。公司固定资产过亿元，生产加工面积 70000 多平方米，各类工程技术人员 800 多人，其中拥有一批在国内电站综合自动化系统领域有着较高知名度的专家和工程技术人员。2009 年，公司作为中国水利部“完全无人值班水电站”项目的试点实施唯一承接机构，先后启动了三个示范（试点）水电站项目的实施改造，2011 年 5 月，国家水利部国际合作及科技司主持和组织了对该项目的科技成果鉴定，认定该项目为国际领先水平，并将对国内中小水电站技术进步和管理提升起到极大的推动作用。截止到 2011 年初，公司产品已经成功运行于世界三十多个国家各地区，现在，公司正在计划建立全球唯一以中小水电、水利信息综合处理及自动化控制为主要研究方向的国家级工程技术中心，积极促进我国水电控制设备信息和技术与国际同行的合作，并实质推动以基地作为长沙乃至全国电站装备产业国际化战略的公共平台，我们期待您的见证。

The manufacturing base, located in Lu valley Changsha high-tech industrial development zone, covers 80,000 square meters. With the fixed assets over 100 million RMB and manufacturing processing area over 70,000 square meters, HNAC has more than 800 engineering and technical personnel of various kinds, among which are experts enjoying a high reputation in the field of domestic hydropower intergraded automatic system. In 2009, as the only undertaker for the pilot project of fully unattended hydropower station approved by the Ministry of water resources in China, HNAC launches reformation projects of three demonstration (pilot) hydropower stations successively, having achieved great results. Till early 2011, our products have been successively operated in more than 30 countries or areas. Now, HNAC is scheduled to apply for the buildup of a national engineering technology center, a unique organization globally focusing on the small and medium-sized hydropower, water resources integrated information

processing and automatic control system, promoting the collaboration with international partners regarding hydropower control equipment information and technology and virtually driving the base to be a public platform for the internationalization of Changsha and even national hydropower station equipment industry. We look forward to enjoying the success with you.



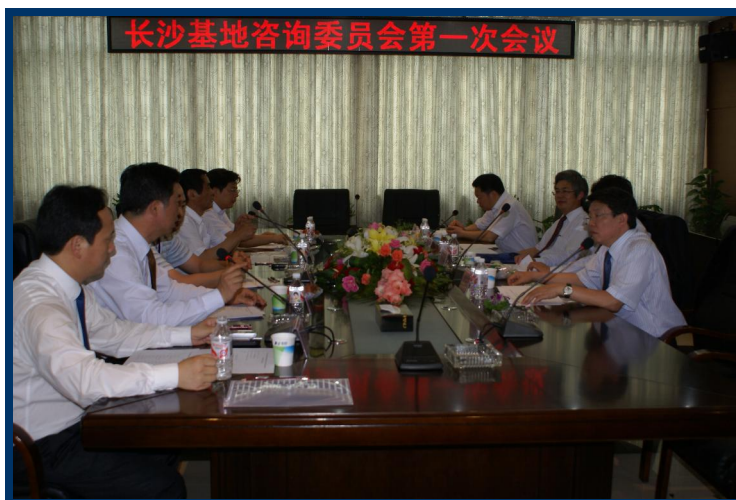
经济绩效

Economic Performance

一、承诺与制度 Management System

1、2010 年 6 月，联合国工发组织国际小水电中心水电控制设备制造长沙基地成功落户本公司，该基地对加强我司水电控制设备信息和技术与国际同行的合作，促进我省整个电站装备产业国际化战略的扩张，奠定我司在国际电站装备领域的地位将起到积极作用，并让公司在 2010 年实现了海外直接出口的突破，将对公司在未来进一步扩大出口提供良好的平台。

1. In June, 2011, UNIDO ICSHP hydropower control equipment manufacturing Changsha base is successfully located in our company, which strengthens the collaboration with international partners regarding hydropower control equipment information and technology in Hunan province, promotes the expansion of the international strategy of hydropower equipment industry in Hunan province, and established the status of Hunan province in international hydropower equipment. Besides, HNAC realizes a breakthrough for direct overseas export. Changsha base will provide a favorable platform for HNAC to expand overseas market.



2、2010 年 10 月，公司成立标准化委员会，并制定出台公司各部门作业指导手册，用科学、公平、客观的手段来规范并指导实际工作，并奖励在标准化方面取得突出成效的部门和个人。

2. In June, 2010, HNAC founded its standardization committee responsible for setting rules and making instructions for each department. Scientific, impartial and objective means are used to bind and guide practical work; those departments and individuals with great achievements in standardization will be awarded.

3、在产品的售后服务上，严格贯彻“科学管理、持续贯标、质量取胜、客户满意”的质量方针，根据市场需求变化，及时调整售后服务网络，2010 年底，公司规划新增 广东、四川、云南三个售后服务联络站，如客户有需求，必须 24 小时之内赶到服务现场，通过不断健全及完善公司的售后服务体系，为客户提供全方位的贴心服务。

3. As for the after-service, we rigorously adhere to the quality guidelines: “scientific management, sustainable pursuit of aims, good quality and customer satisfaction.” The after-service network is adjusted in time according to the changes of market needs. At the end of 2010, we increase three new after-service offices: Guangdong, Sichuan and Yunnan offices. Our after-service personnel have to arrive at the service site in 24hours. The after-service system is consummated continuously to provide all around service to customers.

4、注重产品品质，打造华自品牌，目前是湖南省同行业中通过 3C 认证最多的企业。

4. HNAC focuses on product quality and aims to build its brand. And HNAC now has the most 3C certificates among enterprise peers in Hunan.



5、2010 年，公司完成引进战略投资者规划，新增注册资本 1100 万，并拟新设华自科技股份有限公司为上市平台，上市工作进一步推进。

5. In 2010, HNAC succeeds in introducing strategic investors with 11 million RMB newly-increased registered capital. Hunan huazi Science & Technology Co.,Ltd is newly set as the listing platform. We are further nearer to the goal of going public.

二、工作与成果 Achievements

1、整体运行情况：截止到 2010 年底，公司产品已在全国三十一个省、（直辖）市、自治区（包括台湾地区）5000 多个用户成功投运，其中有不少为国家重点工程，如：南水北调江都泵站，山西夹马口泵站，湖南五强溪电厂，首钢总降变电站，重庆索特火电厂，世界银行招标项目荆门水泥总厂总配电站等等。

1. Overall operation situation: till the end of 2010, our products have been successfully operated by more than 5,000 customers covering 31 provinces, municipalities (cities) and autonomous areas with Taiwan included. Many national key projects are among them: South-to-North water diversion Jiangdu pump station, Shanxi Jiamakou pump station, Hunan Wuqiangxi hydropower

plant, the general step-down transformer substation for Capital Iron and Steel Company, Chongqing Suote thermal power plant, the World bank tender project—general substation for Jingmen cement manufacturer and others.



（国家主席胡锦涛在都江堰站参观考察时操作我司后台系统）

Chairman Hu Jintao is watching the operation system made by us in Doujiang Pump Station

公司产品已经出口到缅甸、尼日利亚、越南、印度、土耳其、智利等全球三十多个国家，
主要项目包括：

Our products have been exported to more than 30 countries including Myanmar, Nigeria, Viet Nam, India, Turkey, Chile and others. The major projects are as follows:

缅甸贺岛电站缅甸 (Myanmar WA STATE HEDAO Power Station)

尼日利亚 FARIN RUWA 电站 (Nigeria FARIN RUWA Power Station)

越南大叻二级水电站 (Viet Nam DADANG II Hydropower Station)

印度 KADAVI 电站 (India KADAVI Power Station)

智利 DONA HILDA 水电站 (Chile DONA HILDA Hydropower Station)

土耳其 DAMLAPINAR 水电站 (Turkey DAMLAPINAR HEPP)

巴布亚新几内亚水电站 (Papua New Guinea Hydropower Station)

布隆迪 Burundi-穆杰雷水电站 Mugere Hydropower Station

哈萨克斯坦 MOINAK HPS 项目 (Kazakstan MOINAK HPS Project)

布隆迪 Burundi-布琼布拉变电站 (Bujumbura Substation)

塞内加尔 Senegal-SOMETA 公司变电站 (SOMETA Company Substation)

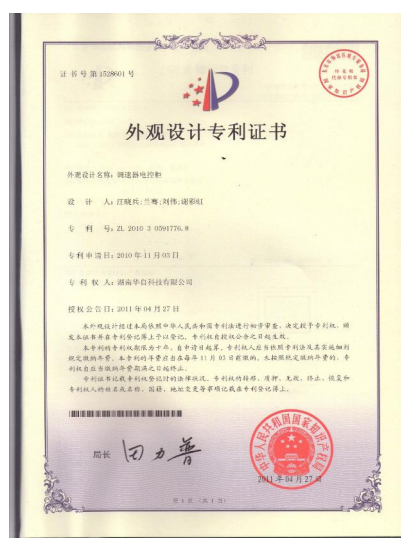


(公司产品在国外运行)

Our products run in overseas countries

公司 2010 年公司实现销售合同额近 6 亿元，同比 2009 年增长 15% 多，上缴税金两千多万元，解决就业 800 余人。

In 2010, HNAC reached nearly Six Hundred million yuan sales contract value with an increase of 15% compared with that of 2009, paid more than Two thousand yuan for tax and created jobs for more than 800 people.



(新型产品专利证书)

Patent Certificates for New Type Products

2010 年度，公司新增软件著作权 23 件；软件产品 15 件；申请实用新型专利 12 项，获证 3 项，授权 2 项；承担国家级科技项目 1 项，省级科技计划项目 2 项，通过省级科技成果鉴定 1 项。

In 2010, we have increased 23 software copyrights, 15 software products, 12 patents for utility model applications, 3 certifications, 2 authorizations; we undertake 1 national science and technology project, 2 provincial science and technology projects, and 1 item of achievement passes through the examination of provincial science and technology authority.

2. 2010 年，完全无人值班综合自动化系统在吉林贾家营、云南冒水洞、湖南慈利赵家堰水电站成功运行，当年实际经济效益 800 多万元，并被列入湖南省科技计划重点攻关项目。

2. In 2010, the Unattended hydropower station integrated automatic system is successfully applied in Jilin Jiayiaying, Yunan Maoshuidong, Hunan Cili Zhaojiaya hydropower stations; the real economic benefit reaches 8,000 thousand Yuan; the unattended hydropower station is listed as the critical projects in the scientific and technology plan in Hunan province.

3、截至到 2010 年，公司还获得多项国家和省部级荣誉，包括：

3 . Till 2010, HNAC have won multiple national and provincial honors, including:

2 月，我公司“华自”商标被湖南省工商局授予“湖南省著名商标”称号。

February, HNAC was awarded by Hunan provincial industrial and commercial bureau as the famous brand in Hunan.



(湖南省著名商标)

Famous Brand in Hunan.

4月,“中国水利发电学会控制设备专委会自动化组”在我公司成立。

April, China water resource hydropower control equipment special committee—automatic group is set in our company.

5月,PWL-4A 微机励磁系统获科技部颁发的“国家重点新产品证书”。

May, PWL-4A microprocessor-base excitation system attained the certificate of national key and new product approved by the Ministry of Science and Technology.



6月11日,“联合国工业发展组织国际小水电中心水电控制设备示范基地”正式落户我司。

On June,11, UNIDO ICSHP (United Nations Industrial Development Organization International Center on Small Hydropower) hydropower control equipment manufacturing Changsha base was officially located in HNAC.



8 月，“华自”牌高压/低压预装式变电站系列产品获得了“中国箱式变电站质量公认十佳知名品牌”。

In August, “HNAC” HV/LV prefabricated substation series products win the title of “China top10 box-type substation brand.”

10 月，我公司“水电站综合自动化及信息管理系统”项目获得工信部“计算机信息系统集成典型解决方案”。

October, the hydropower station integrated automation and information management system produced by our company wins the title of “typical solution for computer information system integration” approved by the Ministry of industry and information technology.

12 月，我公司参与的《大型企业综合电气节能关键技术及应用》项目获得国家科技进步二等奖。

December, the project of Comprehensive Electric Power Energy-Saving Key Technologies and Their Application for Large-Scale Enterprise won the National Science and Technology Progress Award (second prize).

三、反馈与评价 Feedback and evaluation

1、创新平台建设取得重大突破：2010 年获评长沙市企业技术中心，这是对我司技术创新能力的肯定，也为我司下一步申请省级、国家级企业技术中心奠定了基础。

1. Innovation platform attains great breakthrough: in 2010, HNAC was awarded as the Changsha municipal enterprise technology center, which confirmed the technology innovation capability of our company and also laid foundation for HNAC to apply for provincial and national enterprise technology center.



2、政府对公司的资金及政策扶持力度加大：全年获省、市各类资金支持项目 10 多项；软件产品按软件收入的 14% 或税负率超过 3% 中的较低者享受退税优惠。

2. The governments gave more support to HNAC regarding capital and favorable policies: more than 10 projects appropriated by various funds from provincial and municipal governments all over the year; the software products enjoy duty refund privilege at the rate of 14% income or over 3% tax bearing rate (the lower one).

3、被评为 2010 年度长沙市、高新区税收过千万先进企业。

3. In 2010, HNAC was titled as “Changsha advanced enterprise with taxation over 10 million”

4、被评为湖南省 2010 年度软件产品出口优秀企业。

4. In 2010, HNAC was titled “Hunan excellent enterprise for exporting of software products”

5、公司董事长黄文宝先生获得“湖南省劳动模范”荣誉称号。

5. In 2010, Huang Wen Bao, the chairman of HNAC, was honored as “Hunan Model Worker”

环境绩效

Environmental Performance

一、 承诺与制度 Commitment and System

公司基于保护环境的使命和愿景，承诺在经营过程中，实行节能减排，如节水、节电、节约纸张，从而减少碳排放，支持低碳运营的声明和主张，以及为支持环保事业。 公司从1998年开始运行ISO9001-1994，目前已经通过了GB/T19001-2008《质量管理体系要求》，GB/T24001-2004《环境管理体系要求及使用指南》和GB/T28001-2001《职业健康安全管理体系规范》三体系认证，这些都成为了指导公司日常管理和经营的立体性全方位规定。2010年5月13日的三体系外审结论表明我公司三体系结合公司的经营方针、目标适合于公司的活动、产品、服务的实际；保证三体系运行和持续改进，实现顾客、员工和相关方满意为目的的管理承诺。同时，企业为了响应政府的低碳经济，倡导低碳生产经营的环保经营理念，我公司于2011年5月9日已与中国质量认证中心武汉分中心签订了ISO 14064低碳认证的合同，从可节约资源和能源的使用量，降低企业成本，挖掘最有效性的减排机会，通过采取系统化的管理、技术改造等有效措施，来开始企业的生产和经营，通过向利益相关方的公开报告，展示组织的低碳绩效，增强企业的透明度，提高利益相关方的认可程度，树立具备良好信誉度的企业品牌形象，以充分体现企业的社会责任。

Based on the mission and vision for protecting environment, the company promise to implement energy saving and emission reduction, such as water saving, electricity saving and paper saving etc. to reduce carbon emission. And this also our statement and proposal to support low carbon operation. The

company began to implement ISO9001-1994 since 1998, now we have been certified by GB/T19001-2008 Quality Management System Requirements, GB/T24001-2004 Environment Management System Requirements and User's guide and GB/T28001-2001 Occupational health and safety management system Specification. On May 13th, 2010 the conclusion of external audit indicate that these are three-dimensional comprehensive regulations which guide regular management and operation of company. We involve related management factors of three-dimensional comprehensive regulations based on the operating principles, purpose and activities, products and service to form the integrative managing system, so we can ensure strictly follow the relevant laws, regulations and standard of the state, the industry and local government when we are setting up, implementing and improving the systems of environment, occupational health safety and quality management; at the same time we should guarantee the operation and continual improvement of three systems to keep the promise of satisfying the customers, staff and stakeholders. Meanwhile, in response to the Government's low carbon economy, promote low-carbon production and management of environmental philosophy, our company in May 9th, 2011 signed ISO 14064 Low carbon certification contract with a branch center of China Quality Certification Center in Wuhan City. Savings from the use of resources and energy reduce costs to find the most effective emission reduction opportunities; through the adoption of systematic management, technological innovation and other effective measures to commence production and management; through make public report to the stakeholders to showing low-carbon performance of organization, to enhance enterprise transparency and improve the recognition of the stakeholders and establish a good reputation for the corporate brand image, to reflect corporate social responsibility.

二、 体系与政策 System and Policy

2009 年顺利通过ISO14000 环境管理体系认证，2010年公司针对环境体系运行的公司内审中发现了相关的问题，针对公司建立的《环境因素、危险源识别、评价和策划控制程序》、《生产现场环境、环境与职业健康安全运行控制程序》、《环境、职业健康安全绩效监视和测量控制程序》、《能源控制程序》、《成本管理控制程序》、《环境因素清单》和《重要环境因素清单》等文件进行再次核对和修改，并根据公司的各项活动、产品及服务的实际情况，形成了2011年的重要环境因素及控制计划清单。

The company gets ISO14000 Environment Management System Certification in 2009, and relevant questions about environment system operation were found during internal audit of the company in 2010. To solve these questions, our company checked and revised such files as Environment Factors & Danger Source Identification & Planning Control Procedure, In-situ Production Environment & Environmental and Occupational Health and Safety Operating Control Procedure, Environmental and Occupational Health and Safety Performance Monitoring and Measuring Control Procedure, Energy Control Procedure, Cost Management Control Procedure, Environmental Factors List and Important Environmental Factors List, etc. again. And our company formed a Significant Environmental Factor and Control Plan List according to practical situation of activities, products and services of the company.

重要环境因素登记表及控制计划

Significant Environmental Factor Enrollment and Control Plan

序号 Item	环境影响 Environmental impact	活动/产品/服务 (发生点) Activities /Products /Services (Occur point)	环境因素 Environmental factors	时态/ 状态 Tense/state	控制措施计划 Control measures and plans	备注 Remarks
1	资源损耗 Resource consumption	空调、电梯、老化室等大功率电器设备的使用 Use of high- power electrical equipments such as air-conditioner, elevator, aging room, etc.	电能消耗 Power consumption	现在/正常 Now/normal	1、按照《集团共用资源的使用管理制度》要求执行； 2、各部门按照规定时间进行统计分析，控制节约资源计划； 3、行政中心进行考核 1. Implement the group shared sources using management system. 2. All departments check it within the prescribed time. 3. Administrative center carry out the evaluation.	
		水资源使用 Water resource consumption	水资源消耗 Water resource consumption			
		生产及办公活动 Production and office activities	办公耗材、大宗原材料的消耗 Use of office consumables and bulk raw materials			
2	固体废弃物 Solid wastes	生产活动 Production activities	焊接残渣、元件废品、废电线、废型材板材角料、废线槽等的废弃	现在/异常 Now/abnormal	1、按照《生产现场环境、环境与职业健康安全运行控制程序》要求和《固体废弃物管理制度》要求执行；	

			The discard of welding leavings , wasted components, wasted wires, wasted boards ,wasted wire through		2、 制定并实施《固体废物管理方案》，制定对废电池、灯管、电子元器件等污染物的分类存放和统一管理 。 1. Implement the <i>in-situ production environment & Environmental and Occupational health and safety operating control procedure and solid wastes management system</i> 2. Draft and implement <i>Threat Management Solution of Solid Waste</i> to realize classified depositing and unified management for used batteries, tubes and electron component, etc.	
		办公活动 Office activities	硒鼓、色带、电池、灯管等废弃 The discard of Se drum, ribbon, battery and tube			
		包装(打包、拆包) Package (packing, unpacking)	包装物的废弃 The discard of packages			
3	潜在火灾 Potential fire hazard	焊接作业 Welding operation	氧气瓶、乙炔瓶漏气/没有回火装置 Oxygen cylinder and acetylene cylinder leak gas and without back-fire arrangement 氧气瓶、乙炔瓶两种瓶体放置距离过近 Distance between oxygen cylinder and acetylene cylinder is too close	现在/异常 Now/abnormal	1、 按照《危险品管理规定》和《安全操作规程》及《应急准备和响应控制程序》要求执行 2、 在动火区域禁止摆放易燃易爆物品，焊接使用气体应摆放在安全距离； 3、 遇下班、临时停水停电或外出前，应检查生产设备及各类用电器电源等是否归位或关闭。 4、 检查设施电气部分绝缘性是否符合用电安全要求 5、 定时对公司进行巡查，发现问题及时整改 1. Implement The <i>Dangerous Cargo Management Regulations</i> ,	

			作业点附近有 易燃易爆物质 Operation point is near back-firearrange ment		<i>Safety Specification and Emergency Preparedness and Response Control Procedures.</i> 2. Forbid lay back-firearrangement at hot area, and welding gas should be put with safe distance. 3. Under the condition of off duty, temporarily out of water of electric or before going out, should close the power supply. 4. Check if the insulativity of electrical equipments accord with electricity safety requirements. 5. Rectify and reform all the problems found in regular inspection in the company.	
		使用电气设备 Applying electrical equipment	电气线路短路 起火 线路超负荷过 热 Fire caused by short circuit of electrical circuit			
		使用易燃易爆物 品 Inflammable article easy to explode	易燃易爆物品 存放管理不善 Back-firearrang ement badly stored			

根据 2011.03.25 日编号为 : ZG2011032501 内部审核报告第 4 点重新建立全公司重要危险源风险登记表及控制计划。
 According to No. ZG2011032501 Internal audit report that written on 25th March, 2011 item 4, the company should rebuild
 Significant Hazard Enrollment and Control Plan.

编制部门/人员 Compile department/ personnel	行政中心/廖俊武 Administrative centre /Liao Junwu	编制 时间 Preparatio n time	2011-4-30
审批人 Approved by	胡兰芳 Hu Lanfang	审批 时间 Approval time	2011-5-3

三、 工作与成果 Achievements

1、为了给公司提供一个整洁、安全、方便的工作环境，并为精益生产体系其他要素的实施提供基础支撑，公司大力推行6S工作。

1. In order to create a clean, safe and convenient working environment and to provide basic support for implementation of other elements of lean production system, the company vigorously promotes 6S management.

公司从6S的定义、作用、掌握6S实施要点、6S常用工具、6S活动推行流程以及6S与其他管理活动的关系来公司全员动员和开展6S工作，目前公司的6S 工作取得了较大的成果，通过6S行动来改变人的思考方式和行动品质，从而改变公司的管理水平，加强环境意识。

Our company mobilizes the staff to learn 6S management and promotes 6S management with expounding definition and function of 6S, mastering implementation points of 6S, expounding common tools of 6S, explaining implementation process of 6S and explaining the relationship between 6S and other management activities. At present our company has made great achievements in 6S management, changed modes of thought and action quality of the staff, sequentially improved management level and strengthened environmental awareness.



2、本着以人为本以及庞大市场需求再造一极“经济推动引擎”公司自2006年以来，结合企业在水利水电领域营造的相对优势和人才团队，义无反顾地踏入了这条致力于环境改善、致力于宜居人文的“污水处理”行业。

2. In order to stick to the thought of People First and to re-launch first pole “Engine for Promoting Economic”, our company has combined comparative advantages of water conservancy & hydropower filed and talent team to be make effort on environmental improvement and sewage treatment for Livable humanities without hesitation.

自2006年以来，我集团已经在城市生活污水、工业废水、净水饮用水等细分的水处理领域奋斗出自己的一席之地，并树立了饱含多处亮点的相对优势，其表现于下：

Since 2006, our group has been making great efforts in the filed of water treatment such as urban sewage, industrial sewage and water purification, and we have got following comparative advantages:

、 在全国范围，我们总包、承包建设了包括河北晋州污水处理厂、海南白沙县城市污水厂、湖南郴州汝城污水处理厂、湖南省常宁市污水处理厂、湖南常德汉寿城市污水厂、湖南双峰县污水处理厂、湖南会同县污水提升泵站、湖南溆浦县污水提升泵站、广西昭平县污水处理厂、贵州六盘水市污水处理厂、贵州平坝县污水处理厂等逾百座城市污水厂项目；

On a nation wide scale, our company have done turnkey project and undertook projects including Hebei Jinzhou Sewage Treatment Plant, Hainan Baisha County Urban Sewage Plant, Hunan Chenzhou Rucheng Sewage Treatment Plant, Hunan Changning Sewage Treatment Plant, Hunan Changde Hanshou Urban Sewage Plant, Hunan Shuangfeng County Sewage Treatment Plant, Hunan Huitong County Sewage Pump Station, Hunan Xupu Sewage Pump Station, Guangxi

Zhaoping County Sewage Treatment Plant, Guizhou Liupanshui Sewage Treatment Plant and Guizhou Pingxian Sewage Treatment Plant etc. in total over a hundred urban sewage treatment plants.

、在全国范围，我们总包、承包建设了包括安徽铜冠铜箔有限公司1万吨/年高精度电子铜箔水处理系统项目（包含纯净水制备、回用水系统和达标直排三部分）、广西南南铝加工有限公司的工业废水项目、湖南长沙望城县循环经济工业园污水厂等逾20座工业废水处理项目；

On a nation wide scale, our company have done turnkey project and undertook projects such as 10000Ton/Year High-accuracy Electron Copper Foil Water Treatment System Project of Anhui Tongguan Copper Foil Co., Ltd (including pure water preparation, water reuse system and standard direct discharge), Industrial Sewage Treatment Project of South Guangxi South Aluminum Processing Co., Ltd and Hunan Changsha Wangcheng County Circular Economy Industrial Park Sewage Treatment Plant etc. in total over twenty industrial sewage treatment projects.

、在全国范围，我们总包、承包建设了包括梧州粤海江河水务有限公司运营的梧州市城市供水系统等近10座城市的自来水处理项目；

On a nation wide scale, our company have done turnkey project and undertook projects such as water system of Wuchow City that operated by Wuchow Yuehai River Water Co., Ltd etc. in total we have tap water treatment projects in nearly 10 cities.

、由此，我们自主研发的水处理自控后台软件系统遍布在以上各个项目中；

Thus, our independently researched and developed foreground and background software system for water treatment automatic control has been applied all over above mentioned projects.

、由此，我们自主制造装备的水处理自控控制单元柜遍布在以上各个项目中；

Thus, our independently manufactured and equipped control unit panel for water treatment automatic control has been applied all over above mentioned projects.

环保投资的重点领域主要包括水环境、大气环境、固体废物、生态环境、核安全及辐射环境保护建设以及环境能力建设。在政府的大力扶持下，环保产业在未来几年有着良好的发展前景，水务、固废等将是重点的受益行业。这些行业具有比较典型的弱周期性特征，在外部环境波动比较明显的情况下，其生产和消费相对稳定，更应受到投资者青睐。

Priority areas of environmental protection investment mainly include water environment, atmospheric environment, solid waste, ecology environment, nuclear safety, radiation and environmental protection construction and environment ability construction. With substantial support from government, environmental protection industry is with good prospects for development in the next few years, and water supply and solid waste etc. will be the focus of the benefits industry. These industries have the typical characteristics of the weak cyclical, and when the external environment fluctuates significantly, the production and consumption is relatively stable and should be favored by investors.



汉南污水处理厂综合楼效果图



长沙华能集团有限公司建筑设计分公司

3、大型企业电力节能是关系我国社会和经济发展的一个重大战略关键，是实现电力节能减排和建设“两型”社会的重要途径的前提下。我公司和湖南大学联合针对大型企业综合电气节能问题，在国家“863”计划、国家自然科学基金、国家发改委产业化专项、湖南省节能减排重大科技专项等项目的支持下，研发了具有自主知识产权的先进综合电气节能关键技术、新产品，技术先进，应用前景好，已进行产业化推广，经济和社会效益显著。项目主要研究内容如下：

3. Electrical energy saving in large enterprises in China is a major strategic key that related to the social and economic development, and is an important way of premise to achieve power saving & emission reduction and to construct two type social. With support of National 863 Program, National Natural Science Foundation of China, National Development and Reform Commission Industry of Special etc, our company cooperated with Hunan University aim at solving problems of electrical energy saving in large enterprises. We have researched and developed advanced new key technology and new products for integrated electrical energy saving. And the new technology and products has been for industrialization promotion and is with good application prospect and remarkable economic and social benefit.

(1) 首次提出了企业配电网高压系统高品质动态节能混合系统 HVHC (High Voltage Hybrid Compensator), 克服了单一电力电子节能系统的功能缺陷; 建立了 HVHC 系统的综合电气模型, 揭示了混合系统各子系统间相互影响的内在本质; 提出了一种动态性能好、自适应性强、鲁棒性高的 HVHC 复合控制方法; 研发了 HVHC 新装备, 解决了电网波形畸变时无功连续补偿的技术难题, 显著降低了企业配电网高压系统的电能损耗, 实现了高品质节能。

1) We first put forward enterprise distribution network high-voltage system high-quality dynamic energy saving hybrid system- HVHC (High Voltage Hybrid Compensator), which have conquered functional deficiency of single power electronics energy saving system; we built a hybrid electric model of HVHC system and revealed inner essence of mutual influence between hybrid system and each subsystems; we presented a HVHC compound control method with good dynamic property, strong adaptivity and high robustness; we researched and developed new HVHC equipment, solved technical problems of reactive continuous compensation when power grid wave-form distortion, significantly reduced power loss of enterprise distribution network high-voltage system and achieved high quality energy conservation.

(2) 首次提出了配电网低压系统低成本高效无功动态补偿电力电子混杂系统 HVC (Hybrid Var Compensator), 开辟了电力电子混杂系统研究的新方向; 提出了 HVC 的专家混杂控制方法和多目标参数优化设计理论; 研发了 HVC 新装备, 在确保 HVC 动态电压恢复能力的同时进行低成本的大容量无功动态补偿, 显著降低了企业低压配电网的电能损耗, 实现了低成本高效节能。

2) We first put forward distribution network low-voltage system low cost efficient reactive dynamic compensation power electronics hybrid system-HVC (Hybrid Var Compensator), which opened up

new directions for power electronics hybrid system; presented expert hybrid control method of HVC and multi object parameter optimization design theory; researched and developed new HVC equipment, made large capacity reactive dynamic compensation when ensuring HVC dynamic voltage is with good restorability, significantly reduced power loss of enterprise distribution network low-voltage system and achieved high quality energy conservation.

(3) 研制了具有自主知识产权的大功率变频电源、磁悬浮牵引变频器等多种特种变频器，是国内牵引变频器的唯一供货商，并首次研发了企业节能型专用变频器 ESI (Energy Saving Inverter)，提出了基于自适应控制的 ESI 前级系统双闭环控制方法和基于矢量演算理论的 ESI 后级系统无传感矢量控制方法，为企业负荷提供低谐波、高效变频设备，显著提高了企业负荷的电能利用率，实现了有功负荷节能。

3) We researched and developed high-power variable frequency power source, maglev traction inverter and other multiple special frequency convertors, and we are the only traction inverter supplier in China. We are the first that researched and developed enterprise energy saving type special inverter- ESI (Energy Saving Inverter), which first presented ESI preceding stage system double closed ring control method that based adaptive control and ESI backward stage system non-sense vector control method, supplied low harmonic and efficient frequency conversion to enterprise load, significantly enhanced electric energy utilization rate of enterprise load and achieved active load energy conservation.

(4) 首次提出并研发了企业配电网先进节能综合系统，集高低压节能装备、电气设备监控于一体，实现了企业高压节能、低压节能、有功负荷节能、管理和优化节能的全方位电气节能。提出了基于动态规划的企业生产电耗预案和配电计划预案，提出了基于实时潮流的配电网无功优化方法；提出了基于多智能体的高低压节能装备调度方案，解决了大型企业整体节能的优化协调难题。

4) Our company puts forward and develops the advanced energy-saving integrated system specializing for the enterprise power distribution network. The system combines the HV/LV energy-saving equipments and monitoring system for electrical equipments as a whole, realizing energy-saving performance for HV/LV, reactive load as well as managing and promoting the electrical energy-saving performance in all-round aspects. In addition, it proposes plans for Enterprise Manufacturing Power Consumption and Distribution based on the dynamic programming, reactive power optimization method based on the real-time trend, and scheduling scheme of HV/LV energy-saving equipments based on the multi-agent system, having optimized and coordinated the integrated energy efficiency for large-scale enterprises.

本项目已获得授权国家发明专利 10 项、实用新型专利 7 项、计算机软件著作权 27 项，公开国家发明专利 23 项(专利奖，省部级一等奖)。近三年来，在国内外著名学术刊物发表论文 60 余篇，SCI、EI 收录 135 篇，被引用 1782 次，其中 10 篇代表作发表在 IEEE Trans. Ind. Electron、IEEE Trans. Power. Electronics 等国际权威期刊，研究成果获得同行广泛引用和高度评价。

The project has applied 10 national invention patents, 7 unity model patents, 27 computer software copyrights, and 23 public national invention patents (Patent Award, the 1st prize of Provincial and Ministry level). In the recent 3 years, the staff of HNAC has released more than 60 theses in academic journals reputed home and abroad. 135 sheets are included into SCI and EI and

have been quoted for 1782 times, 10 of which have been published in the periodicals like IEEE Trans. Ind. Electron, IEEE Trans. Power Electronics. The achievement is referenced and highly regarded by the peer.

研究成果已在株洲变流技术国家工程研究中心有限公司、广州白云电气集团、长沙威胜电子、深圳市华力特公司和长沙华能自控等企业产业化，近三年产品累计销售额达36亿元，新增利税达8亿元，创汇达1亿美元，产品成功应用于马来西亚、赞比亚、阿塞拜疆、加拿大、巴西、香港等国家和地区以及国内大多数省区，覆盖钢铁、冶金、铁路、地铁、石化等行业，其技术成果荣获中国技术市场协会“金桥奖”。

The researched technology has been industrialized in the enterprise like ZhuZhou National Engineering Research Center of Converters Co.,Ltd., Bai Yun Electric Group, WASION Group, FARAD Electric and Changsha Huaneng Automatic Control Group etc. The sales revenue, in the latest 3 years, hits to RMB 3.6 billion, the tax and profit is increased by RMB 800 million and earned foreign exchanges of USD 100 million. The users have been scattered all around China and several oversea countries like Malaysia, Zambia, Azerbaijan, Canada, and Brazil, etc. The application industry ranges iron & steel, metallurgy, railways, metros and petrification and so on. For the technical achievement, it is awarded a prize of 'Golden Bridge' by China Technology Market Association.

本项目电气节能技术和产品成功应用于众多重点工程，如亚洲最大的江铜集团10万吨高精度铜板带项目、亚洲最大的上海轨道交通一号线扩编改造车辆、国内时速300公里动车组机电系统以及广州新白云国际机场、广州地铁、神朔铁路、湖南华菱钢铁集团、重庆钢铁集团、中石化长岭炼油厂等供电系统。典型应用中电网平均功率因数提高至0.94以上，电传动系统节能40-50%，交直流电源系统节能30%以上，供电系统节能20%以上，节能效果显著，产品成本低于国外50%，创造经济效益超过50亿元。

The electric energy efficiency technology and products have been developed and already applied for the power supply system for some key projects, including 100,000-ton high-precision copper sheet project of Jiangxi Copper Cooperation, the largest in Asia, vehicles expansion and renovation of Shanghai Metro Line 1, also No.1 in Asia, electromechanical system of 300km/h motor train unit, Guangzhou New Baiyun International Airport, Guangzhou Metro, Shenshuo Railway, Hunan Valin Steel, Chongqing Iron & Steel (Group) Co., Ltd. Changling Refinery of Sinopec Group, etc. In the typical application, it improves the average power factor to 0.94 or above, and saves 40%~50% energy for the electric driving system, more than 30% for the DC/AC power source and more than 20% for the power supply system. Despite of the outstanding effect, the cost is 50% less than that of the other countries', creating economic benefits of more than RMB 5 billion Yuan..

3. 坚持环境保护从源头抓起，“三同时”管理中特别注重了建设在设计阶段和施工期的环境保护。

在生产过程中严格执行环境保护有关规定，对引进的新、改、扩建的项目要求其先过环保审批关；在公司新的国际小水电技术交流中心建设的过程中，公司项目部认真落实环保设施与主体工程同时设计、同时施工、同时投产使用的“三同时”制度；加强相关方的管理，通过与相关方签订环境保护合同来达到我公司环境管理体系的要求，同时通过印标语、挂横幅、发传单等多种形式，广泛开展环境保护宣传教育活动，通过公司广播站宣传《环境保护法》及相关法律、法规知识，大力营造环境保护宣传气氛。全公司在服务中提高防治环境污染，保护生态环境，提高员工环保意识，努力创建经济节约型企业。

3. The environmental protection is focused from the beginning, and ‘Three Simultaneities’ management policy is applied to guarantee the environmental protection in the phase of designing and construction,

In the production procedures, HNAC strictly follows regulations and rules, requires all projects to be confirmed as environmental-friendly project prior to approval. In the constructing course of International Technology Exchange Center Building, the Project Department applies ‘Three Simultaneities’ management policy that makes sure the environment protection facilities is designed, operated and launched at the same time of the main work; enforce the management and sign the environment protection contract with concerning parties to achieve the standard required by the implemented environment management system. The company launches activities to strengthen publicity and education of environment protection in form of slogans, banners and leaflets; besides, the broadcasting station publicizes the Environmental Protection Act and relevant laws and

regulations, creating an environment protection atmosphere. By preventing and controlling environmental pollution, preserving ecological environment and enhancing environmental awareness, HNAC strives to become an economical enterprise.

4、 清洁生产及清污排放。

4. Clean production and emission

公司积极清洁及防治废气、废水、废渣、粉尘、垃圾等有害物质和噪声对环境的污染与危害，按生产工艺安装、配置“三废”处理、通风、吸尘、净化、消声等设施。以达到清洁生产。同时公司为保证对外排放的水符合要求，以免周围居民的生活，我公司建设了厨房用水的滤水池，以达到清污排放。

Effective provisions are adopted to clean harmful substances (including waste gas, waste water, waste residue, dust and garbage, etc.) and prevent their damage and pollution to the environment. To make sure a clean production, the equipment dedicated for the process of wastes handling, ventilation, dust absorption, purification and noise elimination, etc are applied as required production technology. In addition, our company has built a water filter outside the kitchen in order to guarantee the discharged water within the level specified in the relevant standard and thus the safety of the domestic water for households.

5. 公司积极培养公司员工树立日常节约资源和循环使用资源的意识和行为。

公司通过各部的费用预算来严格控制各部的办公用品费用，同时要求各部的纸张分类处理，各办公场所均在打印机旁设置两个纸盒，一为废纸盒，另一纸盒为可二次利用纸盒，同时各部在每周的废纸处理时，行政中心将进行不定期的检查或抽查，以达到纸张的充分利用。

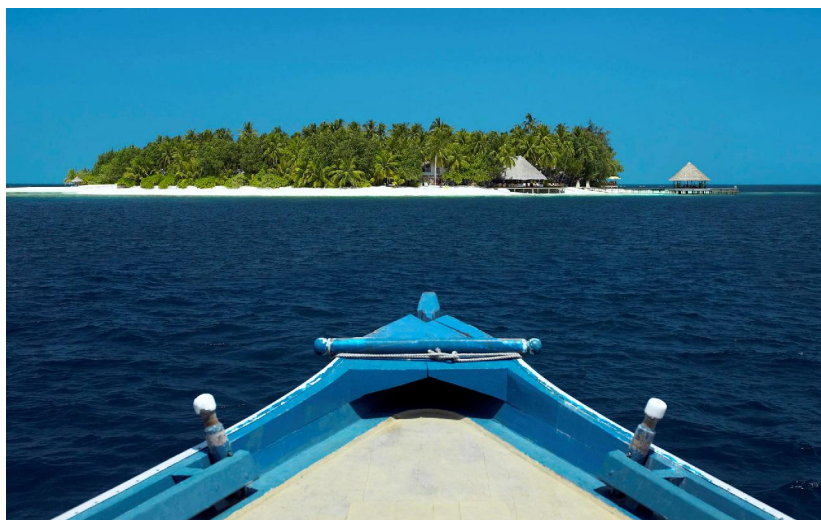
从而让公司所有员工都自觉负有节约能源和原材料 ,杜绝任何浪费及安全隐患的责任与义务。

5. The company cultivates the staff to build up a sense of saving resources and recycling in daily life.

We establish the budget to control the expenses of office supplies. Paper classification is demanded. 2 paper boxes, one of which is for the waste paper and another for the recycled paper, are arranged beside the printer in each office. Administration Center will conduct an irregular check or spot check for the condition of water paper recycling to confirm the paper is utilized to the largest extend. All these provisions are aimed to bring the staff with the sense that it is their responsibility and obligation to save energy and materials as well as prevent waste.

四、 反馈与评价 **Feedback and evaluation**

1. 获国家科学技术进步奖 National Award for Science and Technology Progress
2. 污水处理报告 Sewage treatment report
3. 我公司加入湖南省环境保护组织。 Enter Hunan Environmental Protection Organization for our contribution in this field
4. 相关的数据低于国家的排放标准。 Relevant data below the national emission standard



社会绩效 Social Performance

一、承诺与制度 Commitments and regulations

为千家万户源源不断送去光明，为祖国的又快又好发展提供清洁能源，为全球的生活更加明亮，我们信守一份员工和社会的责任，华能自控多年来持续回馈社会，服务社会，支持慈善公益事业，保护弱势群体，追求经济、社会效益的协调统一，让整个社会多一份和谐的温度，我们将为责任二字奉献无悔的青春。

We also perform our duties as a staff and also undertake our social responsibility in the pursuit of lighting thousands of households by supplying clean energy for the nation development and further brightening our life. For years, HNAC has kept supporting philanthropy and public welfare undertakings feed backing and serving the society, making contributions to bring more harmony and warmth. We will dedicate ourselves to undertake the responsibility and return more to the society.

二、体系与政策 System and policy

通过履行自己的承诺，提高员工乃至整个社会的生活质量。我们一贯关心社会问题，在这个优良传统的基础之上，我们确立了一套系统的方法，持续我们的社会贡献。在公司成立党工团及各种社团组织，有序的组织各种活动，不仅可以发挥员工自身的工作潜力，更让我们的责任服务于整个社会。

We honor our commitment to improve the life quality of our staff and the whole society. To fulfill that promise, we concern social problems and meanwhile establish a system for a sustainable contribution. The system is partly constituted of various associations and organizations which conduct a series of well-organized activities. By that way, the staff can serve the whole society while develop their potential.

三、工作与成果 Works and achievements

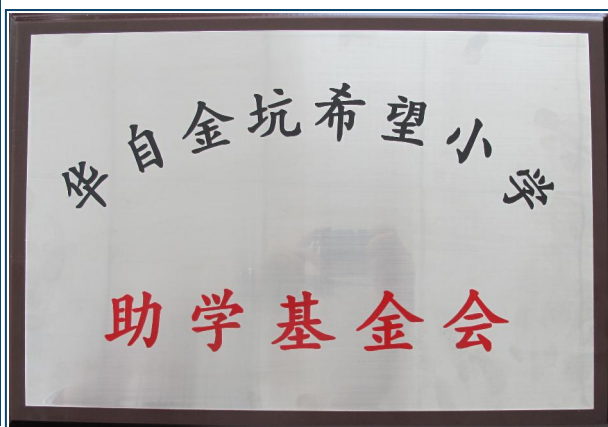
助学基金 Education funds

2010 年，“华自金坑希望小学”助学基金正式成立。公司员工自愿出资设立希望小学助学基金，并在公司大力推行“1+1”手拉手助学活动，现在已有 10 多名学生获益于手拉手活动，被资助直至学业完成。



(助学基金会牌匾)

Plaque of Education Fun



(被资助学生)

Assisted Student

‘Huazi Jinkeng Hope Primary School’ Education Fund, officially started in 2010, is contributed by the staff voluntarily. It promotes the aid education activity of ‘1+1’ Hand in Hand. Up to now, more than 10 students have been supported until their graduation.

希望小学支教 Volunteers in action

华能自控自捐建希望小学以来，从此开始了与教育的不解之缘。公司定期开展与希望小学的信
件来往、助学、支教等多项活动，并为学校师生赠送教学用品、学习用品及大量衣物。



(支教员工在上课)

(为希望小学捐赠)

Volunteers giving a lesson

Donation to the Hope Primary School

Since the contribution to the Hope Primary School, HNAC has been tightly connected with the education. It contacts the school in form of letters, aid education and scholarship regularly and presents teaching supplies, school supplies and clothes to the teachers and students.

“爱的阳光”送温暖活动 Heart-Warming Activity of ‘Sunshine of Love’

华能自控关注残疾人弱势群体。2010 年启动“爱的阳光”送温暖活动，到浏阳看望贫困家庭及残疾老人，送去社会的关怀和温暖，取得了良好的社会反响。

HNAC cares about the vulnerable and disadvantaged social groups. In 2010, a visit to needy families and the disabled aged of Liuyang initiated the Heart-warming Activity of ‘Sunshine of Love’. It shares caring and warmth, and meanwhile wins appreciation for the society.



(自发组织公益活动)

(给残疾夫妇送红包)

Self-organized public benefit activities

Warmth-giving to the disabled couple

扩大就业机会 Enlarge job opportunities

公司先后与多所高校及下岗职工联络，提供就业机会和培训实习机会，2010 年统计达 480 人次，并投入专项资金约 20 万元用于培训、解决食宿交通和办公用品及生产设备添置。2010 年 6 月 8 日下午，我司与长沙理工大学在长沙理工大学云塘校区学术报告厅举行了“华自班”成立启动仪式暨实习、就业基地签约仪式。本次的校企合作，是公司在发展历程中，支持高校教育事业发展、关爱贫困学生和扩大应届生就业创业机会之举，受到社会的广泛称赞。

The company has kept in contact with the colleges and universities and the laid-off workers for continuous offering job opportunities and internships to them. The staff recruited in this way has been totaled to 480 by the year of 2010. And HNAC allocated RMB200, 000 as a special fund for training, accommodation, transportation, office supplies and production facilities. On June 18th, 2010, HNAC, together with Changsha University of Science & Technology, kicked off the launching ceremony of ‘Huazi Class’ and the signing ceremony of Practice and Employment Base in the Lecture Hall of the campus. The cooperation between HNAC and the university is widely praised because it promotes the development of colleagues and universities, shows caring about the poverty stricken students and expands employment opportunities in the course of the development .



(招聘会现场)

Site of career fair



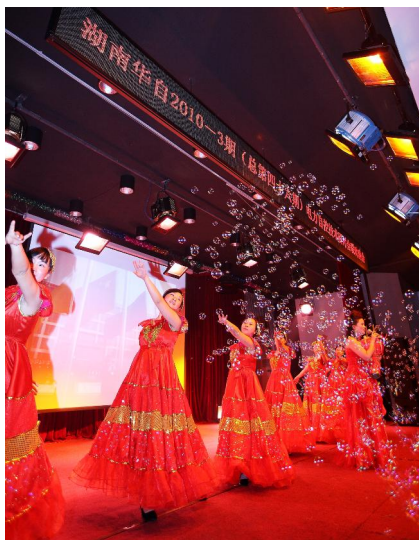
(华自班签约仪式)

Signing ceremony of Huazi Class

文化艺术贡献 Cultural and Art

公司成立华自艺术团、足球俱乐部、篮球俱乐部、羽毛球俱乐部、摄影协会等多个社团组织。2010年华自艺术团代表公司先后参加高新区以及其他各种文艺汇演，各种俱乐部也多次与其他企业开展联谊活动，拉开了文化艺术之桥梁。

HNAC has set up all kinds of associations and organizations, including Art Troupe, Football Club, Basketball Club, Badminton Club and Photographic Association, etc. Its Art Troupe took part in various joint performances conducted by Changsha National High-Tech Industrial Development Zone and others in 2010. Fellowship activities have been also held by our clubs and others enterprises', bridging for culture and arts of each other's.



(文艺表演)

Artistic Performance



(足球友谊赛)

Football Tournament

遵守法律法规

2010 年，公司遵守法律法规及其他规范性文件，在日常运营中未出现因违反法律法规及其他规范性文件而受到行政或司法处罚的情况。公司根据国家法律法规及其他规范性文件相关规定制订修订公司各项管理制度，保证公司经营行为的合法合规性。公司恪守“坦诚、务实、合作、进取”的企业文化依法履行与合作方的合同义务。为此公司已连续多年被湖南省工商局被评为“合同守信用”单位。

In the year of 2010, HNAC abided by laws and regulations and other normative documents and was free of administrative and judicial penalty as a result of violation. It formulated and reformulated regulations and rules under the guidance of national laws and regulations and other normative documents, guaranteeing the regularity and legality of the company's behavior. With the pursuit of 'Frankness, Practice, Cooperation and Enterprising' in the partnership, HNAC has been titled with 'Contract-Observing & Promise-Keeping Unit' for years by Hunan Provincial Industrial and Commercial Administration Bureau.

四、反馈与评价 **Feedback and evaluation**

华能自控在追求茁壮的过程中，积极为社会作贡献，担当应有的社会责任。公司通过举办多方面的活动，取得了相当显著的效果，在社会上产生了广泛影响。

2010 年公司在社会工作方面获得的荣誉：

“五四红旗标兵团委 ”

“ 芙蓉标兵岗 ”

“ 最佳工会支持者 ”

“ 先进班组 ”

“ 优秀团委干部 ”

2010 年公司被授予：

“中国水力发电工程学会水电控制技术培训中心”

In the course of pursuing fast and well-structured development, HNAC never forgets to make contribution and undertake social responsibility. A series of activities had been conducted, followed by remarkable effects and wide influence. The following list the honor HNAC won in 2010 in the aspect of social work:

Model Committee of May Fourth Red Flag Communist Youth League;

Lotus Pacesetter;

Best Supporter of Labor Union;

Advanced Team & Group

Excellent Cadre of Youth League Committee

人权绩效

Human Rights Performance

公司自成立之日起，一贯严格遵守各项劳动保障法律法规，尊重和维护国际公认的各项人权，尽心尽责，恪于职守，设计、制定了一系列行之有效的人权绩效管理办法和方案，在全公司范围内认真贯彻执行。我们秉承华自人“按章办事，循理做人”的原则，通过管理、宣传、督促、检查、考评，切实的掌握和提高了员工的工作绩效，公司也取得了“长沙市和谐劳动关系模范企业”、“长沙市模范职工之家”、“湖南省和谐劳动关系模范企业”等荣誉。

Since the establishment, Changsha Huaneng Automatic Control Group (HNAC hereinafter) adhere to laws and regulations on labor security, supporting and respecting the internationally proclaimed human rights. We designed and drafted a series of effective management methods and plans for human rights performance, which are seriously implemented now. Pursuant to “Play Fair, Follow the Truth” principle, we mastered and improved the work performance of staff via management, publicity, supervision, inspection and assessment. HNAC have gained the honors of Changsha Model Enterprise for Harmonious Labor Relations, Changsha Model Home of Workers and Model Enterprise for Harmonious Labor Relations in Hunan Province.

一、 承诺与制度 Commitments and regulations

公司建立了一套“机构落实，职责明确，制度健全，措施有力”的员工管理办法，先后制定了《工作制度》、《出入厂管理制度》、《安全保卫制度》、《考勤制度》、《加班单管理制度》、《绩效考核制度》等一系列规范性文件，这些文件的制定与实施，一方面有效地提高了人权绩效的水平，使绩效考评工作更加公开化、公平化、透明化；另一方面，保障了员工的正当权益得到更好的实现。

HNAC had established a series of administrative rules and regulations to ensure a practical mechanism, definite duties, the sound system and powerful measures. Documents including Work Routine, Administrative Regulation on Entry and Exit, Security and Protection Regulation, Work Attendance Checking Rules, Administrative Regulation on the Overtime Sheet, Payment Administrative Regulation, Performance Appraisal Regulation, etc. have been implemented, considering every respect of management, labor contracts, social insurances and welfares for the employee. The formulation and implementation of the aforesaid documents improved the human rights performance level on the one hand, and guaranteed the better realization of the staff rights on the other hand.



公司与员工签订了100%的劳动合同 ,按国家规定购买了保险 ,并按时足额的缴纳了保险费用 ; 员工拥有8小时工作制、双休及法定的假期 ;公司按月付给员工工资 ,如有加班情况则按照规定支付相应的加班工资 ;对于特殊岗位 (如驾驶员、保安员、安全生产管理员等等) 要求持证上岗 ; 通过校企合作联合办班 , 向在职员工提供各类操作技能的脱产或非脱产培训 , 并颁发国家认可的作业证明 , 提高工作品质 , 帮助员工增加职业含金量。

Every single employee had signed the labor contract and we paid full insurance for them according to national regulations. The employees work 8 hours a day and 5 days a week along with legal holidays. All employees are paid monthly and those who worked overtime enjoy the overtime wage. The qualified license and the periodic training are required for special positions like drivers, security staff, and production controllers, etc. We also provide off-job training and non off-job training of various operating skills via joint class by school and enterprises cooperation. After the training, we will issue the authorized certificate to improve the professional value of staff.

公司严格执行了一系列的劳动保障条例 , 重视加强员工的法律意识。迄今为止 , 没有发生劳动争议及仲裁的情况。

A series of labor protection rules are strictly carried out, at the same time we value the strengthening of the legal awareness of our staff. So neither labor disputes nor labor arbitration happened in our company till now.

二、 工作与成果 Works and achievements

员工关爱 Staff care

为保障员工与单位之间能够更好的协商、沟通，公司早于1997年即成立了工会委员会，负责协调处理员工与单位之间的工资协商、劳动争议等工作。目前工会成员11人，作为职工代表与企业方就涉及职工权利的事项，为达到一致意见进行经常开展沟通和协调。工会积极参与企业劳动关系的建立、调整，并促进劳动关系的健康发展。

To guarantee a sound negotiation and communication between the employee and the Company, the Labor Union Committee was launched in 1997 to handle wage negotiations, labor disputes and other matters concerned. Up to now, there have had 11 committee members as the representative to exchange with the company regularly in terms of staff rights so that both parties would reach a favorable agreement. The Labor Union engaged in the establishment and the adjustment of the relation between the employee and the Company, catalyzing the development of the labor relation.

首先与公司领导协商，全面建立劳动合同制度，到劳动合同签订率达到100%。在此基础上，工会又与公司领导和人力资源协商明确了企业要执行法律规定的最低工资标准、职工休息休假、劳动安全卫生、职工保险福利等内容，为企业内部建立和谐的劳动关系起到了积极作用。其工作职责涵盖了职工的民主管理，涉及职工权利的规章制度的制定、修改，职工的劳动报酬、工作时间、休息休假，保险福利、劳动安全卫生、女职工保护、职工培训及职工文化体育生活、劳动争议的预防和处理以及双方认为需要协商的其他事项。工会通过开展加强凝聚力和向心力的教育、文娱活动，大力开展和提倡“爱国守法、明礼诚信、团结友善、勤俭自强、敬业奉献”精神。利用宣传手段进行法制教育，开展知识竞赛，加强员工培训，使思想教育走向经常化、制度化的轨道。

The Union set up the Labor Contract System inside the Company after a discussion with the management layer. Subsequently, together with the HR Department, it defined and implemented rules and regulations on the minimum wage, labor safety and hygiene, insurances, welfares, and holidays in the Company, playing an important role at creating the harmonious labor relation. The Labor Union's job responsibilities cover the democratic management for the staff, the formulation and modification of the rules and regulations regarding the staff rights, labor reward, work hours, rest and vacations, insurances, welfares, labor safety and hygiene, the female employee protection, staff trainings, sports and entertainment activities, prevention and handle for labor disputes and other matters concerned. The union conducted activities in variety of forms to unite all together and bring each other closer in pursuit of the spirit of being patriotism, law-abiding, politeness, integrity, friendliness, diligence and industry, professionalism and dedication. Meanwhile, the Union carried out a series of contests, legal education lessons, and other activities in order to routinize and systemize the virtue education.

员工培训 Staff training

在劳动保障工作中，有部分员工对国家政策不够了解，不能正确、合理的运用各种政策和法律，对劳动保障工作认识片面，甚至出现不愿意购买社会保险、不愿意签订劳动合同的情况，遇见劳动保障方面的问题也无法找到正确的渠道咨询。为了帮助员工正确、全面掌握劳动保障知识，公司设立“360度劳动保障沟通体系”，员工可以随时通过OA系统、总经理信箱、电话、面谈等多种方式，与工会主席、总经理、部门经理、劳动保障专员沟通、咨询，也可以随时在公司内部网上找到即时公布的劳动保障政策文件，在遇到劳动关系不明确、劳动保障误解时能够及时得到正确有答复和解决。

For knowing little about the national policy and the labor security, some employees are unable to apply all kinds of policies and laws correctly and reasonably and thus reluctant to pay for social insurances and sign the labor contract. As a result, they become helpless when their rights are threatened. In order to strengthen their awareness about the related policies, HNAC establishes the “360°Labor Security Communication System”, by which a direct communication between the staff and the Labor Union Chairman, General Manager, Department Manager or Labor Security Officer are workable through the OA system, General Manager Mailbox, phone calls and conversations, etc. In addition, documents concerned are accessible in the Intranet.

为确保问题传递的扁平化，公司利用月会、周会、董事长信箱、总经理信箱等多种渠道、各种各样的形式，加强员工与管理层之间的沟通。

为保障自上而下的管理无边界，在进行二年一届的干部换届聘任工作时，对新任干部提出“岗位任职目标承诺”，并对承诺内容除各岗位需要完成的业务指标以下，作出以下具体要求：

In order to facilitate the information transmission, we strengthened the communication between staff and administrators via monthly meeting, weekly meeting, the chairman mailbox, the general manager mailbox and other channels.

To guarantee the top-down boundless management, we proposed the “Office Goal Commitment” for the new leaders. The following requirements are the operating indicators need to be finished by new leaders besides their duties:

Ⅰ 打破管理壁垒，加强工作主动与协作性：承诺对于不明确、有争议的工作范围、职责，主动承担的全年次数，并无推诿现象；以每月绩效考核对应项得分情况为考核依据。

Breaking the management barrier and making the work active and cooperative. For the undefined, disputed working range, responsibilities, no buck-passing is allowed. The scores of monthly performance assessment are the evaluation.

Ⅰ 执行力：对于各类决议和上级要求，因自身主要责任没做到的全年次数 0 - 3 次；承诺对于本职工作范围和职责不以本位主义推诿责任，对于涉及本职工作范围和职责的事务践行自动自发、主动作为的处事氛围；以每月绩效考核各部评价为考核依据。

Execution: According to all kinds of decisions and leaders' requirements, those who do not finish the job because of self-responsibility can not do that over 3 times. For those works of their own working range and responsibilities, no buckpassing is allowed. The monthly performance assessment is the evaluation.

Ⅰ 首问负责制、及时性、有无反馈：承诺对于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明了，并结合公司各高层领导主观考评为考核依据。

Primary responsibility, timeliness, with or without feedback: For the problem raised by any staff, one should take the first responsibility if the problem is partly related to one's working range and then give an overall solution and feedback. If it is not, one should tell the reason and show the way of solution. The staff response and the assessments of executive leaders are the evaluation.

通过“360 度劳动保障沟通体系”、“岗位任职目标承诺”等无边界沟通渠道搭建和管理，提高了企业工作效率，优化了内部劳动关系，为人企和谐、共谋发展创造了良好的环境和空间。

Through 360 Degree Labor Protection Communication System, Office Goal Commitment and other boundless communication channel and management, we greatly improved the work efficiency of enterprise and optimized the interior labor relations, which made a nice environment and space for harmony and common development.

员工发展 Staff development

1. 优化人才资源环境、创新人才选拔机制：创新人才选拔机制是企业持续发展的重要保障，公司针对不同岗位人才，如行政职能管理人员、技术研发型工程师、营销工程师、生产技工等分别设计不同了晋升通道和选拔机制，如管理干部换届聘任制度，每隔二年所有干部全体“卧倒”后重新竞聘上岗，保证了新鲜血液的补充，形成了优胜劣汰、你追我赶的良性竞争机制；技术研发类工程师设立首席、资深、高级、普通、助理等不同技术等级晋升制度，保证每位员工在各自职业生涯上有不同的上升空间，避免职业发展中的“瓶颈”或“天花板”。

First, optimize talents resources environment and talents promotion mechanism: Optimizing the talent promotion mechanism is crucial for the enterprise sustainable development. The Company has formulated different talents selection and promotion mechanism for different posts. For example, the term of all the managing-level posts will be expired every 2 years and then re- select new talents via the post completion, forming the benign competition; The technical development engineer is ranked in the Chief, the Senior, the General and the Assistant to make sure every single employee has promotion opportunities, avoiding “Bottleneck” or “Ceiling” in the career development.

2. 完善人才制度建设：重视培训、人才评估。每年制定年度培训计划；每周开设第二课堂，邀请国内外知名技术专家、企业家及院校讲师为全体员工授课；定期派送技术人员到电站/优秀企业学习/参观、赴专业培训/学习机构深造；为员工提供申报各项个人职业资质、职称的机会；与国内各电力院校及省内知名院校的产、学、研合作，为员工提供二次深造的良好平台；对年度业绩突出、技术贡献杰出人员给予“营销十佳”、“技术十佳”、“生产十佳”、“十佳新人”等荣誉称号，将其事迹及科研论文选送至国家级刊物发表，使获奖者成就产生广泛社会影响，保证在物质及精神层面得到实现和满足，促进人才成长。

Secondly, perfect the talent system: HNAC highly values the training and the talent review. Make the annual training schedule once a year; set up the Second Classroom weekly to invite experts, entrepreneurs and lecturers to give lessons; send the technician to visit and study in the power station, reputed enterprises and training/learning institutions; offer opportunities for the staff to apply professional qualification certificates and titles; cooperate with famous colleges and universities across China to provide the staff a better platform for further study; award the staff having the outstanding performance and great technical contributions with the title of “Top 10 in Marketing”, “Top 10 in Technology”, “Top 10 in Production” and “10 Best Newcomer” as well as forward their achievement and research papers to national-level journals for publishing, which will inspire the awardees both in economical and spirit.

三、 反馈与评价 **Feedback and evaluation**

公司以人为本，着重建立了以职工薪酬激励机制为核心的薪资福利体系。

公司制定了《薪酬管理制度》和《绩效考核体系》，建立了以岗位绩效工资为核心的工资结构，包括岗位工资、绩效工资，即与岗位劳动业绩相联系的激励性工资。同时，公司建立健全了劳动计量与考核制度。建立了较为完善的工资调整与运行机制。

People always come first. The payment and benefit system implemented in HNAC focus on the employee's payment motivation mechanism.

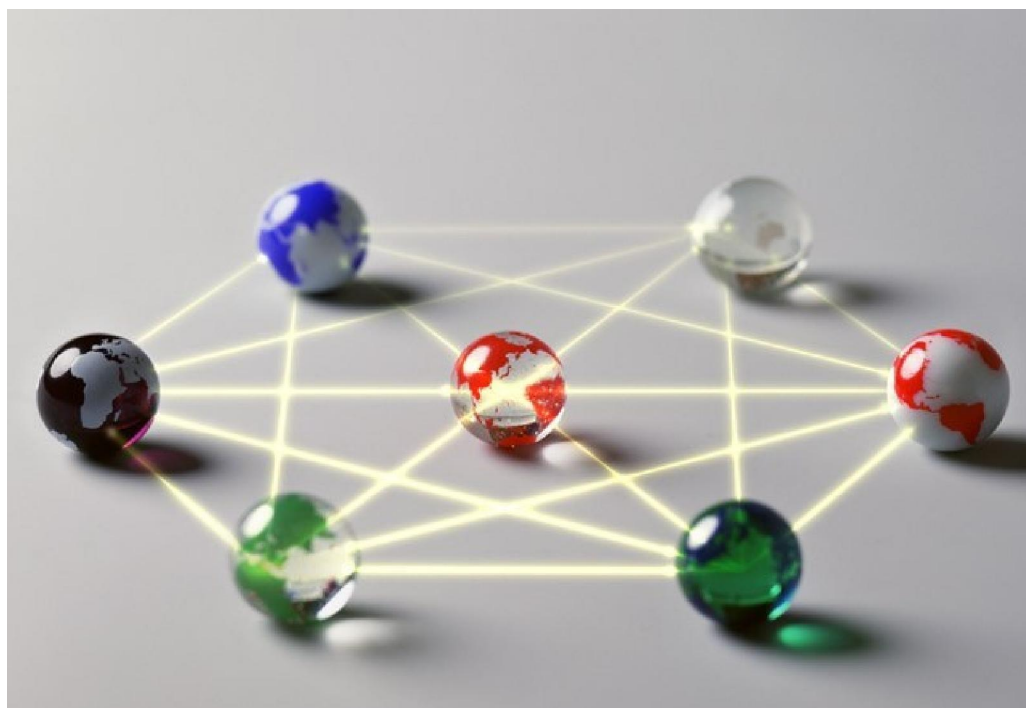
Therefore, HNAC formulates the *Payment Administrative Regulation, Performance Appraisal System* which take the post performance wage as the core and consist of the incentive pay (incl.: post wages, performance pay, etc.) evaluated by the post achievement. Meanwhile, the Company has set up a complete system for labor counting, appraising, and wage adjustment and operation mechanism.

协调企业与员工和谐方面是将企业发展与员工发展结合起来，在制定近期和远期发展计划时公司也为员工制定个人发展计划，帮助员工进行个人职业生涯管理，公司为员工个人成长提供帮助，创造学习、培训机会，签订共同发展协议，报销学习、培训费用。员工队伍素质的提高，在广大员工之间、员工与企业之间、员工与社会之间形成了和谐的关系，同时也促进了企业的生产经营和经济社会全面发展。

Create a mutual development relation between the enterprise and the employee. While aiming at the development for the Company, it also helps the employee complete and perfect their personal career plans. The Company provides opportunities for learning and training and covers the cost incurred, and signs the mutual development agreement. Improving the employee quality is beneficial for building the harmonious relation amongst employees, enterprises and the society, and thus promoting the development of the enterprise management and the society development.

在《薪酬管理制度》和《绩效考核制度》的基础上，公司通过年度薪酬调查、行业内薪酬白皮书等数据，动态了解业内薪酬情况，建立了适应市场变化的包括岗位工资和绩效工资（即与岗位劳动业绩向联系的激励性工资）相结合的工资结构，同时，也健全了员工的劳动计量和考评工资，拥有了较为完善的工资调整与运行机制，完善而具有活力及竞争力的薪酬体制对公司建立企业价值和组织观念提供了强有力的支持，与公司经营战略相辅相成、相得益彰。

On the basis of *Payment Administrative Regulation* and *Performance Appraisal*, the company established a reasonable pay structure including post wage and performance pay (an incentive wage related to post labor performance). At the same time, we perfected the labor measurement and assessment wage, so that a sound wage adjustment and operating mechanism are formed. The perfect, active and competitive pay system offered strong support for building the enterprise value and organization, which is also a complementary element of the company business strategy.



为激励其产生佳绩的效果。公司就薪酬水平、薪酬体系、薪酬结构、薪酬构成以及特殊员工群体的薪酬在做出调整决策时，会通过年度职工代表大会上进行工资集体协商。在季度调薪时充分尊重员工意愿，并以一线管理人员意见为基础进行调整，当薪酬发生变化时及时交流。薪酬体系作为一种持续的组织过程，以人力资源中心为主牵头组织，进行了持续不断薪酬计划更新，年度拟定薪酬预算，不定期就薪酬管理问题与员工进行沟通，同时定期对薪酬系统的有效性做出评价而后不断予以完善。

All the employees feel the external competitiveness and internal fairness, so that we can attract more talents and encourage our staff to create more achievements. During the adjustment of pay level, salary system, salary structure, salary composition and the payment of special staff, we will discuss those problems in the annual workers conference. At the seasonal pay adjustment, we will value their personal intension based on their administrators, and communicate in time when there is salary variation. The salary system is a kind of continuously organization which lead by the Human Resource Center which keeps updating. The salary budget is determined annually and we will communicate with staff on pay management problem irregularly. The upgrading of salary system will keep on based on the assessment.

未来愿景

Future Vision

未来三年发展规划

Development plan in the next 3 years

(一) 2011 年工作目标

A. Working plan for 2011:

1. 实现销售订单额 6 亿元，实现利税 8000 万元；
2. 继续开展联合国水电控制设备示范基地/国际技术交流中心的建设工作；
1. To achieve sales order RMB 600,000,000 Yuan and tax RMB 80,000,000 Yuan
2. To continue the construction of UNIDO ICSHP Changsha Hydropower Control Equipment

Manufacturing Base/International Technology Exchange Center

(二) 未来三年发展规划

B. Development plan in the next 3 years:

1. 目标：

(1) 3 年内，公司实现年销售产值 10 亿元，利税突破 2 亿元，解决就业达 1000 人；

(2) 成功上市：公司于 2009 年 5 月份聘请券商、会计师事务所、律师事务所等中介机构

进驻辅导，并拟新设华自科技股份有限公司为上市平台，现正在进行改制工作。

1. Aims:

(1) HNAC will achieve annual sales value of RMB 1,000,000,000 Yuan and tax of RMB 200,000,000 Yuan in 3 years, at the same time offer total employment of 1,000.

(2) Go public successfully: Since May, 2009, we employed the intermediaries like dealer,

accounting firm, law firm, etc to assist our listing work. Hunan Huazi Science and Technology Co., Ltd. is newly established as a listing platform and now the restructuring work is proceeding now.

2.实施原则：先做实——再做强——再做大。

2. Implementation principle: be solid, be stronger, and then be larger.

3.实施提要：

(1) 依托联合国示范基地的平台，3年内力争将示范基地打造成为全球研发技术水平最高、生产制造能力最大、销售产值最多的中小水电自动化控制设备的领航者；

(2) 大力推广“完全无人值班电站”改造项目，积极引导无人值班电站加入我司“远程监控服务平台”，以远程综合信息服务及维护系统的实施，初步构造“服务（售后）外包产业体系”。

(3) 大力拓展污水处理自动化市场，力争在2年内打造我司成为国内最大的污水处理自动化系统提供商；

(4) 继续保持现有中小水电自控、泵站自动化及信息化市场的核心竞争优势，提高市场占有率，取得未来市场定价权。

(5) 依托企业多年在电力、水利及其他工业领域参与自动化及信息化改造的经验，积极拓展轨道交通、太阳能及风能发电、物联网等新兴产业和领域的自动化控制及信息综合处理系统的市场。

3. Summary of implementation

(1) Based on the platform of UNIDO ICSHP Changsha Base, we will make it the leader of small and medium-sized HPP automation control equipments with the highest research and development level, biggest manufacturing capability and most sales value in 3 years.

(2) To greatly promote the *Fully Unattended Power Plant* reconstruction project, and lead the unattended power plants to join the *Remote Monitoring Service Platform* of our company. Therefore

we can construct the *Service (After-service) Outsourcing Industry System* based on the implementation of remote integrated information service and maintenance system.

(3) To greatly develop the sewage treatment automation market, and try the best to be the one of the biggest sewage treatment automation system provider in China.

(4) To keep the core competitive advantages of our products in the market of small and medium-sized hydropower station automation control, pump station automation and informatization; to increase the market share and seize the pricing power of future market.

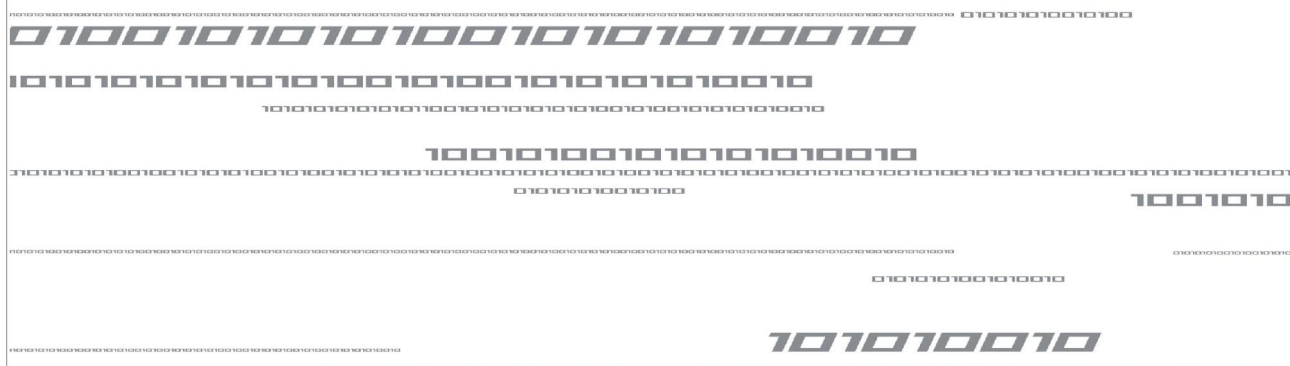
(5) With our rich experiences of automation and informatization in electric power, water conservancy and other industries, we are expanding to the automation control and information integrated processing system market of rail transportation, solar power and wind power generation, the Internet of things, etc.

4.长期战略目标：在信息综合处理、生物智能自动化控制应用领域成为全球领先者。

4. Long-term strategic objectives: to be the global leader in the fields of information integrated processing and biological intelligent automation control field.



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华自集团欢迎您对本报告提出建议和意见

We welcome your feedbacks and your opinions on this report.

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