

Eaton Corporation

Eaton China

Sustainability Report 2009

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2009年伊顿中国
可持续发展报告



引言

INTRODUCTION

“未来十年中，能够实现可持续发展并将其转化为优势的企业，将在竞争中脱颖而出。在伊顿，我们将这种机遇称为‘带来积极变化的能力’。”

柯仁杰

伊顿公司董事长兼首席执行官

“Companies that master sustainability and leverage it as a competitive advantage will emerge as the leaders in the coming decade. At Eaton, we call that opportunity 'The Power to Make a Difference.'”

Alexander M Cutler,

Eaton Chairman and Chief Executive Officer

在我们迈入2010年之际，可持续发展不再只是企业的一种选择，而是业务发展的必然需求。政府、监管机构、客户和消费者都要求看到切实的行动和承诺，推动环保、安全 and 健康，让我们的星球能够承载起今天的人类和我们的子孙后代。

今天，中国已成为全球可持续发展进程中新崛起的领导者。清洁技术、可再生资源、能源效率、减排和循环利用等都已经是中国政府和企业最关心的头等大事。

许多公司正在努力适应这一新的全球格局。在伊顿，我们多年来一直把“正当经营”作为公司愿景和日常工作的核心。我们早已把可持续发展融入到经营方式和为客户提供的尖端技术、产品和服务之中，为今天和未来创造一个更美好、更安全、更健康的世界。

可持续发展也一直是伊顿中国业务的核心。自从1993年进入中国市场以来，我们不但为推动基础设施建设、推进社区发展做出了积极贡献，也努力帮助中国社会以更环保、更可持续的方式进步。2008年，我们首次发布了伊顿在中国地区的可持续发展报告。

2009年，伊顿全新环保的亚太地区总部在上海正式启用，再次实现我们对可持续发展的承诺。我们还获得了《商务周刊》“中国100快公司”和“中国50绿公司”两项重要认可。

这份2009年伊顿中国可持续报告着重展示了公司过去一年在中国市场的环保行动和产品，这也是伊顿全球“可持续发展社区计划：满足现实需求、兼顾长远发展”的组成部分。

周涛

伊顿中国区总裁

As we enter 2010 and the Year of the Tiger, the business world has recognized that sustainability is not an option but a business imperative. Governments, regulators, customers and consumers all demand tangible action and commitment to environmental protection, safety and health to ensure that our planet can sustain our generation and those who follow us.

Today, China has emerged as a new leader in the global sustainability movement. Clean technologies, renewable resources, energy efficiency, reduction and reuse are all top priorities for the Chinese government and businesses.

Many companies are scrambling to adapt to this new global paradigm. For Eaton, “Doing Business Right” has been central to our vision and our work for years. In the way we conduct our own business and the advanced technologies, products and services that we provide to our customers, we have integrated sustainability into the fabric of our business, helping to create a greener, safer and healthier world for people today and for the next generation.

Sustainability has been a core focus for Eaton in China as well. Since we established our operations in China in 1993, we have contributed not only toward the development of the infrastructure and communities in which we work and live but have done so in ways that help make China’s development environmentally sustainable.

Building upon past sustainability efforts in China, in 2009, Eaton opened our new, environmentally efficient Asia Pacific regional headquarters in Shanghai. Eaton was also named by Business Watch magazine as a recipient of the 2009 Fast Company Top 100 and Green Company Top 50 awards.

This Report describes in detail some of Eaton's initiatives and products in China in 2009 and is part of our global “Sustainable Community” initiative: meeting today's needs without compromising tomorrow's.

Happy Year of the Tiger!

Joe-Tao Zhou

President, China, Eaton Corporation



a global
technology leader

关于伊顿

伊顿于1993年进入中国市场并设立首家合资企业，主要生产用于农业和建筑设备的转向器和液压摆线马达。此后，伊顿通过并购、合资和独资的形式迅速发展在中国的业务。如今，伊顿在中国已有27家工厂、超过10000名员工。

伊顿公司是一家多元化的动力管理公司，2009年销售额达119亿美元。伊顿公司在许多工业领域都是全球领导者，包括电源品质、输配电及控制系统；工业设备和移动工程机械所需的液压动力元件、系统和服务；商用和军用航空航天所需的燃油、液压和气动系统；以及帮助卡车和汽车提升性能、燃油经济性和安全性的动力及传动系统。伊顿公司现有约7万多名员工，产品销往150多个国家和地区。

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ABOUT EATON

Eaton began operations in China in 1993 through a joint venture to manufacture steering control units and hydraulic motors. Since then, its presence has grown significantly in the region through acquisitions, joint ventures and wholly-owned subsidiaries. In China today, Eaton has 27 operations with more than 10,000 employees.

Eaton Corporation is a diversified power management company with 2009 sales of \$11.9 billion. Eaton is a global technology leader in electrical components and systems for power quality, distribution and control; hydraulics components, systems and services for industrial and mobile equipment; aerospace fuel, hydraulics and pneumatic systems for commercial and military use; and truck and automotive drivetrain and powertrain systems for performance, fuel economy and safety. Eaton has approximately 70,000 employees and sells products to customers in more than 150 countries. For more information, visit

www.eaton.com

从办公室到生产工厂，从太阳能发电站到城市街道，从机场到水电站大坝，伊顿环保产品帮助客户更加高效、安全地使用能源。伊顿产品遍布：

— 家庭

— 工作

— 道路

— 空中

— 海洋

我们通过多种不同技术，发挥业界领先的环保技术能力：

•刀片式UPS技术，提高能效5%到8%

•逆变器，有效利用太阳能

•油电混合动力车辆技术，降低油耗20%到60%，减少温室气体排放和噪音污染

•全球首套5000psi液压系统，减轻飞机重量，降低油耗

•乘用车机械增压器，提高燃油经济性10%以上，减少排放

以上和许多其它伊顿技术都已投放中国市场，为合作伙伴和客户创造可持续发展的优势。

From office and plant facilities to solar farms, cityscapes, airports and hydropower dams, Eaton sustainable products help its customers use power more efficiently and safely. Eaton's products can be found:

— In the home

— At the workplace

— On the road

— In the air

— In the water

We deploy our industry leading capabilities for sustainability through many different technologies including:

•Blade UPS technology, improving efficiency by 5% to 8%

•Inverters for efficient solar energy

•Hybrid electric vehicles leading to 20% to 60% fuel savings, reducing greenhouse gas (GHG) emissions and noise pollution

•The world's first 5000 psi hydraulic systems in aircraft, leading to lower weight and reduced fuel consumption

•Superchargers for passenger cars to improve fuel economy by more than 10% and reduce emissions

These and other Eaton technologies have been deployed in China creating the advantage of sustainability for our partners and customers.





承诺 身体力行

可持续发展根植于伊顿的文化之中。在我们的各个业务部门，在全球的各个地方，伊顿员工秉承并实践着同样的环保理念发挥聪明才智，提高产品和服务的效能和表现，帮助并服务于他们所生活和工作的社区。

卓越的环境、健康与安全表现

伊顿致力于实现世界级的环境、健康与安全(EHS)表现。我们根据伊顿全球环境、安全与健康管理体系(MESH)计划，仔细衡量、评估项目进展。

伊顿已将环境、健康与安全(EHS)融入六西格玛流程改进项目之中。我们在中国的各个业务部门都遵循同样的理念，所有工厂也都执行同样的高标准，提供同样的培训课程。2009年，EHS管理人员和工厂领导层参加了累计超过900个工时的EHS培训和知识普及课程。通过培训，共有14位MESH评估专家通过资质认证。

根据联合国制定的标准，伊顿工厂已经开始根据不同工厂的情况采取有针对性的MESH环境管理要素，更好地保护环境，贯彻ISO 14001认证的要求。2008年，我们邀请了ERM认证与核实服务机构对伊顿全球各个主要工厂进行独立审核，提高数据准确性与可靠性。在亚太地区，17家伊顿工厂已经通过了ISO 14001 ERM CVS评估。

2009年，我们在所衡量的各个EHS领域都取得了进展，但我们也认识到还有改进提高的空间。

我们继续提高员工健康与安全表现，亚太区工厂伤病假数量(合计应记录事故率)降低了28.8%，有10家工厂实现了零伤病事故率。

我们在中国的工厂均大幅度降低了温室气体、废水和废弃物等各类排放。我们还对所有现有工厂进行详尽的能耗审查，寻找节能环保方面的挑战和机遇。

亚太区EHS表现	2009年表现	相对2008年降低
能源消耗	减少2,131,254千瓦时用电量	NA
温室气体排放	减少1,680公吨CO2排放	14.90%
废弃物产生总量	减少89,376公斤废弃物产生量	18.90%
水资源消耗量	节约11,754立方米用水量	11.80%
合计应记录事故率(TRCR)	0.42	28.80%
缺勤事故率(DACR)	0.27	20.60%

所有伊顿在中国的工厂都配备了先进的废水处理系统。比如，我们投入巨资在山东济宁的液压设备工厂配备了世界级的工业废水和污水处理设备，日处理能力达100吨。在液压集团位于泸州的工厂、车辆集团位于无锡的工厂和电气集团位于苏州的工厂也都采用了同样的环保设备。

2009年，伊顿获得《中国企业报》颁发的“跨国公司履行社会责任优秀案例”奖项，表彰我们在全球环境、健康与安全(EHS)方面的表现。

在全球范围，伊顿加入了“国际碳披露项目”和“温室气体减排倡议”，始终遵循相关约定，进一步强化环保承诺。公司承诺在2006到2012年间降低温室气体排放18%(根据销售额计算)。在碳披露项目(CDP)的碳披露表现方面，伊顿在标准普尔500强制造企业中排名第二，并在所有完成CDP6全球调查的多元化工业产品制造商中位列第一。

COMMITMENT Live It

Sustainability is deeply rooted in Eaton's culture. Across our business lines and around the world, Eaton people have embraced sustainability and lived by this philosophy by applying ingenuity to improve efficiency and performance in the products they provide to customers, and by serving the communities in which they work and live.

Environmental, Health and Safety Excellence

Eaton is committed to achieving world-class environment, health and safety (EHS) performance. We carefully measure and evaluate our progress using our global Management System of Environment, Safety and Health (MESH).

Eaton has integrated EHS components into our Lean Six Sigma process improvement program. Sharing such ideas across our businesses, high standards are applied at all our plants and trainings are conducted throughout our facilities in China. More than 900 documented man-hours of EHS training and exposure for EHS managers and site leadership were conducted in 2009.

In line with standards set by the United Nations, our plants have begun to adopt site-specific MESH environmental management elements in environmental protection and ISO14001 deployment. All the plants in China have launched the site-specific MESH activities through MESH profiling and risk assessment.

During 2008, Eaton hired ERM Certification and Verification Services to perform an independent audit of key Eaton sites across the world to confirm and improve the accuracy and reliability of our data. Seventeen (73.9%) sites in the Asia Pacific region have passed ISO14001 ERM CVS assessment.

For the year, we made progress in virtually every area of EHS performance we measure, but we recognize we still have work to do.

We continued to improve our employee health and safety performance during 2009, reducing the number of work-related injuries or illnesses at our facilities in the region by 28.8 percent. Ten (43.5%) of manufacturing sites in Asia Pacific recorded zero recordable or injury free status

All Eaton China sites have significantly improved results on environmental metrics such as GHG emissions, water usage and waste. Eaton also performs exhaustive energy audits of existing facilities to identify conservation challenges and opportunities.

All of Eaton's plants in China are equipped with wastewater treatment systems. For example, Eaton invested heavily in a world-class industrial wastewater and sewage treatment plant at its hydraulics site in Jining City that can process 100 tons of wastewater every day. Similar environmental practices have also been deployed at a hydraulics plant in Luzhou, a vehicle group plant in Wuxi and an electrical plant in Suzhou.

In March 2009, Eaton was recognized by a leading publication, China Enterprise News, for its achievements in improving environmental, health and safety (EHS) performance worldwide and was honored among “2008 Excellent Cases of Multinational Corporations Fulfilling Social Responsibility.”

Further reinforcing our environmental commitment, Eaton is a compliant member of both the International Carbon Disclosure Project and the Business Roundtable's Climate RESOLVE initiative. Eaton has pledged to reduce GHG emissions by 18 percent, indexed for sales, between 2006 and 2012.

● 中国计划到2020年使单位国内生产总值二氧化碳排放较2005年下降40%至45%。

● China plans to curb 2020 emissions per unit of gross domestic product by 40-45 percent from 2005 levels.



社区

关爱社区 — 以人为本

可持续发展最终的目标是以人为本。伊顿关爱员工，关心业务所在社区中的居民和每天使用伊顿产品和服务的广大客户。我们共同努力，创造更美好的社区，提高对客户的贡献，减少对地球造成的负面影响。

在伊顿，参与社区建设远不仅是为了塑造良好的声誉，更是建立蓬勃进取、可持续发展的业务的核心。因此，我们努力成为工作和生活的社区中不可或缺的一份子。不同的社区有着不同的需求，而我们的管理者和员工们亲身参与选择并决定支持的项目。通过这种方法，员工们有机会见证他们的决定和行动所取得的成果并引以为傲，从而提高参与项目的积极性。

2008年“5·12”汶川大地震后，伊顿向中国红十字会及其下属单位捐款约人民币200万元用于救援赈灾，其中近半数来自员工捐献。此外，许多伊顿员工还志愿前往受灾地区，亲自参加救助工作，积极为当地社区贡献自己的力量。

来自济宁、泸州、宁波和上海的13名伊顿员工在四川白鹤林为当地小学建起了图书馆。他们从重庆出发，驱车五小时到达那里的偏远山区，并花费两天时间在当地就建设事宜进行联系安排，亲手建立起了“伊顿图书馆”，将公司和员工共同捐赠的超过2000本图书摆上书架。

2009年，伊顿再次向上海师范大学捐赠2.5万美元，用于支持其中西部教育发展项目。“上师大伊顿联合支持中西部教育项目”是上海师范大学和伊顿联合为中西部教育事业的发展，培养人才、以教育

促经济，推动和促进中西部地区经济和社会发展的爱心项目。2006年，伊顿首次捐款20万元以及一台HP9000服务器用于资助该项目。到目前为止，公司已累计向该项目捐款逾11万美元。

项目资金主要用于资助中西部地区中小学教师的培训进修、支持上师大师生赴贫困地区参加中短期支教项目，对前往中西部地区从事中小学教学工作的师大毕业生提供生活补助等。为了更好地推动当地教育的发展，激励同学奋发图强，伊顿和上师大还在伊顿贵州支教项目中设立“贵州安龙一中奖学金”项目。

2006年至今，伊顿中国和国内员工累计捐赠超过500万元人民币善款，支持各种慈善项目，帮助社区发展。过去五年间，伊顿全球向慈善事业捐款的金额和参与社区活动的数量已经提高了75%以上。2008年，伊顿慈善基金向全球各慈善组织提供近800万美元的援助。

丰富工作环境

伊顿是一家以价值观为导向的公司，尊重每位员工的个体差异，珍视不同的观点和看法以及由此推动的创造和革新。我们的核心价值观包括诚信、信任、尊重、荣誉和诚实，这是我们所有行为的基础，也是伊顿致力成为受员工、客户、股东和社区尊重的企业的核心。

伊顿连续第二年被《商业道德(Ethisphere)》杂志评为“全球最具商业道德公司”之一，认可伊顿对“正当经营”的不懈努力伊顿始终坚定不移地坚持的最高道德标准和行为规范。

伊顿还设有独立的申诉/咨询办公室，这是一个独立、中立且保密的渠道，帮助全球员工发现并解决与工作相关的问题。2009年，我

们还在上海设立了首个地区申诉/咨询办公室，为中国地区1万多名员工提供咨询。

伊顿拥有一整套通行的政策、守则和流程，形成一个统一的平台，发挥众人所长，形成一个团结的整体，更好地开展工作。我们将这个平台称为伊顿商业系统，包括“伊顿业务理念：人才造就卓越”，概述了公司和员工之间在共同创建富有吸引力的优秀环境方面的相互责任。

伊顿努力在所有开展业务的地区成为知名的最佳雇主。我们提供完善的福利待遇，根据员工不同的生活方式和需要相应调整，包括帮助员工平衡工作和生活、提高身心健康的项目。

我们的致力于创造开放、坦诚的工作环境。2009年中，伊顿中国员工100%参与了全球年度员工调查，以匿名保密的方式，就强化公司实力、提高业务运营、改进相关政策提出了自己的意见。所有员工无论职位高低都能说出自己的想法。

伊顿支持借助各种“及时便捷、恰到好处、度身定制”的学习资源不断学习提高。学习资源包括伊顿大学图书馆、自主网络学习、现场和虚拟活动、讲师主讲课程和实践社区等。此外，我们还启动了全新的全球学习管理(LMS)体系，并在中国设立了伊顿大学“校区”，推动开发培训和职业发展项目，满足不同地区员工的需求。2009年，中国校区开设了23个项目，为400多名员工提供了759天工作时的课堂培训。

COMMUNITY

Caring for Our Communities

Ultimately, sustainability is all about people. Eaton cares about the people it employs, the people in the communities where it operates, and the people who use its customers' products and service everyday. Working together, we are making a better community creating a bigger impact for customers and leaving a smaller footprint in the world.

At Eaton, community involvement goes far beyond mere goodwill. It is essential to building thriving and sustainable businesses. That's why we work hard to become an integral part of the communities in which we live and work. Every community has different needs. Our managers and employees help make decisions on which local programs to support. This approach inspires greater employee participation and volunteerism, because our people can directly see and take pride in the results of their own decisions and actions.

Eaton contributed approximately RMB 2 million about half from employees to the Red Cross Society of China and its affiliates to support relief work and humanitarian efforts following the massive earthquake that struck China's Sichuan Province in May 2008. In addition to donations, many of the Eaton China employees volunteered to go to the earthquake-affected areas to provide support in person and contribute their own efforts to the communities there.

Thirteen employees from Eaton China operations in Jinling, Luzhou, Ningbo, and Shanghai set up the library at Baihelin Primary School in Sichuan. The volunteers traveled five hours from Chongqing to the remote, mountainous area, where they spent two days working at the school on the new addition that was officially named the Eaton Library. Once all the shelving was in place, the Eaton group had another important task at hand lining the shelves with over 2,000 books donated by Eaton and its employees in China.

In addition, Eaton initiated a “Powering Communities Grant” totaling \$25,000 to

benefit Shanghai Normal University (SNU). Funds will be used to sponsor its Midwest Education Development Program which supports basic education in China's underdeveloped Midwestern regions.

The Eaton-SNU Midwest Education Development Program started in 2006. To date, Eaton has contributed more than \$110,000 to help improve the education standard in the country's underdeveloped Midwestern regions. The program includes a training program for primary and middle school teachers from the Midwestern areas, short-term teaching programs in the schools for students and teachers of Shanghai Normal University, and donation of books and equipment to the schools and establishment of scholarships.

Since 2006, Eaton and its employees in China have helped address community needs by donating nearly RMB5 million. In 2008, the Eaton Charitable Fund donated almost \$8 million to various charitable organizations worldwide, an

Enriching the Work Environment

Eaton is a values-based company that respects the unique individual differences of every employee and values the diverse viewpoints and perspectives that lead to creativity and innovation. Our core values of integrity, trust, respect, dignity and honesty are the foundation of everything we do and the essence of why Eaton strives to be admired by employees, customers, shareholders and communities.

For the second straight year, Eaton was named one of the “World's Most Ethical Companies” by the Ethisphere Insitutue, which recognizes our corporate dedication to “Doing Business Right” an unwavering commitment to the highest ethical practices and standards of behavior.

Eaton also operates an Office of the Ombudsan independent, neutral and confidential resource to help employees identify and resolve work-related issues or problems. During the year, we expanded our Ombuds service to more than 10,000 Eaton employees at more than 100 sites in China, Hong Kong and Taiwan. In addition, we are evaluating further rollouts in Asia and Europe.

Eaton operates on a platform of common policies, practices and processes, helping us to leverage our strengths and perform as one integrated operating company. This platform known as the Eaton Business System includes “The Eaton Philosophy: Excellence Through People,” which outlines the mutual responsibilities of our businesses and employees for creating and engaging high-performance environment.

Eaton aims to become known as a top employer everywhere we do business. We provide comprehensive benefits, tailored to each employee's life and lifestyle. This includes programs to help our employees achieve a healthy work/life balance.

Our workplace thrives on openness and candor. One hundred percent of our China workforce participated in our annual global employee survey in 2009, providing confidential feedback to strengthen our company and its practices and policies. Every employeeat every levelhas a voice.

Eaton supports continuous learning through a wide variety of learning resources that are available “just in time, just enough, just for you.” These resources include Eaton University, the Eaton University Library, self-directed e-learning programs, live and virtual events, instructor-led programs and Communities of Practices.

Additionally, we opened regional Eaton University “campuses” in Chinato facilitate the creation of training and career development programs specific to the needs of each region. In 2009, it launched 23 programs in China, covering over 400 employees leading to 759 days of training.



绿色环保的全新亚太地区总部

为满足公司在中国地区业务不断扩大的需要，伊顿投入巨资新建了节能环保的亚太地区总部，再次体现了对业务可持续发展的承诺。

位于上海的总部大楼采用了多项伊顿自有的“绿色建筑”解决方案，其一大特色就是强调使用环保材料和设备，采用了伊顿业界领先的高能效不间断电源系统(UPS)、断路器、开关设备和照明控制系统等。

伊顿还参加了美国绿色建筑物理学会(USGBC)的“能源与环境设计先锋”(LEED)项目，并决定通过该理事会的第三方认证体系为总部大楼申请LEED认证，预计2010年将获得LEED认证银制评级。通过该项目和认证，能够促进环保发展、提高员工健康水平、降低运营成本。

主要环保指标包括：

- 办公家具重复利用率31%
- 节约用水34%
- 70%的木材获得FSC认证
- 76%的材料来源于本地区
- 拆建物料循环利用率88%
- 90%的座位能够享受到阳光和景观
- 100%的地毯通过“绿色标识+”认证

我们制定了专门的水资源利用效率目标。预计通过更换节水型座便器、新型淋浴设备和节水型龙头，每年节约用水30万加仑，相比以前和《1992年美国环境政策法案》中的要求节水32%。

从选址开始实现目标：

- 热岛效应：所有车辆停放于地下。
- 替代性交通：能够搭乘公司班车、公交车辆、地铁。

- 替代性交通：自行车库和更衣室。地下室增加淋浴和更衣设施。
- 替代性交通：停车场提供至少三个合伙用车专用停车位。
- 社区互动与基础设施：随着周围社区的成熟正不断加强。

能源与大气目标方面：

- 进行基本调试，保证所有系统均按预定方式工作
- 设定所有设备的最低限度能效表现指标
- 在制热、通风与空调控制(HVAC)系统中减少使用氟利昂
- 能效表现：照明，通过减少固定装置和使用高效LED灯具，将照明功率密度降低于标准25%的水平
- 能效表现：HVAC系统，通过优化分区和控制，提高设备能效
- 能源使用、计量和支付责任制度：使用伊顿产品、IQ260、Power Xpert和Power Command等
- 绿色可再生能源：鼓励开发可再生能源技术



有效管理物料和资源，优化环保表现：

- 长期使用同一办公空间：建筑物所有权
- 建筑废弃物管理，减少75%的填埋
- 重复利用办公家具、储物柜、座椅等，占办公家具置换总额的30%
- 使用本地区材料，周围800公里范围内生产的材料在建筑材料总值中占40%以上
- 使用快速再生材料，占建筑材料总值的5%以上
- 使用经认证的木产品，占木材价值50%以上
- 存储和收集可循环使用物料，设置专门的区域和内部项目

室内空气环境质量，采取了多项措施，包括：

- 新鲜空气：通过增加换气设备，提供更多新鲜空气，超过行业标准ASHRAE达20%
- 空气质量监测：在所有封闭的会议室内安装二氧化碳传感器，监测空气质量，需要时可增加换气
- 建筑物室内空气质量规划：在建造过程中，对机械管路、过滤器和设备部件等均进行包裹，从而防止在系统启动后建筑空间有人使用时出现灰尘或其它物质散逸
- 建筑物IAQ管理规划：在建造过程中，所有项目团队均必须遵循SMACNA IAQ指导原则，包括HVAC保护、物料来源控制、通道无阻碍、日常事务管理、项目进度安排等。

- 挥发性有机化合物(VOC)低排放粘胶剂与密封材料：使用VOC低排放或零排放材料，包括所有橱柜、玻璃、地毯、织物等中使用的胶水(水基)，供应商为道康宁、通用电气、汉高
- VOC低排放油漆：在整幢建筑物内全面采用，供应商为多乐士、立邦
- VOC低排放地毯：均达到国际“绿色标识+”标准
- VOC低排放合成木料与层压板：所有橱柜家具中均采用
- VOC低排放整体家具：通过“绿色卫士”(Greenguard)认证，达到国际主要木材测试标准
- 室内化学品和污染物来源控制：文印室及其中的打印机、复印机等设备均有隔门和负压保护，所有污染物经过滤后集中收集，不影响员工工作空间中的空气质量
- 温度控制和HVAC系统：在制冷、供暖和换气方面均满足并超过国际和ASHRAE标准。此外，在春季和秋季室外温湿度宜人的季节，可开窗通风换气
- 日光和户外景观：覆盖超过95%的员工坐席。研究表明，自然光线能够大幅提高工作效率和健康水平，同时减少能源需求



Eaton Opens New, Eco-friendly Asia Pacific Regional Headquarters in Shanghai

To house the company's growing operations in the region, Eaton invested in a major project signifying its commitment to sustainable business its new environmental efficiently Asia Pacific regional headquarters.

Employing many of Eaton's own "green building" solutions, the design of the new regional headquarters in Shanghai is projected to reduce greenhouse gas emissions and energy consumption at the facilities. Eaton's industry-leading energy efficient uninterruptible power system (UPS) equipment, breakers, switchgear and lighting control systems power the new building.

Eaton has participated in the US Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) program and pursued LEED certification for the new headquarters building through USGBC's third party verification system. Achievable goals were environmental sustainability, increased employee health and reduced operational costs. We anticipate earning LEED certification with a Silver rating in 2010.

Key sustainability features of the building include:

- 31% of furniture is reused
- 34% water use reduction
- 70% of wood is FSC certified
- 76% regional materials use
- 88% demolition debris recycled
- 90% of seats have daylight and views
- 100% carpet is green label plus

Water efficiency was a particular objective with a projection of 32% less water use than previous and the minimum standards for the US Environmental Policy

Act 1992 via replacement of low flow toilets, new showers and water saving faucets, saving more than 300,000 gallons of drinkable water per year.

Meeting our goals started with site selection:

- Heat island effect: providing all parking spaces underground.
- Alternate transportation: within access of private shuttles, buses and metro.
- Alternate transportation bicycle storage and changing rooms. Adding showers and changing rooms in the basement.
- Alternate transportation parking availability, providing minimum 3 carpool parking spaces.
- Community connectivity and infrastructure are expanding with the neighborhood growth.

Energy & atmosphere objectives were addressed by:

- Minimum energy consumption in all equipment
- CFC reduction in HVAC systems
- Energy performance lighting reducing lighting power density to 25% below standards via reduction in fixtures and use of LED high efficiency lights
- Energy performance HVAC: equipment efficiency, use of optimal zoning and controls
- Energy use, measurement and pay accountability: using Eaton products, the IQ260, Power Xpert and Power Command.
- Green power renewable energy credits: encourage the development of renewable energy technologies



Materials & resources have been managed for optimal sustainability by:

- Tenant space long term commitment ownership of the building
- Construction waste management diverting over 75% from landfills
- Resource reuse of furniture, cabinets, chairs for over 30% furniture replacement value
- Regional materials, manufactured regionally within 800km for over 40% construction material value
- Rapidly renewable materials use for over 5% of construction materials value
- Certified wood use for over 50% wood value
- Storage and collection of recyclables, designated areas and internal program

Indoor air environmental quality; extensive measures taken include:

- Fresh air: providing over 20% more fresh air to building occupancy than industry standards as measured by ASHRAE, by installing increased ventilation equipment
- Air quality monitoring: installed CO2 sensors in an all-enclosed meeting room to monitor the quality of air and inform when quality levels require increased ventilation
- Construction indoor air quality (IAQ) management plan, during construction, such that all mechanical ductwork, filters and units are wrapped to prevent dust and pollution from being distributed when systems are on and space occupied
- Construction IAQ management plan, during construction all project teams were required to work to meet the SMACNA IAQ guidelines, including HVAC protection, source control, pathway interruption, housekeeping and scheduling.
- Low emitting VOC adhesives and sealants were used in the building that have no or low VOC ratings, including all glues (waterbased) for cabinets, glass, carpets, fabrics, etc. Suppliers: Dow Corning, GE, Henkel
- Low emitting VOC paints were used in the entire building. Suppliers: ICI DuLux and Nippon Paints.

- Low emitting VOC carpets were used meeting the International Green Label Plus standards.
- Low emitting VOC composite woods and laminates were used in all cabinetry and furniture.
- Low emitting VOC system furniture is Greenguard certified and meets the international large chamber test protocol.
- Indoor chemical and pollutant source control such that all the copy fax rooms and their printers and equipment are located with doors and negative return air pressure such that all pollutants are removed thru a filter and exhaust system.
- Thermal comfort and HVAC systems were designed to meet and exceed international and ASHRAE standards, for cooling, heating and fresh air. In addition, during the spring and fall days when the humidity and outdoor air temperature are comfortable, operable windows can open for additional fresh air.
- Daylight and direct views to the outdoors are provided to over 95% of all seated staff spaces. Studies have proven that staff with exposure to natural light dramatically increase productivity, health and well being as well decrease energy usage.

● 中国国家主席胡锦涛在2009年11月的第十七届亚太经济论坛领导人年会上表示，中国将优化能源结构，推进产业升级，大力发展绿色经济，培育新的经济增长点，为经济可持续增长创造条件。

● Chinese President Hu Jintao pointed out at the 17th APEC Economic Leaders' Meeting in November of 2009 that China will strive to realize sustaining growth by optimizing the energy structure, accelerating the industrial upgrading, developing green economy and fostering emerging factors for economic growth.



伊顿绿色解决方案通过许多不同途径提高环境水平



减少物料使用	
不含六氟化硫的中压开关设备	使用环保材料作为绝缘物质，避免使用会造成严重温室效应的六氟化硫
整合生产体系	减少建筑物中电气系统所需的材料和空间
减少电力消耗	
绿色建筑解决方案	用于LEED认证建筑物的电力监测、控制、降耗设备
马达转速控制（变频马达）	精确控制HVAC系统的风扇和马达，减少电力消耗、延长设备寿命
Power Xpert计量设备	实时监测建筑物内各处的能耗和能效，寻找节能降耗机会
Power Xpert软件	在部件、设备和系统三个层面管理电源系统，寻找节能降耗机会
Pow-R-Command照明控制系统	自动减弱或关闭照明
Protection Station 650和800保护系统	自动关闭家用电脑和视听设备
节能校正器	减少通信网络中基站、顾客预置设备和路侧单元的电力消耗
9395不间断电源系统	减少大型数据中心的电力消耗
刀片式UPS	减少刀片式服务器、数据中心、网络设备、存储设备和关键信息技术设备的电力消耗
降低油耗和排放	
HEV（油电混合动力车辆解决方案）	提供用于多用途卡车、货运卡车、城市公交车和其它商用车辆的柴油电力混合动力系统
液压启动助力系统	提供用于垃圾运输车、通勤车和其它商用车辆的液压混合动力传动系统
串联式液压混合动力系统	提供用于货运卡车和其它商用车辆的液压混合动力传动系统
Roadranger FE 75-90W高能效润滑剂	提高重型卡车的燃油经济性，延长润滑剂更换间隔
UltraShift HV 5速、6速传动系统	提高中型卡车的燃油经济性
A380客机5000 psi液压系统	减轻大型飞机的重量，降低燃油消耗
使用替代能源	
GH100 ESP油管	使公路和非公路用车能够100%完全使用生物燃料
提高空气质量	
EH049 ESP油管和EH089 ESP油管	降低船用发动机和草坪维护设备的排放水平至低于EPA标准

伊顿绿色解决方案

伊顿在可持续发展方面的领导地位自然延伸至我们的动力管理产品与服务。我们的先进技术能够降低建筑物能耗，提高可再生能源的可靠性和效率，减少飞机、卡车、汽车的燃油消耗和污染排放等，不胜枚举。这些技术有助于客户提高可持续发展能力和盈利能力。

为了不断推动技术创新，我们启动了伊顿绿叶计划，表彰为客户带来卓越环保贡献的伊顿产品或解决方案。伊顿绿色解决方案是代表伊顿环境表现基准的产品、系统或解决方案。“绿叶标识”传达我们对用户的承诺，表明该解决方案已经过审核和记录，能够为客户、消费者和社区带来卓尔不群、业界领先的环境表现。所有伊顿产品和解决方案均旨在满足或超越相关的政府环保标准，而获得绿叶标志的产品则能够提供更高水平的“卓越环境表现”。

详细介绍

伊顿“绿叶标识”根据全球环保要求制定，包括：

- 第三方认可和保证（如有）
- 分析可能的负面影响、权衡方法和风险因素
- 详尽的文件记录
- 为客户提供更高标准的环境表现

由伊顿旗下不同业务集团和部门组成的跨部门委员会负责审核产品申请并决定是否授予绿叶标识。最终也是最高的决策权则在客户和消费者手中选择伊顿产品，创造卓越环境表现。

Eaton Green Solutions

Eaton Green Solutions are products, systems or solutions that represent Eaton benchmarks for environmental performance. The green leaf symbol is our promise that the solution has been reviewed and documented as offering exceptional, industry-leading environmental benefits to customers, consumers and our communities. Though all of Eaton's products and solutions are designed to meet or exceed applicable government standards related to protecting the environment, our products with the Green Leaf designation further provide "exceptional environmental benefit."

How It Works

Eaton's Green Leaf designation is modeled upon existing global standards for environmental claims, including:

- Third party certifications and endorsements (where available)
- Analysis of potential negative attributes, trade-offs and risks
- Thorough documentation
- Higher level of customer environmental benefits

A cross-functional panel from Eaton's corporate groups and businesses review the applications and make a decision to award the Green Leaf. Ultimately, our customers and consumers provide the final - and highest - level of approval by choosing our products for superior environmental performance.

Eaton green solutions, such as those listed here, help our environment in diverse ways.

Reduce Material Usage	
SF6-Free Medium Voltage Switchgear	Uses environmentally friendly choices for insulation, avoiding sulfur hexafluoride, an extremely harmful greenhouse gas
Integrated Facility Systems	Reduces materials and floor space needed for electrical power systems in buildings
Reduce Electricity Usage	
Green Building Solutions	Monitors, controls, and reduces electricity consumption in LEED certified buildings
Motor Speed Control (Variable Frequency Drives)	Reduces electricity consumption and extends equipment life through fine control of HVAC fans and industrial motors
Power Xpert Meters	Monitor energy consumption and efficiency in real time throughout a building, allowing identification of energy-saving opportunities
Power Xpert Software	Manages power system at a component, device and system level and allows identification of energy saving-opportunities
Pow-R-Command Lighting Controls	Automatically turns lights down or off
Protection Station 650 and 800	Automatically turns home computers and audiovisual devices off
Energy Saver Rectifier	Reduces electricity consumption in cellular base stations, customer premises equipment and road-side cabinet installations in telecommunications networks
9395 UPS System	Reduces electricity consumption in large datacenters
BladeUPS	Reduces electricity consumption for blade servers, data centers, networking applications, storage devices and critical IT equipment
Reduce Fuel Consumption and Associated Emissions	
HEV (Hybrid Electric Vehicle solutions)	Provides hybrid diesel-electric drivetrains for utility trucks, delivery trucks, city buses, and other commercial vehicles
Hydraulic Launch Assist	Provides hybrid hydraulic drivetrains for refuse trucks, shuttle buses, and other commercial vehicles
Series Hybrid Hydraulic System	Provides hybrid hydraulic drivetrains for delivery trucks and a broad range of other commercial vehicles
Roadranger FE 75-90W Fuel Efficient Lubricant	Improves fuel economy and extends lubricant drain intervals in heavy-duty trucks
UltraShift HV 5 and 6 Speed Transmissions	Improves fuel economy in medium duty trucks
5000 psi Hydraulic System for A380	Reduces weight and fuel consumption in large aircraft
Enable Use of Alternative Fuel	
GH100 ESP Fuel Hose	Enables use of 100% biodiesel fuel in on- and off-highway vehicles
Improve Air Quality	
EH049 ESP Fuel Tubing and EH089 ESP Fuel Hose	Reduce emissions beyond EPA standards for marine outboard engines and turf care equipment



助力业务增长—— 更为负责、更可持续

在中国，伊顿贡献力量，创造更加清洁、安全的环境。我们的各个业务部门电气、液压、宇航、卡车零部件和汽车组件 — 均致力于开发保护环境、节约能源、减少排放、控制资源消耗的产品和流程。

与国内产业紧密合作

伊顿油电混合动力车辆行驶在北京、广州、济南

2009年，美国总统奥巴马参观了南加利福尼亚州爱迪生公司的电动车辆技术中心，考察尖端车辆技术，而展示项目中就包括一项伊顿研发的创新技术。伊顿与电力能源研究所 (EPRI) 合作，开发出首套插入式卡车油电混合动力系统。该系统预计可提高燃油经济性达70%，并相应减少有害气体排放。

迄今为止，已有超过2400多台伊顿混合动力系统在全球投入运行，并且为全球客户累计提供了超过4820万公里清洁又可靠的服务。

伊顿公司提供全球最完整的商用车混合动力系统产品线。我们提供油电混合动力系统、插电式油电混合动力系统以及串联式或并联式两种液压混合动力系统。这些系统已经配置于万国、彼得比尔特、肯沃斯、福莱纳、依维柯、DAF、戴姆勒、福特等厂家所生产的卡车上，也在福田、中通、宇通、JNP、金龙、申龙、恒通、百路佳、Solaris等厂家生产的公交车辆上得到应用。

联邦快递、UPS、可口可乐、百事可乐、沃尔玛等多家企业都已使用配置伊顿系统的运输卡车。不仅如此，北美地区许多公用事业与电信公司也在都使用配置了伊顿混合动力系统的工程车。伊顿混合系统的优点包括能够有效提升燃油经济性达35%并降低同等比例的尾气排废、延长刹车寿命；另外，更可在车辆发动机待机停靠在工作现场时节省87%燃油量。

伊顿已在国内引入了该油电混合动力技术，并积极寻求与国内汽车厂商开展合作。

伊顿于2005年6月28日与福田签订协议，共同开发符合欧四排放标准的混合动力公交车。继2006年1月推出首辆样车后，5月再度推出了第二辆样车。伊顿还特别优化了逻辑控制单元以适应城市交通条件。2007年4月至10月间，伊顿在广州进行了连续场地测试，累计行程

35000公里，未出现任何可靠性问题。2007年10月，伊顿与福田共同赢得了广州一汽巴士30辆混合动力公交车的订单。车辆已于2008年1月驶上广州街头。此后已相继在国内其它城市开展场地测试。

在中国，伊顿混合动力系统为客户提供每天200公里左右的行驶服务，到目前为止，累计提供了超过1280万公里清洁、可靠的运行服务。

●在**广州**，30辆配有伊顿混合动力系统的福田客车自2008年1月起投入使用，累计行驶里程已超过480万公里。

●北京公交将在2010年2月前完成投放共计800辆配置伊顿混合动力系统的客车，累计行驶里程已达640万公里。

●济南公交于2009年9月投放了100辆配置伊顿混合动力系统的客车，累计行驶里程已达160万公里。

2009年8月，伊顿在台湾地区推出了创新型商用车混合动力系统，赢得了台北首都客运集团的75辆混合动力公交车的订单。通过与成运汽车制造公司合作，伊顿将先期交付两辆配备该柴电混合动力系统的车辆，并预计在2010年初交付总计75辆柴油电力混合动力公交车。

该项目不仅向台北首都客运集团证明了伊顿在混合动力系统应用方面的领先技术，也吸引到了台北市政府和民众的广泛关注和大力支持。

台北首都客运集团董事长李博文表示：“我们将进一步扩大车队中混合动力系统的使用范围，更好地利用这个安全可靠的环保能源。”

在台北地区，油电混合动力公交车在一般运输乘客的状态下，约可节省燃油达25%至30%，微粒及有害气体排放也将相应同比例减少。

伊顿的混合动力系统为公司赢得了全球商用车辆替代动力行业领袖的地位。伊顿混合动力产品还包括HLA(液压启动辅助系统)并联式液压混合系统。丰富的技术是我们的一项重大优势，为客户提供度身定制的方案，满足业务和市场需求。

Powering Business — More Responsibly, More Sustainably

In China, we are helping create a cleaner, safer environment. Our businesses Electrical, Hydraulics, Aerospace, Truck and Automotive develop products and processes that protect the environment, conserve energy, reduce emissions and manage resources.

Partnering with China Industry

Hybrid Electric Vehicles in Beijing, Guangzhou, Jinan

In 2009, when US President Barack Obama visited Southern California Edison's Electric Vehicle Technical Center near Los Angeles to view vehicles employing advanced technologies, an Eaton innovation was part of the line-up.

Eaton partnered with the Electric Power Research Institute (EPRI) to develop the first plug-in hybrid electrical utility truck system, which the is estimated to deliver fuel economy improvements of up to 70 percent and corresponding reductions in harmful emissions.

Eaton has put more than 2,400 hybrid systems into service, and collectively, our customers have accumulated more than 48.2 million kilometers of clean, reliable service throughout the world.

Eaton offers the world's most complete line-up of hybrid systems for commercial vehicle applications. We have a hybrid electric, plug-in hybrid electric and two hybrid hydraulic power systems, parallel and series, that are available or in development on truck models including International, Peterbilt, Kenworth, Freightliner, Iveco, DAF, Daimler, and Ford and on bus models from Foton, Zhongtong, Yutong, JNP, King Long, Shen Long, Heng Tong, BCI and Solaris.

Companies such as FedEx, UPS, Coca-Cola Enterprises, PepsiCo and Wal-Mart are using delivery vehicles with the Eaton system. Work trucks with Eaton hybrid power are also in service at many utility and telecommunications companies across North America. Benefits of the existing Eaton hybrid systems include fuel savings up to 35 percent, with similar percentages in emission reductions, extended brake life and idle time reductions of up to 87 percent during work site operations.

Eaton introduced the electrical hybrid system in China in 2005. It is mainly applied in buses, and is proactively cooperating with commercial vehicle manufactures in China.

Eaton signed agreement with Foton Euro-V on June 28, 2005 to jointly develop the hybrid- powered buses. Eaton finished deployment of the prototype of the first hybrid powered-bus in January of 2006 and the second bus in May of 2006. Eaton optimized the logic control to adapt to urban transportation needs.

Continuous field trail testing was conducted in Guangzhou from April to October 2007, with an accumulated mileage of 35,000 kilo meters. During the trail test, no reliability problems were encountered. In October, 2007, Eaton and Foton jointly won the order of 30 hybrid powered buses for Guangzhou Yiqi Bus, which hit the road in January 2008 in Guangzhou. The test trials in other cities in China were conducted afterward.

China customers are averaging about 200km of use per day with our hybrid electric power system and have accumulated a total of about 12.8 million kilo meters of clean and reliable service.

●In Guangzhou, 30 Foton buses with Eaton's hybrid electric power system have been operating since January 2008 and have accumulated 4.8 million km of passenger service.

●Beijing Transit will have 800 Eaton hybrid-powered buses in service by early Feb 2010. Those buses have accumulated 6.4 million km of service.

●Jinan Transit has been operating 100 buses with Eaton's hybrid electric power system since Sept 2009. They have accumulated 1.6 million km of service.

In August 2009, Eaton won the order of 75 hybrid buses with Taipei Capital Bus Group after the company launched an innovative commercial vehicle hybrid system in Taiwan. The system will power two hybrid diesel-electric transit buses built by Sincere International Mass Transportation Vehicle Company. The clean energy buses are the first of a fleet of 75 to be delivered to Capital Bus Company by early 2010.

This project, therefore, has not only showcased the leading technologies of Eaton in the application of hybrid power systems to the Capital Bus Company of Taipei, but also attracted close attention and support from the government of Taipei City.

“It is our intention to expand the use of hybrid power in our bus fleet to take greater advantage of this reliable clean energy source,” said Po-Wen Lee, chairman of Capital Bus.

In normal passenger transit duty in Taipei, the buses are expected to generate fuel savings of 25 to 30 percent, along with similar reductions in particulate and nitrogen oxide (NOx) emissions.

● 中国代表在2009年哥本哈根会议上表示，可持续发展是应对气候变化的有效方法和目标。应在可持续发展的框架下考虑并讨论经济发展、扶贫减困、保护环境、寻求应对气候变化和经济发展的双赢结果等问题，确保发展中国家的发展权。

● Chinese representative said at the Copenhagen conference in December of 2009 that sustainable development is an effective approach and goal for addressing climate change. Economic growth, alleviating and eliminating poverty, protecting the environment, gaining win-win results for development and addressing climate change should be considered and discussed under the framework of sustainable development to ensure the realization of the right to development for developing countries.



提高可再生能源技术效率

伊顿不断地在推动可再生能源技术发展、探寻不同能源渠道的各个领域中扩大着自身的影响。我们帮助客户将可再生资源转换成可靠的动力来源，加快全球各地符合成本效益的太阳能、风能和水电项目。

由于中国政府加速推进可再生能源发展，国内风力发电行业发展迅猛，发电量自2006年起每年翻番。如今，中国已经成为全球第四大风能发电市场。伊顿提供动力、液压和电气部件，让风力发电机在最严苛的环境下仍能正常工作。我们的本地业务基础和丰富的工程设计与服务能力，帮助我们在2009年中不断赢得重要项目。伊顿处于了非常有利的地位，能够满足国内不断成长的可再生能源需求，帮助中国崛起成为清洁技术领袖。

我们结合液压集团和电气集团的优势，开发出更可靠、更高效的部件，提升风力发电机运转效能、增加正常运行时间、降低运营成本。依靠遍布全球的网络和丰富的产品及工程设计服务，我们不断拓展与世界各地不同规模的风力发电机制造厂商的合作，赢得新业务从业界巨头到新兴企业。

2009年，在风力发电市场，伊顿赢得了多项重要合约。伊顿将为广东明阳风电技术有限公司提供480台液压动力组件，控制其风力发电机的叶片偏转和主轴制动。公司还将为国电联合动力技术有限公司提供装

备威格士整体液压旋入式插装阀的液压动力部件，控制风力发电机的叶片偏转和主轴制动，与国电在河北省生产的风力发电机配套。

与此同时，我们也整合液压和电气技术应用于其它可再生能源项目，比如在越南等发展中国家建设高效的水力发电站，与海洋能源技术公司(Ocean Power Technologies)合作从洋流和潮汐中获取电能。此外，伊顿在太阳能领域的业务也在不断扩大。我们推出并普及更高效的太阳能逆变器和电力存储系统，使最偏远的地区也能用上价格低廉的电力。

伊顿正在推出一系列基于伊顿现有技术的新型太阳能逆变器，将直流电力转换为交流，供应商业或公用事业领域。伊顿是欧洲和澳大利亚地区领先的住宅用太阳能逆变器供应商，并提供各类太阳能电力应用环境中的开关设备，覆盖从家庭到大规模系统的各个领域。

- 2009年11月，哥本哈根会议前，国务院于正式发布减排目标，即到2020年二氧化碳排放比2005年下降40%至45%。

- The State Council of China officially confirms an emission target in November of 2009, just before the Copenhagen conference that the emission level of CO₂ will decrease between 40% and 45% in 2020 compared with that of 2005.



Improving the Efficiency of Renewable Energy Technologies

Eaton has a growing presence in virtually every form of energy exploration to advance the development of renewable energy technologies. Eaton is helping to transform renewable energy into reliable energy, accelerating the cost-effective deployment of solar, wind and hydropower projects across the globe.

Bolstered by increased government support for renewable energy resources, wind power production in China has doubled every year since 2006, making China the world's fourth largest wind-energy producing country in the world. Eaton provides the power units, and hydraulic and electrical components, that keep those turbines turning in China's extreme climates. Our local presence, and full-service engineering and service capabilities, helped us win key contracts in 2009. Eaton is well positioned to meet the needs of China's growing renewable energy markets, as the country continues its drive to become a clean technology leader.

We're combining our Hydraulics and Electrical expertise to develop more reliable and capable components that improve the performance and uptime of wind turbines and help reduce operating costs. Eaton's global reach and broad portfolio of products and engineering services are helping us to win new business from turbine manufacturers of all sizes and all parts of the world from industry giants to emerging companies.

In the wind energy sector, Eaton has won a milestone contract from Guangdong MingYang Wind Power Technology Company, Ltd. of Zhongshan, China, one of eastern Asia's leading wind power technology providers. Eaton will supply MingYang with 480 hydraulic power units per year that will manage yaw and shaft braking functions on MingYang wind turbines. Each power unit will be equipped with an Eaton control valve manifold assembly containing Eaton's Vickers® screw-in cartridge valves.

In 2009, Eaton won another major wind energy customer in China with new business from Guodian United Power Technology Company Ltd. The wind turbine manufacturer is a subsidiary of China Guodian Corporation, one of the country's top five power generation groups. Eaton will supply hydraulic power units equipped with Vickers® and Integrated Hydraulics' screw-in cartridge valves for yaw and shaft braking functions on Guodian wind turbines produced in Hebei Province. Eaton will also supply its Aeroquip® MatchMate Plus® hose and Global TTC crimp fittings for braking system functions.

At the same time, we have an emerging presence in solar power, helping to create and deploy more efficient solar inverters and battery storage systems, making it possible to deliver affordable electric power to the most remote places on earth.

Eaton and China's Chint Power Systems have agreed on a partnership targeting the renewable energy markets. Eaton will provide Chint Power Systems single phase and low power three phase PV inverter for turnkey solar projects. Both companies are looking forward to further opportunities to enhance their strategic partnership.

Eaton will introduce a new line of solar inverters based on existing Eaton technologies that convert DC power into AC power for commercial and utility applications. Eaton's Phoenixtec business, headquartered in Taiwan, is also a leading supplier of solar inverters for residential applications in Europe and Australia, and our Moeller business, based in Germany, provides switching devices for solar power applications ranging from individual homes to large-scale systems.



提高飞机和汽车的燃油经济性

伊顿是航空产业许多领域中的领先供应商，为全球商业和军用航空、宇航、武器、海洋和越野市场提供服务。空客A380飞机是世界上最大的商用飞机，但也是世界上燃油经济性最高的民用机型之一，且这其中就有伊顿的贡献。我们与空客公司密切合作，设计并制造了史无前例的5000 psi（压力单位，每平方英寸磅）液压系统，相比其它商用机型使用的系统压力提高了40%左右。

该创新性高压部件设计是伊顿为军用机型所首创。通过使用该技术，A380客机的总重量减少了整整一吨。在不影响动力、性能和操控的情况下，大幅度提高了运营经济性。此外，该机型成功地降低了噪音和排放水平，最大程度地减少了对环境的影响。使用轻质材料则使其燃油经济性进一步提高。

中国已成为除美国之外的全球第二大航空市场，对商用飞机的需求增长迅速。行业需求的旺盛也促进了伊顿宇航业务在中国的快速发展。伊顿为中国商飞生产的新支线飞机“翔凤”提供了整合驾驶舱控制面板组件和灯光控制器。2009年，中国商用公布了正在开发的130至200座级商用飞机C919机型。伊顿正积极寻求机会，参与C919机型项目，为中国航空客户提供最新的节能技术和解决方案。

同时，伊顿车辆集团为专业的汽车应用设计制造了精密的罗茨式机械定排量增压器。由于其良好的运行特性，机械增压器经常应用于高性能发动机上，但整车制造商也将伊顿的罗茨式机械增压器应用于小体

积引擎中，提高燃油经济性、减少排放，带来完美的驾乘体验。与涡轮增压器不同，伊顿的机械增压器能够在整个发动机动力输出范围内提供迅速的油门响应和扭矩提升。

为响应市场对增加发动机功率、缩小发动机体积、提高燃油经济性、减少排放的需求，伊顿推出了双涡漩系列(TVS)机械增压器，以更小的体积提供更强的动力和更好的燃油经济性。相比以往产品，伊顿TVS增压器效率提高约20%，热效率超过75%、增压比达2.5。该增压器采用采用双四角型转子，转动范围达160度。高速转子相互啮合，将空气直接注入发动机进气系统。增压空气与燃油混合，有助于产生更为澎湃的动力。相比之下，伊顿增压器原先采用三角型转子，转动范围60度。采用四角型转子并增加转动范围后，配合重新设计的进气和排气口，能够使注入发动机的空气气流更为顺畅高效，有效降低噪音和震动。

2009年，伊顿第五代机械增压器在机械技术及环保方面的卓越表现帮助大众1.4升TSI发动机夺得三项2009年度国际发动机技术大奖。大众“双增压器”将一台小型伊顿机械增压器和一个单级涡轮增压器组合，提升了发动机马力和扭矩，同时将燃油效率提高到每加仑39英里以上。



Improving the Fuel Efficiency of Airplanes and Vehicles

With seating for up to 555 passengers, the Airbus 380 is the world's largest commercial aircraft. It's also one of the most fuel-efficient thanks to Eaton. Working closely with Airbus, Eaton designed and created a 5,000-pound-per-square-inch (psi) hydraulic system 40 percent larger than most other commercial airplanes. The innovative high-pressure design pioneered by Eaton on military aircraft helped reduce the weight of the A380 by one metric ton, making it far more economical to operate without compromising power, performance, or control. Furthermore, the aircraft's significantly reduced noise and emission levels help to minimize effects on the environment, while its lightweight materials also make it highly fuel-efficient.

Currently, Commercial Aircraft Corporation of China (Comac) is developing China's own jumbo jet, the Comac C919, a 130-200 seat commercial aircraft. As an owner of leading hydraulic technology applied on aircraft, Eaton is actively engaged with the China Aviation Industry in support of the C919 program.

Eaton's vehicle business is focused on helping customers to develop vehicles that run cleaner, more efficiently and perform better overall. In addition to our hybrid power systems, we have a pioneering supercharger technology, sophisticated engine valve and valvetrain systems and advanced traction technology that can help engine and vehicle manufacturers around the world to boost power and performance while at the same time helping them to reduce fuel consumption and improve emissions. We also have commercial vehicle transmissions that offer superior performance, control and efficiency no matter the load or the road.

Eaton designs and manufactures precision Roots-type positive displacement superchargers for highly specific automotive applications. The Roots-type design was first patented in 1860 by brothers Philander and Francis Roots, refined for automotive passenger car use by Eaton and commercialized in the 1980s. To date Eaton has produced more than four million Roots superchargers

for global customers.

Based on their well established operating characteristics, superchargers are often associated with performance applications, but vehicle manufacturers are also applying the Eaton Roots supercharger on their downsized engines to improve fuel efficiency, emissions and create a tailored driving experience. Unlike turbocharging, Eaton superchargers provide instant throttle response and torque across the engine's entire powerband.

In response to market demand for increased engine power in smaller engines with improved fuel economy and lower emissions, the Eaton Twin Vortices Series (TVS) supercharger delivers more power and better fuel economy in a smaller package. The TVS design provides approximately 20 percent more efficiency than previous supercharger systems, more than 75 percent thermal efficiency and 2.5 pressure ratio capabilities.

The TVS features twin four-lobe rotors that are twisted 160-degrees. The intermeshing, high-speed rotor design pumps air directly into the engine's intake system and creates more power. By comparison, previous Eaton supercharger designs featured three lobes twisted 60 degrees. The fourth lobe and added twist, when combined with redesigned air inlet and outlet ports, create a smooth, highly efficient flow of air into the engine that reduces noise and vibration. All Eaton superchargers are maintenance free, guaranteed to last the life of the engine and performance tested to three million miles.

In 2009, Eaton's fifth generation supercharger has helped the Volkswagen 1.4-litre TSI engine to win three 2009 Engine Technology International awards for engineering and environmental excellence. The Volkswagen "Twincharger" combines a small Eaton supercharger with a single-stage turbocharger to boost horsepower and torque, while improving fuel efficiency to an average above 39 miles per gallon.



积极推动数字经济发展

伊顿是领先的高能效环保电气解决方案供应商，帮助客户节约能源、降低成本、实现可持续发展目标。

伊顿提供全面丰富的UPS解决方案，保证高密度数据中心等关键运营部门免受日益增多的电源异常波动和断电等问题的影响。作为世界第二、国内最大的不间断电源系统(UPS)供应商，伊顿为客户提供电源质量控制系统和一体化电源管理解决方案，确保安全、可靠、不间断的电源供应，满足数字经济环境中严苛的电力需求，同时减少能源消耗和温室气体排放。

伊顿已经与工商银行、中国银行、建设银行、招商银行、华泰证券、湘财证券等国内大型银行和金融机构成功地开展了合作。此外，在国内基础设施建设项目中的参与程度也不断提高。我们的环保电气产品已经应用于成都双流国际机场、南京地铁、上海电信、北京市地税局等项目中。

伊顿9395型不间断电源系统是在产品可持续性与客户切实利益两方面实现双赢的典范。

更经济=更可持续

与其它大型数据中心用UPS系统相比，该产品独有多项特别技术，让初期投入和持续运营更为经济、环保。

该产品在节能模式下能效高达99%，最大程度地节约能源、降低冷却成本。

该产品采用了伊顿专利的Hot Sync热同步并机技术，提高了系统的可叠加升级能力，更适应多变的电力需求，对于数据中心等增长趋势难以预测的应用场合尤为重要。

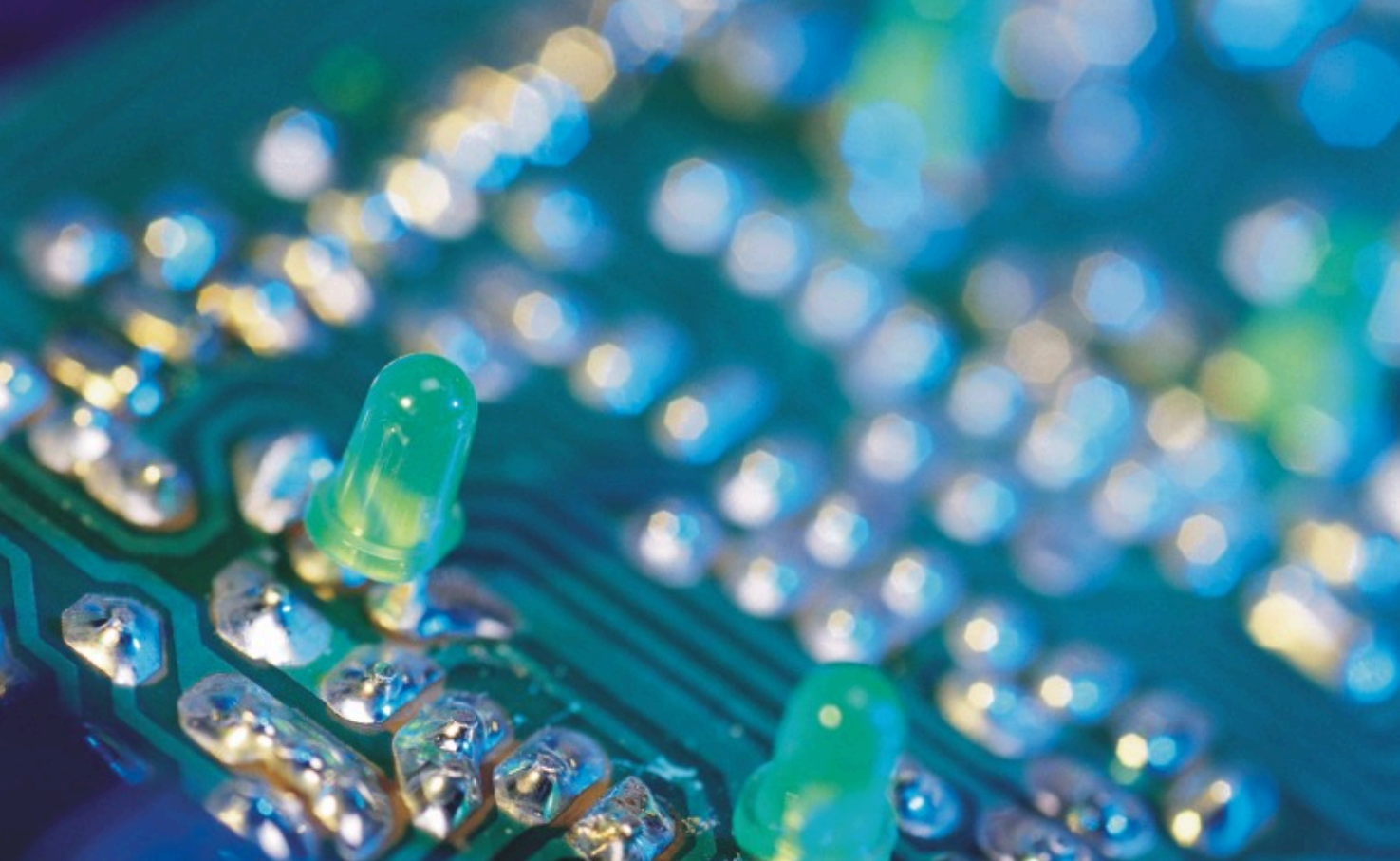
伊顿高级电池管理(ABM)技术使用精密传感线路和创新充电技术，延长电池使用寿命、优化电池充电时间。与之相比，其它UPS系统在充电时会影响电池的内部化学构造，进而缩短使用寿命。

双倍可靠性

除了兼顾经济性与可持续性外，伊顿9395型UPS还独有相互整合的不间断电源模块(UPM)，即便万一其中一个模块失灵，另一个仍能保证持续的电力供应。

该产品还采用了伊顿尖端多绝缘栅双极型晶体管(IGBT)技术，能够把电力系统中的干扰或“谐波”降到极低的水平，基本消除电压畸变和其它可能造成电源中断或设备损坏的电源干扰。

- 2007年12月，国务院发布《中国的能源状况与政策》白皮书，强调中国将继续继续以本国能源的可持续发展促进世界能源的可持续发展，为维护世界能源安全作出积极贡献。
- The State Council of China published in December of 2007 a white paper entitled China's Energy Conditions and Policies, which emphasizes that China will continue to contribute to the sustainable energy development of the world by enhancing China's sustainable energy development.



Keeping the Digital Economy Up and Running

Eaton is a leading provider of energy-efficient and environmentally friendly electrical solutions to help customers conserve energy, reduce operating costs and achieve their sustainability goals.

As the world's second largest manufacturer of Uninterruptible Power Systems (UPS) around the globe and the largest manufacturer of UPS in China, we provide power quality control systems and integrated power management solutions to customers, ensuring a safe, reliable and uninterrupted power supply to meet the strict demands on practicality in a digital economy and shrink their carbon footprints.

Eaton's comprehensive UPS solutions keep critical operations, including high-density data centers, up and running in the face of growing power anomalies and outages.

Our 9395 UPS, for example, powered by our new Energy Saver System, operates at up to 99 percent efficiency, virtually eliminating the electrical losses of older UPS systems. The energy savings can pay for the 9395 in only three to five years, without sacrificing power protection.

Eaton has successfully cooperated with many Chinese companies in financial and banking industries including Industrial and Commercial Bank of China, Bank of China, Construction Bank, Merchant Bank, Huatai Securities and Xiangcai Securities. Eaton is also expanding its presence in China by offering its green electrical products to China's infrastructure construction, such as Chengdu Shuangliu International Airport, Nanjing's Subway Project, Shanghai Telecom and Beijing local tax bureau, among others.

A product of Eaton's "sustainable by design" culture, the 9395 is also up to 60 percent smaller and 50 to 70 percent lighter than competitive UPS systems and may be easily upgraded or expanded to meet changing needs. Designed without a transformer, the 9395 requires 80 percent less energy for production and testing, helping the system to earn a Gold Sustainable Materials Rating

Technology (SMaRT®) certification from the Institute for Market Transformation to Sustainability.

More Economical = More Sustainable

Compared to other systems for large-scale data centers, the Eaton 9395 features several technologies that make it more economical and greener to own and operate:

The Eaton 9395 reaches 99 percent efficiency in Energy Saver Mode, maximizing energy efficiency while reducing cooling costs.

Eaton's patented Hot Sync® technology has increased the system's scalability, making it easy to adapt to changing power requirements. This is especially important to data centers, where growth tends to be unpredictable.

Eaton's advanced battery management (ABM®) technology uses sophisticated sensing circuitry and an innovative charging technique that extends the service life of UPS batteries while optimizing the battery recharge time. In contrast, other UPS systems charge in a way that degrades the batteries' internal chemical composition, reducing service life.

Double the Reliability

In addition to its blend of economy and sustainability, the Eaton 9395 features two integrated uninterruptible power modules (UPMs) to ensure continuous power even in the unlikely event that one module fails.

The Eaton 9395 also features Eaton's advanced insulated gate bipolar transistor (IGBT) technology, which reduces power system interference or "harmonics" to extremely low levels. The technology virtually eliminates voltage distortion and other power disturbances that lead to interrupted power supply and equipment damage.



助力绿色建筑

伊顿提供丰富的高能效、环保电气解决方案，促进绿色建筑发展。伊顿电气设备、工具和服务能够降低能耗、减少环境影响。

为推动节能环保、应对能源成本不断上升的趋势，我们在Power Chain解决方案中引入了Power Xpert电力监控系统，使用户能够跟踪其电力系统的运行有效性。通过现场能源管理研究并与其它企业合作，我们开发了许多可持续电力解决方案，包括：照明控制，将照明能耗降低30%以上；电力因数校正设备；变频驱动器；更高能效的不间断电源系统，与传统设备相比，能源损耗减少50%。这些都是伊顿电气称之为“绿色房屋”解决方案的组成部分，这是一整套绿色建筑方面的创新实践。

中压开关设备的内部部件之间需要进行绝缘。根据不同用途，绝缘材料各异，其中有些材料会造成环境污染。伊顿中压开关设备采用环保绝缘材料，杜绝使用六氟化硫。六氟化硫会造成严重的温室效应，污染程度高于二氧化碳。伊顿已为中国供电行业提供了这种环保型开关设备。例如，通过与上海市电力局合作，我们有幸参与了2010上海世博会的多个建设项目。

Powering the Green Building

Eaton offers a broad range of energy efficient and environmentally-friendly electrical solutions that can help a building go green. Eaton's electrical equipment, tools and services reduce energy consumption and leave a smaller footprint on the world's environment.

To promote conservation and confront rising energy costs, Eaton's PowerChain Solutions have introduced Power Xpert, an electronic monitoring system that allows companies to track their energy efficiency. By conducting onsite energy management studies, Eaton is working with companies to develop a wide range of new sustainable power solutions including lighting controls that reduce light energy consumption by 30 percent, power factor correction equipment, variable frequency drives and high-efficiency uninterruptible power supplies that have 50 percent less power losses compared to traditional units. Collectively, these efforts comprise what Eaton Electric calls the “Green House” Solution, a set of innovative practices for green building.

Medium-voltage (MV) switchgear requires insulation between internal components. Insulation types can vary between switchgear applications and several are harmful to our environment. Eaton's MV switchgear designs use environmentally friendly choices for insulation, avoiding sulfur hexafluoride (SF6), an extremely harmful greenhouse gas much more potent than carbon dioxide (CO2). Eaton has delivered its environmentally friendly switchgear to China's electric power supply industry. For example, the partnership with Shanghai Power Supply Bureau has yielded Eaton the opportunity to participate in several major construction projects for the Shanghai World Expo in 2010.

AWARDS & RECOGNITION

奖项与荣誉

《财富》杂志 “全球最受尊敬企业” 行业排名第四

《商务周刊》杂志 “中国 50 绿公司”

《商务周刊》杂志 “中国 100 快公司”

2008 和 2009 年度 “跨国公司中国贡献奖” — 《中国企业报》

荣登 “2009年度全球最具商业道德公司榜” — 《商业道德(Ethisphere)》杂志

2008年 “通用汽车最佳供应商奖”，表彰伊顿提供的提高燃油效率的先进技术

“主要汽车零部件供应商卓越贡献奖” (伊顿双涡旋系列TVS®机械增压器和前轮驱动桥电子锁定差速器 FWD ELocker™ 获得荣誉奖)

“最具 ‘中国心’ 的跨国公司” — 《中国外资》杂志

“2008金蜜蜂企业社会责任榜” 和 “可持续发展奖” — 《WTO 经济导刊》

“2008年中国优秀企业公民” — 中国社工协会企业公民委员会

“2008跨国公司履行社会责任优秀案例” — 《中国企业报》

《新闻周刊》首届 “美国500大环保企业” 中名列地43位

“百佳企业公民” — 《企业社会责任官(CRO)》杂志

CALSTART 组织颁发的2008 蓝天奖(Blue Sky™)，表彰伊顿在可持续运输技术方面的创新和发展

Ranked 4th in Industry on Fortune's 'World's Most Admired' list

Ranked in Business Watch “China Green Company” Top 50

Ranked in Business Watch “China Fast Company” Top 100

Multinational Company (MNC) Contribution Award in 2008 and 2009 China Enterprise News

Ranked in 2009 Roster of World's Most Ethical Companies— Ethisphere

2008 General Motors Supplier of the Year for technologies that help improve fuel efficiency

Won Premier Automotive Suppliers' Contribution to Excellence (Eaton's TVS® Supercharger, FWD ELocker™ received honorable Mention)

“Most Committed Multi-National Award” Foreign Investment in China magazine

“2008 Golden Bee Honor Roll” and “Sustainable Growth Award” for achievements in providing sustainable products in China China WTO Tribune magazine

2008 China Excellent Corporate Citizen the Corporate Citizen Committee of China Association of Social Workers

2008 Excellent Cases of Multinational Corporations Fulfilling Social Responsibility” China Enterprise News

Ranked 43 out of 500 companies in the first-ever Newsweek ranking of “The Greenest Big Companies in America”

Ranked among “100 Best Corporate Citizens,” — Corporate Responsibility Officer (CRO) magazine

Winner of CALSTART 2008 Blue Sky™ Award for innovation and advancement in sustainable transportation technology

“伊顿中国在竞争力和可持续发展两方面均广受认可，我们为此倍感自豪。可持续的动力管理是我们业务的核心。通过创新并不断改进产品和服务，我们帮助客户更有效、高效、负责地管理电力、流体动力和机械动力，创造竞争优势。”

周涛，伊顿中国区总裁

“We are proud that Eaton is recognized for its achievements in both competitiveness and sustainability in China. Sustainable power management is at the core of our business. Through continuous innovation in the products and services we offer, we give our customers a competitive edge by helping them manage electrical, fluid and mechanical power more efficiently, effectively and responsibly.

Joe -Tao Zhou, President, China, Eaton Corporation

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