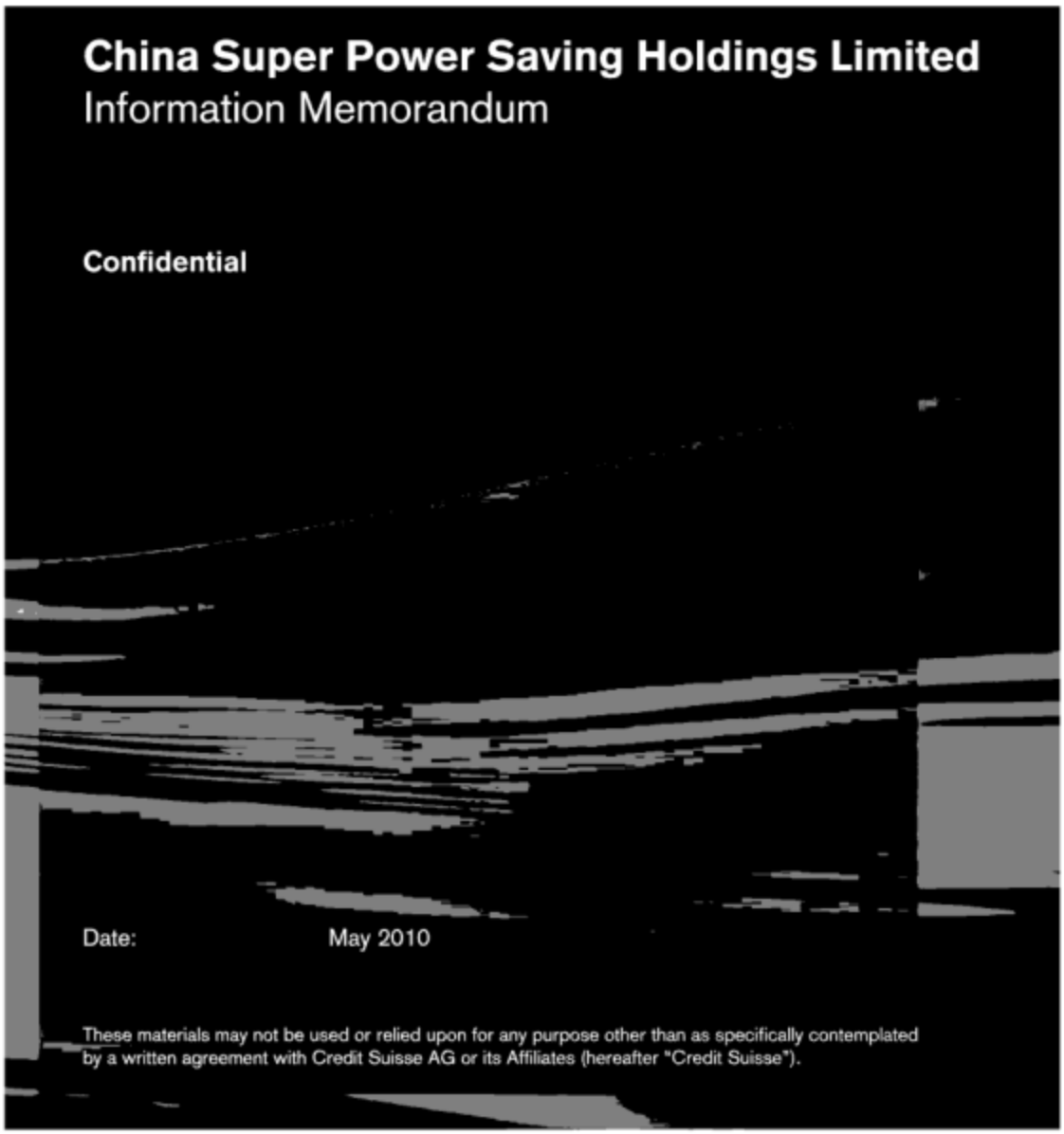
CREDIT SUISSE

China Super Power Saving Holdings Limited

Information Memorandum

Confidential



Date: May 2010

Important notice

Memorandum ref. 1

This preliminary information has been prepared from data supplied by China Super Power Saving Holdings Limited ("CSPS" or the "Company") and Lemonte Investments Limited (the "Seller") solely for information purposes to assist the recipient in deciding whether to proceed with further analysis of the transaction contemplated herein.

Credit Suisse AG ("CS") has not independently verified any of the information set forth herein, including any statements with respect to projections or prospects of the Company or the assumptions on which such statements are based. Neither the Seller, the Company nor CS makes any representation or warranty, express or implied, as to the accuracy or completeness of this document or the information contained herein and none of such parties shall have any liability for the information contained in, or any omissions from, this document.

CS, the Seller and the Company reserve the right to amend or replace the information at any time, and undertake no obligation to update or correct the information set forth herein or to provide the recipient with access to any additional information. This information may not be redistributed or reproduced.

The information contained herein is preliminary and does not purport to contain all the information that such interested parties may desire. In all cases, each interested party should conduct its own investigation and analysis of the Company, its business, prospects, results of operations and financial condition, and should consult their own professional advisors.

Neither the receipt of this information by any person, nor any information contained herein constitutes, or shall be relied upon as constituting, the giving of investment or tax advice by CS to any such person.

This document may contain certain statements, estimates and projections as well as forward-looking statements, e.g., statements including terms like "believe", "assume", "expect" or similar expressions, provided by the Company and the Seller with respect to the Company's anticipated future performance. Such statements were prepared based upon certain assumptions and Management's analysis of information available at the time this document was prepared, and may or may not prove to be correct. No representation, warranty or assurance of any kind, express or implied, is made regarding future performance or results.

This document does not constitute an invitation or offer to sell, or a solicitation of an offer to subscribe for or purchase, any of the securities or assets, business, products or services mentioned herein. It does not constitute a prospectus within the meaning of Article 652a or Article 1156, respectively, of the Swiss Code of Obligations.

This document is not being issued in the United States of America and must not be distributed in the United States or to U.S. persons or publications with a general circulation in the United States. This document does not constitute or form part of an offer or invitation to purchase any securities in the United States. The securities of the Company have not been registered under the United States securities laws and may not be offered, sold or delivered within the United States or to U.S. persons absent from registration under or an applicable exemption from the registration requirements of the United States securities laws.

By accepting this document, the recipient acknowledges and agrees that (i) all of the information contained herein is subject to the Confidentiality Undertaking; (ii) the recipient will not distribute or reproduce the document in whole or in part and will use this document solely for the purpose of evaluating the recipient's interest in the Company; (iii) in the event that the recipient has no further interest in submitting a proposal to acquire the Company or if at any time CS or the Seller so requests, this document, together with all other material relating to the Company which the recipient may have received from CS, the Seller or the Company, will be returned to CS at the earliest opportunity; (iv) the recipient will not disclose to any third party that this document has been provided or that the Seller are considering a Transaction and (v) any proposed actions by the recipient which are not consistent in any manner with the foregoing agreement will require the prior written consent of the Seller, the Company or CS.
The Seller, the Company and CS reserve the right to negotiate with one or more parties at any time and enter into a definitive Purchase Agreement without prior notice to you or any other recipients of this document. The

Seller and CS also reserve the right (i) to terminate, at any time, all further participation by any party in the investigation of the Company and all participation in the proposed Transaction described herein, and (ii) to modify the rules and procedures set forth herein or any other procedures relating to the sale of the Company without prior notice to you or any other recipient of this document. In no instance will the Seller, the Company or CS be required to assign any reason for such termination or alteration of the process. The Seller, the Company intend to operate the Company in the ordinary course during the evaluation and offer period. However, the Seller, the Company and CS reserve the right to take any action, whether in or out of the ordinary course of business, which in their sole discretion is deemed reasonably necessary or prudent in the conduct of the Company or in the process contemplated by this document.

CS contact person		
Alex von Werra Director	**Angela Krebs** Vice President	**Raed El-Dana** Analyst
[redacted]		

Table of Contents

1. Executive summary

1.1. Background

Credit Suisse AG ("CS") has been retained by Lemonte Investments Limited as its exclusive financial advisor in connection with the potential disposal of all or part of its holding in China Super Power Saving Holdings Ltd. (herein referred to as "CSPS", the "Company").

CSPS is active in the fast growing market of energy efficiency solutions and has established a strong foothold in its home market, China. The Company is listed at the Marché Libre in France, an unregulated trading facility operated by Euronext Paris SA. With a shareholding of approximately 65% owned by the Company's founder Ian Cheng Yi Feng (程一峰) (the "Founder", "Ian Cheng") through his investment vehicle, Lemonte Investments Limited, the Company ultimately remains under his control. The Founder has developed the Company to become a respected provider of energy saving solutions in China and is now looking for a strong buyer, who can foster the Company's further growth by adding an international network and knowhow.

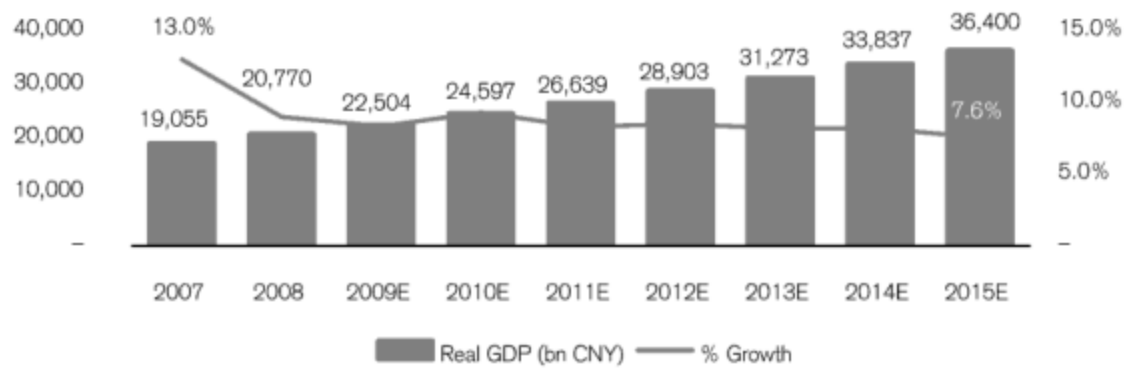
This Investment Memorandum is being furnished to selected parties who have shown an interest in the Company and have signed the relevant Confidentiality Agreement.

If after reviewing this Investment Memorandum, the potential buyer wishes to further analyse the Company, such interest should be communicated to Credit Suisse AG in a formal process as outlined in the accompanying Procedure Letter.

1.2. Market overview

An important driver of energy efficiency products and services is economic growth. China is expected to continue its strong growth path with 9.3% and 8.3% growth in 2010 and 2011 respectively.

China – Real GDP growth

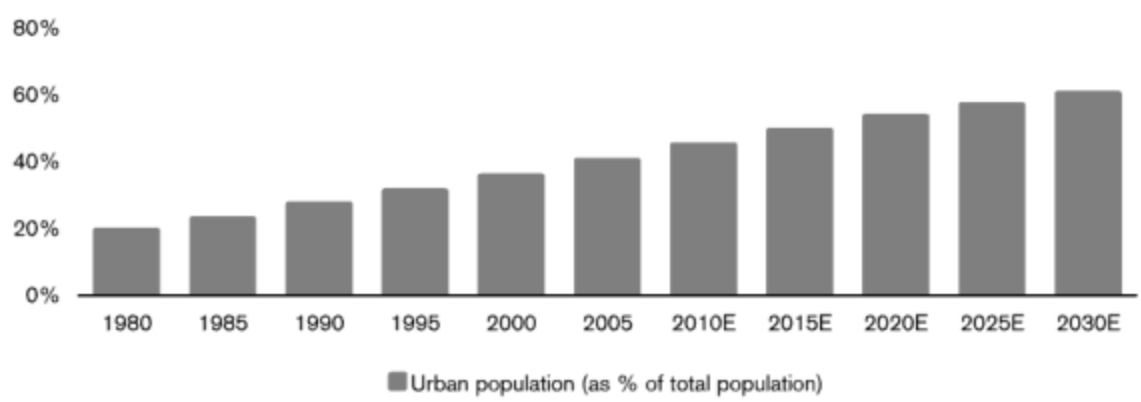


Source: EIU.

Key drivers for energy efficiency in China include:

- Strong economic growth
- Increasing environmental concerns
- Energy efficiency policies being implemented in China, supported by government stimulus measures
- Steadily rising urbanisation
- Continuous growth in energy consumption and rising electricity prices
- Lower cost of ownership of new technologies

Steadily rising urbanization ratio in China



Source: Credit Suisse, United Nation, WDI.

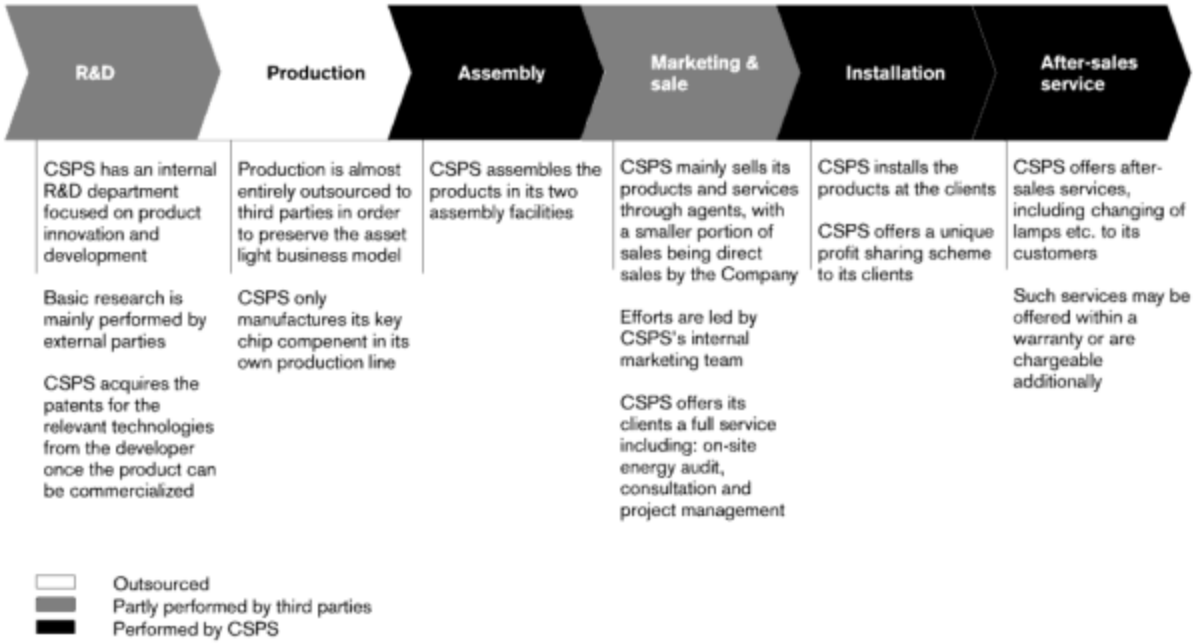
A further key driver is the power shortages China faces, combined with an increasing environmental awareness. Although new regulations are supporting the use of renewable energy, over 90% of new power generation in China still comes from thermal coal plants. In addition, an estimated 80% of energy is being lost before reaching the end user, through generation, transportation etc. The government has taken note of the multiplying effect of energy savings at the end consumer and supports energy saving products and services through various regulations and subsidies.

1.3. Business model

CSPS is looking to strengthen its position as one of the leading energy saving solution providers in China and introduce its services elsewhere in Asia and abroad. The Company has developed a unique business model, offering its clients a complete range of energy saving solutions and services. As such it focuses its resources on i) R&D, ii) solution based offering, and iii) a strong distribution network.

The Company is offering a one-stop shop service for companies looking for energy savings. It offers its customers with a complete service including i) analysis of the current situation and energy saving potential, ii) engineering of the most suitable energy saving solution iii) assembly of the energy saving products, iv) installation of the equipment at the client's facilities, as well as v) after-sales services.

While offering a complete service package to its customers, CSPS runs an asset light business model, allowing it to adapt to changing business needs of its customers.



The Company is incorporated in Hong Kong and its operations are based in Mainland China with its office located in Shenzhen. The Company outsources the production of most product components to third parties, and assembles them in its own assembly facilities in Shenzhen and Wujiang. It employs approx. 100 permanent staff in key functions of the Company and over 200 temporary staff mainly active in its production department.

The Company has focused its business on the Chinese market for energy saving solutions. It is seeing strong growth due to fast economic development, strong urbanization and increasing environmental concerns, all of which have led to a strong increase in energy consumption and new regulation relating to environmental pollution and energy usage.

CSPS provides its solution based service to a broad client base, reaching from corporates from a wide variety of industries, to government related companies, as well as municipalities, all over Mainland China and Hong Kong. It is also exploring the overseas market potential, with first orders expected to come from the Middle East.

The Company markets its products almost exclusively through agents. It has one of the largest distribution networks of its kind in this sector in China, with over 140 agents in 28 provinces.

Agent network

Source: Company.

Revenue split by region

Source: Company.

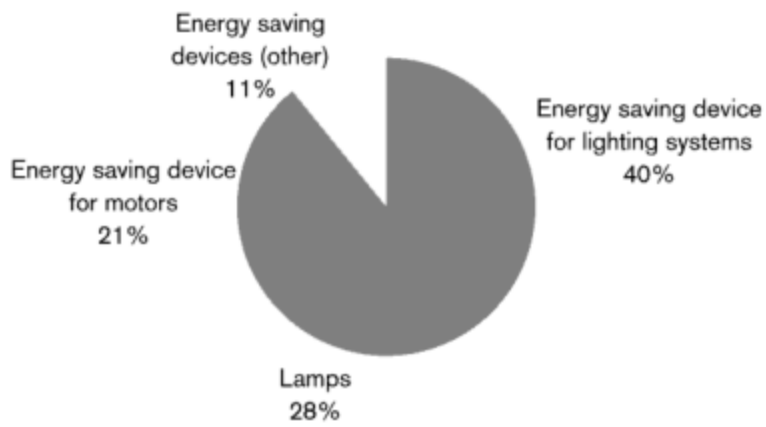
1.4. Products and services

The Company has developed a wide range of energy saving products including energy saving devices (used in combination with fluorescent lights, street lights, sewing machines, pumps, fans, etc.) and a low consumption lamps series.

The Company analyses the customers current energy saving potential and then engineers an optimal solution, taking into consideration the customer's energy saving potential, current installation, investment budget, as well its quality considerations.

CSPS' core offering currently includes solutions around its three product categories, namely: i) new generation lighting products, ii) energy saving devices for motor and lighting systems, and iii) new energy saving sets. The first two categories are currently its key revenue drivers.

2009E revenue split by product group



Source: Company.

New generation lighting products with a current focus on electrodeless magnetic discharge light ("EMDL") lamps often used in street lighting projects

Lighting products

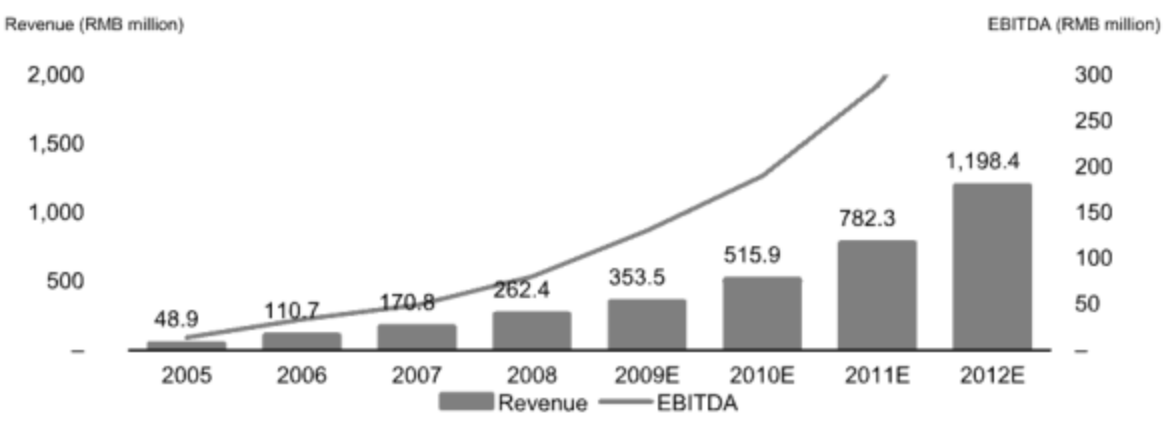
- Energy saving devices with a focus on:
  - Energy saving devices for lighting systems, used to regulate electricity usage in large government buildings or production facilities
  - Energy saving devices for motors such as fans, air compressors, pumps, central air conditioning etc.

Energy saving devices

1.5. Summary of key financials

The Company experienced significant growth with revenues increasing from 2005 to 2008 by a CAGR of 75%. The management believes that the strong revenue and earnings growth experienced by the Company in recent years is poised to continue over the medium term. The Company is rolling out new energy saving devices and sets into the Chinese market and plans to enter new markets in Europe and the Middle East. Revenues are expected to grow from 2009 to 2012 by a CAGR of 37%. Over the same period EBITDA is expected to grow at a CAGR of 37.5%.

Revenue and EBITDA development



Source: Company.

The following table presents CSPS' key historical and projected financial information.

Consolidated P&L account

(RMB in millions)

	2005	2006	2007	2008	2009E	2010E	2011E	2012E
Revenue	**48.9**	**110.7**	**170.8**	**262.4**	**353.5**	**515.9**	**782.3**	**1,198.4**
% growth		*126.5%*	*54.3%*	*53.6%*	*34.7%*	*45.9%*	*51.6%*	*53.2%*
EBITDA	**13.9**	**33.4**	**49.4**	**80.4**	**130.6**	**190.2**	**288.7**	**441.7**
% sales	*28.5%*	*30.2%*	*28.9%*	*30.6%*	*36.9%*	*36.9%*	*36.9%*	*36.9%*
Operating profit	**13.9**	**33.4**	**49.3**	**68.3**	**103.0**	**155.6**	**264.4**	**428.7**
% sales	*28.4%*	*30.1%*	*28.9%*	*26.0%*	*29.1%*	*30.2%*	*33.8%*	*35.8%*
Net income	**12.5**	**28.5**	**42.3**	**53.7**	**77.9**	**117.6**	**200.5**	**325.4**
% sales	*25.5%*	*25.8%*	*24.8%*	*20.5%*	*22.0%*	*22.8%*	*25.6%*	*27.2%*

Source: Company.
Note: D&A increase in 2009 due to amortization of new patents over a shortened 3 years period.

2. Investment highlights

2.1. Chinese market's continuous growth in energy consumption

The Company is well positioned to profit from China's continuous economic growth. China's economy is expected to grow by a CAGR of 8.3% from 2010 to 2015. Along with the country's continuous strong GDP growth, China's energy consumption is increasing at a rate of over 5% annually. A booming real estate market further drives the hunger for energy.

CSPS has established a strong footprint in China and is uniquely positioned to benefit from the growth in its energy consumption.

2.2. Favourable industry dynamics

The continuously growing energy consumption puts pressure on the country's energy resources, which are still heavily dependent on traditionally polluting thermal power plants. With the government and the public keen to lessen the environmental impact of the country's fast development, energy saving measures are playing an increasingly important role. These developments are leading to a fast growing demand for CSPS' energy saving services. The use of CSPS' products and services further allows companies and local governments to achieve substantial cost savings, by reducing energy usage as well as through government awards and subsidies available. Ongoing urbanization is a further key driver for the Company, especially its lighting business.

In addition to these generally strong market fundamentals, the Company benefits from offering a service which is not dependent on any specific industry sector, but can be flexibly applied to the energy needs of any company or municipality, giving CSPS the flexibility to quickly adjust to changing market demand and regulatory frameworks.

2.3. Capital efficient and highly profitable business model

CSPS has an impressive record of financial performance, even showing strong growth in an adverse global macroeconomic environment.

- The Company has shown continued strong sales growth over the last four years, reaching a CAGR of 75%
- It has set up a lean business model, outsourcing most of the basic product manufacturing to third parties
- With its production and assembly located in China's manufacturing centres, Pearl and Yangtze river delta, the Company benefits from a low cost environment
- Profitability has remained high with an EBITDA and net income margins above 30% and 20% respectively

2.4. Large established distribution network

CSPS has established a large distribution network, composed of over 140 agents targeting the China market opportunity. This network allows the Company to efficiently distribute products and services. It also offers a potential buyer a unique set-up to enter the Chinese market with their own products and services offering.

2.5. Unique entry point to China's market for energy saving services

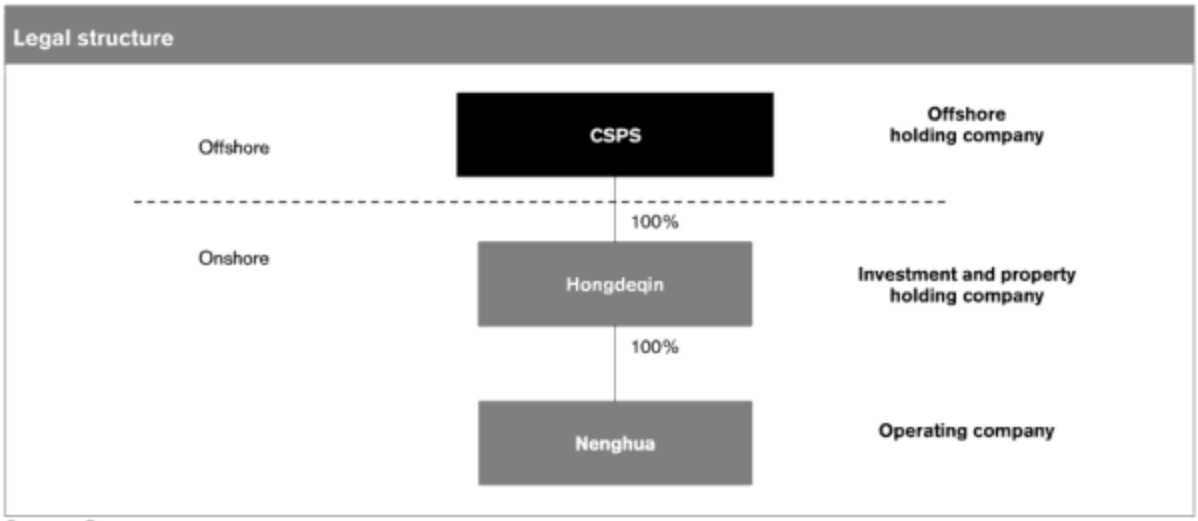
CSPS is positioned uniquely in its home market, China, to offer its clients a complete range of energy saving services. It has established itself a name for offering more than just the sale of a product. It reaches most of China and a wide variety of industries. CSPS provides a unique opportunity to enter the energy efficiency market in China by acquiring one of the few well established players in this fast growing segment.

3. Transaction overview

3.1. Legal structure

CSPS was incorporated under the laws of Hong Kong on August 15, 2007. It is registered with the Hong Kong companies registry under the number 1158791, having its registered office at Flat 1702, 17/F, Eastern Commercial Centre, No. 393-399 Hennessy Road, Wanchai, Hong Kong.

After the group's legal restructuring in 2007, CSPS became the holding company for its China onshore based operating businesses, namely Hongdeqin Energy Saving and Environmental Technology Limited ("Hongdeqin") and Shenzhen Nenghua Energy Saving and Environmental Protection Limited ("Nenghua").



Source: Company.

3.2. Ownership structure

CSPS is listed at the Marché Libre in France (0.33% floating), but remains controlled by its founder Ian Cheng. Through his investment holding company, Lemonte Investments Limited, he controls about 65% of the total issued share capital. Other shares are held among a limited number of company directors and private investors. The Company's free float is currently below 1%.

Since December 28, 2007, CSPS has an authorized share capital of HKD 10m (divided into 20m shares of HKD 0.5 each). Its issued share capital is HKD 3m (divided into 6m shares of HKD 0.5 each).

The following table shows the ownership structure as of April 30, 2010.

Ownership structure

Shareholder	Number of shares	% of capital
Lemonte Investments Limited[1]	3,896,000	64.94%
Finasia Limited	480,000	8.00%
Eufinasia Limited	360,000	6.00%
Pyrite SA	320,000	5.33%
Balboa International Limited	240,000	4.00%
Banque Neuflize OBC	198,000	3.30%
Global Cap	186,000	3.10%
China An Bang Investments Limited	180,000	3.00%
China Qiao De Xin Investments Limited	60,000	1.00%
Max Move International Limited	60,000	1.00%
Floating shares	20,000	0.33%
Total	**6,000,000**	**100.00%**

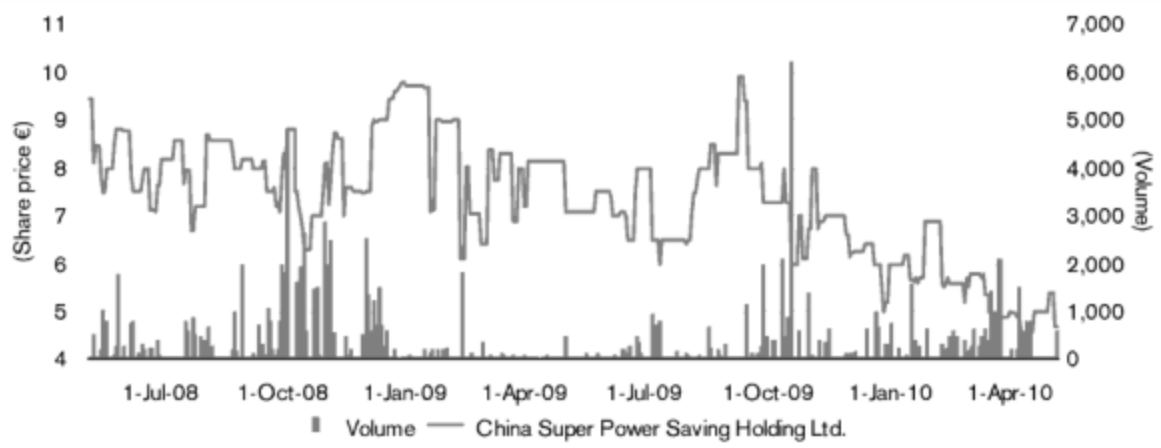
(1) Lemonte Investment is an investment vehicle wholly owned by Ian Cheng.
Source: www.boursorama.com, Company.

3.3. Listing

CSPS has been listed at the Marché Libre on February 25, 2008. The Marché Libre is an unregulated trading facility operated by Euronext Paris SA. The Company had initially sold 20,000 shares through the platform, resulting in its current free float of 0.33%.

- Symbol MLCSP
- ISIN code: HK0000043510

Share price performance and trading volume



Source: Factset, as of 06/05/10.

Company performance			
Share price (April 23, 2010):	EUR 4.68	Average daily trading volume:	237 shares
52 week high:	EUR 9.93		
52 week low:	EUR 4.50		
Shares outstanding:	6.0 million		
Market cap:	EUR 28.08 million		

Source: Factset, as of 06/05/10.

There is no market making and no broker research on the Company. In combination with the very limited float, this leads to the Company's shares being extremely illiquid with an average trading volume of only around 237 shares since its listing. As such, the management believes that the current share price does not properly reflect the Company's value.

The Marché Libre is an unregulated market, which does not set forth any regulations on minimum disclosure, mandatory takeover rules etc.

3.4. Transaction structure

The Seller is considering selling all or part of his holding in CSPS, as a way of strengthening the Company's future growth prospects by bringing in a strong owner with an international network and knowhow.

This Information Memorandum has been prepared to provide interested purchasers with a basis on which to submit an indicative proposal for the acquisition of a majority interest in CSPS.

CSPS directly and indirectly owns two Chinese legal entities, which directly own the licences and patents as well as its two assembly facilities. The transaction includes all of intellectual property rights and patents linked to current business, the distribution network related to CSPS business and its assembly facilities.

Interested parties should review the information provided in this Information Memorandum in conjunction with the accompanying Procedure Letter from Credit Suisse AG, which describes the basis on which any written indicative proposal should be made, the expected process beyond the indicative proposals stage and certain other important matters. Based on these and other relevant concerns, the Seller, with the advice of Credit Suisse, will determine which, if any, of the interested purchasers will be invited to continue their investigation of CSPS.

The Seller reserves the right, at its sole discretion, to consider any and all factors in choosing the parties with which to proceed and whether to do so, to reject any or all proposals without giving reasons and at any time and in any respect, without giving notice, to modify or terminate the process or to negotiate with any potential purchaser. Similarly, the Seller may at any time, in its absolute discretion, enter into any special arrangement with any potential purchasers without notifying other potential purchasers.

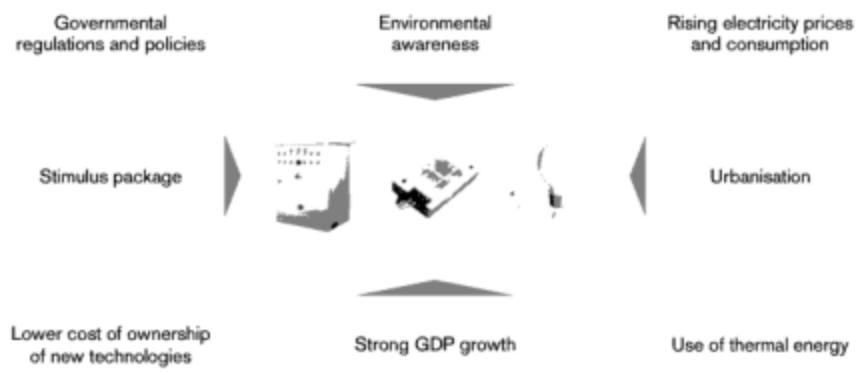
4. Market overview

4.1. Industry overview

Climate change, lack of resources and energy scarcity are leading to an increasing number of regulations and policy changes put in place by governments around the globe. Associated high energy prices, rising environmental awareness and the need for compliance with such stricter regulations and government policies are encouraging energy users to look for more efficient energy usage and saving potentials. With an increasing demand, a fast growing industry segment is developing around providing energy efficient solutions to clients in public, corporate and retail segments.

The growth in the market for electrical equipment for energy efficiency solutions is driven by a wide range of regulatory, macro economical and socio-economical factors.

Key drivers – energy saving market

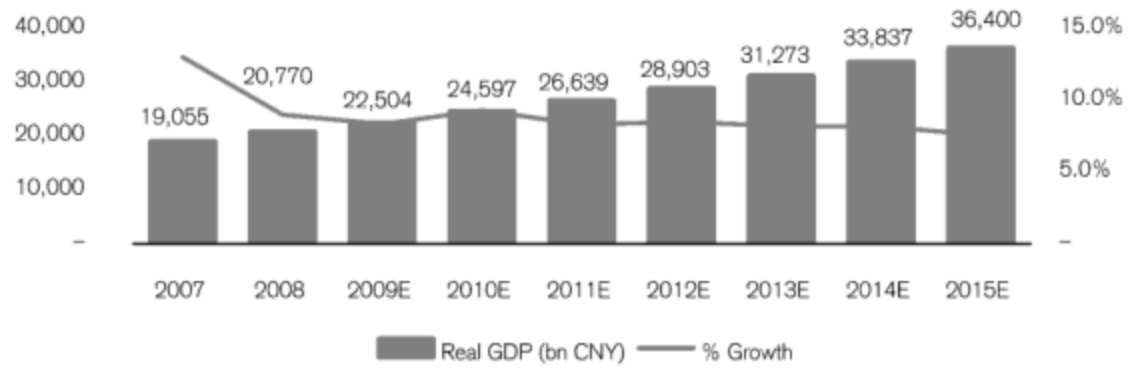


With global fossil fuel supply getting increasingly scarce and effects from climate change associated with CO2 emissions starting to be felt, the public as well as governments are turning their focus to large users of fossil fuels and emissions of CO2. A key contributor of CO2 emissions is the electricity production, which consumes 32% of global fossil fuel and is associated with 40% of energy related CO2 emissions. By 2030, global electricity demand is expected to double and coal will continue to be the most widely used fuel, accounting for up to 90% of new power generation in China[1]. Although new measures and legislations are paving the way towards the use of renewables and low-carbon energy, there is a necessity to improve generation, transmission and end user efficiency. By the time the energy reaches the end user an estimated 80% of the energy has already been lost through its transport, generation, transmission and distribution, industrial processes, etc. Such economics highlight the multiplying effect of energy savings at the end user level.

A further important driver of energy efficiency products is economic growth. With 70% of power supply coming from thermal power plants, and a strong growth in energy demand, China sees itself confronted with pressure to increase supply, limit demand and attend to its environmental needs. While the global economy has been slowed by the financial crises, China is showing continued high single digit growth. The world GDP is expected to grow by 3.2% and 3.4% in 2010 and 2011 respectively, while China is expecting to speed ahead with 9.3% and 8.3% growth for the two years.

[1] Source: EIA, IEA.

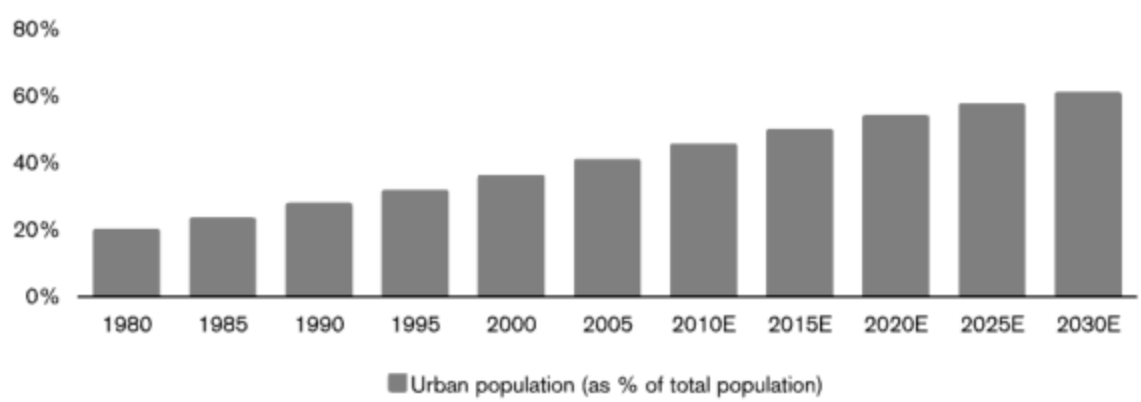
China – real GDP growth



Source: EIU.

Key drivers behind China's continued strong growth are ongoing urbanization, as well as stimulus measures.

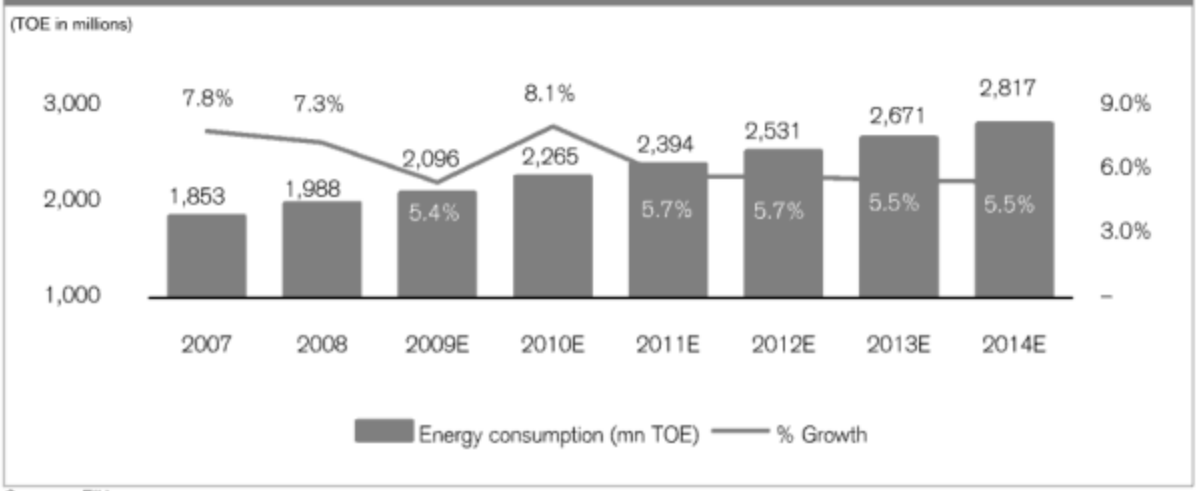
Steadily rising urbanization ratio in China



Source: Credit Suisse, United Nation, WDI.

The strong growth in energy consumption has been highly correlated to strong growth in GDP over the last years.

China – energy consumption growth



Source: EIU.

China's current thermal power plants are showing very high utilisation rates of over 4,500 - 5,000 hours[2], above global average of approx. 4,400[3]. To ensure enough energy without putting too much additional stress on the environment, China has introduced a series of new regulations and polices. These include a wide variety of measures to shift to renewable energy sources, but like most other developing countries, China has implemented energy efficient targets, and drafted policies and legislations that will be implemented by the most consuming economic sectors. Policies in China shifted from a centrally-planned system to a more market-oriented approach. Many energy efficient policies have been implemented, providing a clear legal framework, technology development guidelines and policy tools to allow energy efficiency improvement activities in various industries and sectors.

- By 2010 China is expected to reduce energy consumption per unit of GDP by 20 percent from its 2005 levels (11th 5 year program)
- On November 26, 2009, China announced that by 2020, it targets to reduce carbon dioxide (CO2) emission per GDP by 40-50% from 2005 levels
- Specific policies for commercial buildings, including building codes, office equipment standards and labelling introduced
- China targets a 4% annual improvement on energy efficiency
- Energy supply target: doubling energy consumption, from 1.30 billion tons of coal equivalent or 0.92 billion tons of oil equivalent (toe) in 2000 (China Statistical Yearbook, 2004) to 1.83 billion toe in 2020 (Zhang, 2005)
- Energy efficiency will reduce the need for new power capacity to satisfy increasing demand and represents a cheaper and quicker option, as well as reduce dependency on energy imports

14 energy efficiency policies have been put in place, most notably the Energy Conservation Law, the Cleaner Production Promotion Law, the Medium and Long-Term Energy Conservation Plan. Other tools are under review intended to highlight the main content of each policy and its effectiveness.

The Medium and Long-Term Energy Conservation Plan, for example, which is part of the 11th five year plan period (2006-10), outlines ten programs promoting and increasing energy efficiency:

[2] Source: Credit Suisse estimates.
[3] Source: Nomura International.

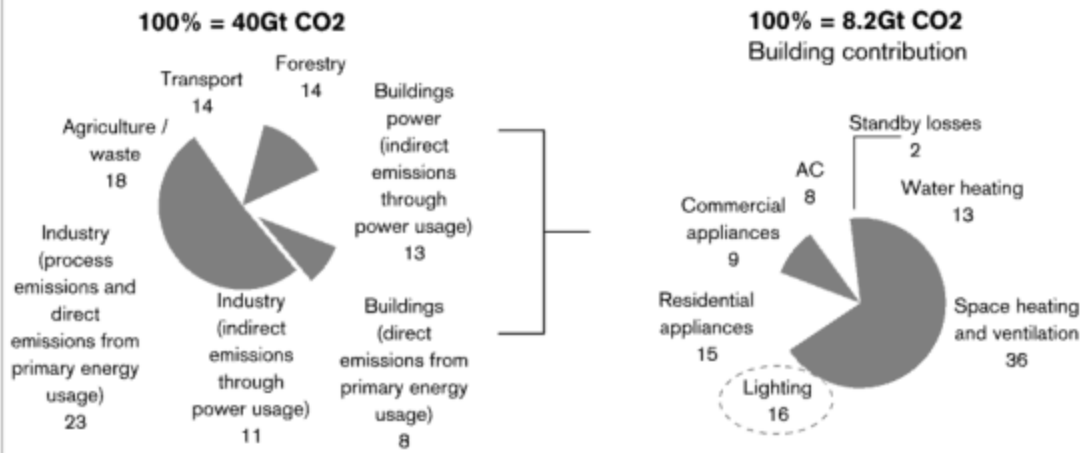
- Upgrade of low-efficiency coal-fired industrial boiler (Kiln)
- District heat and power cogeneration: combined heat and power system, centralised heat supply instead of small boilers
- Recovery of residual heat and pressure
- Oil saving and substitution
- Energy conservation of motor system
- Optimization of energy system
- Energy conservation in buildings
- Green lighting
- Energy conservation in government agencies
- Building the energy conservation monitoring and technological support system

Apart from new regulations, government stimulus and a general increase in environmental awareness, growth of energy efficient equipment is also driven by its own technological development. New production processes and technologies lower the cost of ownership of such equipment making it economically interesting for users to incorporate these also for pure economic reasons.

Lighting market overview

Lighting accounts for 19% of electricity use worldwide according to the IEA, out of which 31% is used for residential lighting and 69% for commercial, industrial and outdoor lighting. Philips estimates that up to 75% of all lighting currently installed does not offer the best energy usage and dissipates most of the energy used in the form of heat. This also means that buildings and lighting are particularly large contributors to global green house gas emissions.

Global greenhouse gas emissions – building contribution



Source: Vattenfall, 2007.

Market forecast for illumination by application

(USD in millions)

Application	2008	2009E	2010E	2011E	2012E	2013E	CAGR
Replacement lamps	31	45	99	270	657	1,150	106.0%
Architectural	203	222	274	328	455	618	24.9%
Commercial / industrial	77	89	114	149	184	232	24.7%
Outdoor area	8	37	63	110	155	221	94.2%
Retail display	29	36	50	86	135	180	44.1%
Residential	3	9	20	36	83	99	101.2%
Other	173	163	201	245	305	348	15.0%
Total	**524**	**601**	**821**	**1,224**	**1,974**	**2,848**	**40.3%**
Change -YoY		15%	37%	49%	61%	44%	

Source: Strategies Unlimited.

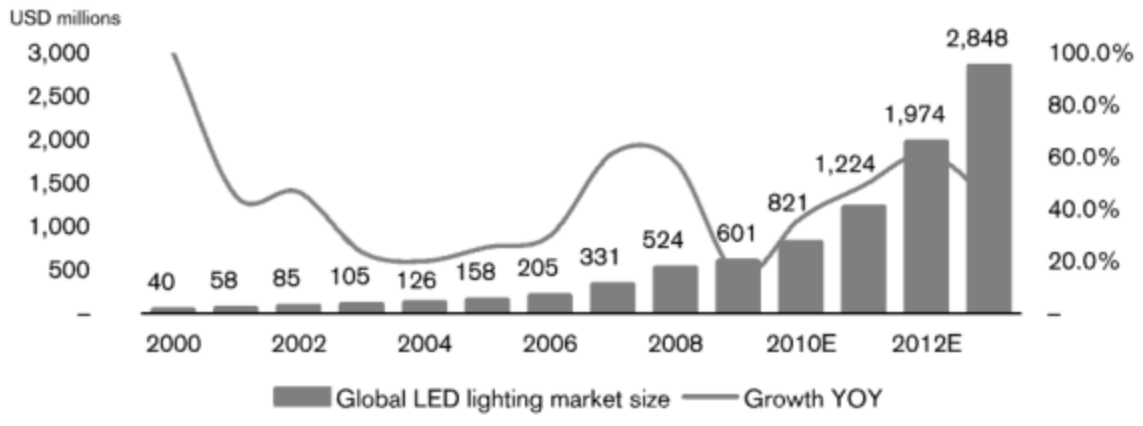
The Light Emitting Diode ("LED") lighting market is expected to grow by a CAGR of 40% reaching approximately USD 3bn market potential by 2013[4]. The main growth driver of LED lighting is expected to come from replacement lamps from commercial and municipal lighting.

LED lamps use 60%–80% less energy than incandescent light bulbs and provide equivalent or higher light efficiency in terms of luminosity per watt. LED lamps also have a much longer life span of up to 50K hours versus 1,000-2,000 hours for traditional incandescent bulbs. However, LED lights are currently 50 times more expensive than incandescent bulbs and 5-6 times more expensive than compact florescent lights.

LED lighting has several benefits compared to incandescent and fluorescent lamps:

- Does not contain any hazardous substance such as mercury or hazardous gases
- Digital control which allows to control the intensity of the light (dimming and elimination of flicker)
- Better reliability and longer lifetime
- Faster response time

Global LED lighting market size and growth



Source: Strategies Unlimited.

[4] Source: Strategies Unlimited.

Average life of lighting sources, in hours	
Light source	**Range of typical rated life**
Incandescent	750-2,000
Halogen incandescent	3,000-4,000
Compact fluorescent (CFL)	8,000-10,000
Metal halide	7,500-20,000
Linear fluorescent	20,000-30,000
High power white LED	35,000-50,000 (*)

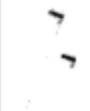
Source: US department of Energy.
Note: (*) reflects estimated useful life.

The lighting industry is composed of 5 main business segments:

- General lighting: includes the production of light bulbs, incandescent bulbs, halogen, fluorescent and high-intensity discharge bulbs
- Ballasts: electronic systems that regulate the current flow and therefore allow to save energy
- Automotive lighting: composed of headlights, brake lights, indicators and instrument panels. It varies from the classical bulbs to Xenon systems or LEDs
- LED: semiconductors diodes used principally for illuminating facades and public areas
- Luminaries: light fixtures including spotlights, desk lamps, etc.

LEDs, luminaries and electronic ballasts offer an alternative to the less efficient lighting systems currently in use and can help to cut energy cost and the inefficient loss of energy through heat.

Overview of lighting technologies

Lighting type		Description - application	Typical luminous efficiency (lm/W)	Typical lifetime (hours)	Typical financial efficiency
	Standard Incandescent Lamp	Used for general indoor lighting, dimmable. Generate a lot of heat, poor efficiency and short lifetime. Forbidden in EU	10-15	1,000	×××
	CSPS Compact Fluorescent Lamps (CFL)	New generation of indoor lighting, saving energy lamps. Can be dimmable, high efficiency and good lifetime	70-85	15,000	✓
	Halogen Lamps	Incandescent technology spotlight. Used for spot lighting, ceiling spots, etc. Poor efficiency, short lifetime	15-33	2,000-6,000	××
	CSPS LED Spotlights	Cutting edge LED technology, perfect substitute to Halogen lamps. Very high efficiency and lifetime. Wide range of colour	60-85	30,000-50,000	✓✓✓
	T8 Fluorescent Tube	The classic indoor diffuse light source. Used in all wide indoor area such as ware house, supermarket, office etc. Average efficiency, average lifetime. Can create electrical network disturbance	60-80	5,000-20,000	○
	CSPS T5 Nano Ceramic Tube	New generation of fluorescent tube, using nano ceramic technology. High efficiency and lifetime, the perfect retrofitting solution to T8	85-100	30,000	✓✓✓
	Discharge Lamps	High power lamps used for street lighting and industrial lighting. Poor to average efficiency, short lifetime. Poor to average color rendering. High heat generation. medium to high warm-up time	50-100	5,000-20,000	×
	CSPS EMDL	Innovative technology of high power lamps. Good efficiency and very long lifetime. High color rendering, instant start-up	85	60,000	✓✓✓
	CSPS LED Streetlight	LED technology applied to street lighting. High efficiency and long life-time. Modern design. Allow solar lighting	90	50,000	✓✓

Source: Company.

China – street lighting market

Energy efficiency and saving programs have been initiated by the Chinese government as part of its 11th 5 year program, most notably the LED lighting program "10,000 lights in 10 cities in China", which targets the installation of 1 million units of street lighting equipments in 21 major cities by 2010. The equipment will be installed on main streets, subways, tunnels, and other public areas.

The expected worldwide penetration of LED streetlights will only represent around 1.3% in 2009, an estimated 2.5 million units while over 90% of street lights still use high pressure mercury sodium or mercury as the light. China alone accounts for 56% of the LED street lights demand for 2009.[5]

Global LED street light demand

(in millions)

	2007	2008	2009E	2010E	2011E
Global streetlight units	174	181	193	205	213
LED streetlight units	0.4	0.9	2.5	4.5	8.5
LED streetlight penetration rate	0.23%	0.50%	1.30%	2.20%	3.99%
LED streetlight annual growth rate	100%	125%	178%	80%	89%

Source: Topology Research Institute.

China LED street light demand

(in millions)

	2007	2008E	2009E	2010E	2011E
Global LED streetlight unit	0.4	0.9	2.5	4.5	8.5
China LED streetlight unit	0.3	0.6	1.4	2.5	5.0
China market share	75%	67%	56%	56%	59%

Source: Topology Research Institute.

The Chinese government initiated a general lighting source replacement for its street lights:

- Phase 1, up to 2009: designate 21 cities as test beds, using 1million units of LED lighting equipment. Goal of achieving 60% of domestic production in LED components
- Phase 2, 2010-2012: designate 50 cities at test beds, using 2 million units of LED lighting equipment. Goal of achieving 70% of domestic production in LED components
- Phase 3, 2013-2015: replace over 30% of total lighting market to LED

LED lamps used in street lighting environment might come at a high cost in certain regions, where humidity requires frequent replacements and purchase cost for lamp parts are increasing amid high demand. EMDL lamps may provide for a cost conscious alternative for such applications.

EMDL lamps transfer the power needed to generate light from the outside of the lamp envelope by means of electromagnetic fields. This allows to eliminate electrodes leading to several advantages over a traditional lamp:

- Extended lamp life
- Allows usage of high efficiency light-generating substances
- Improved collection efficiency

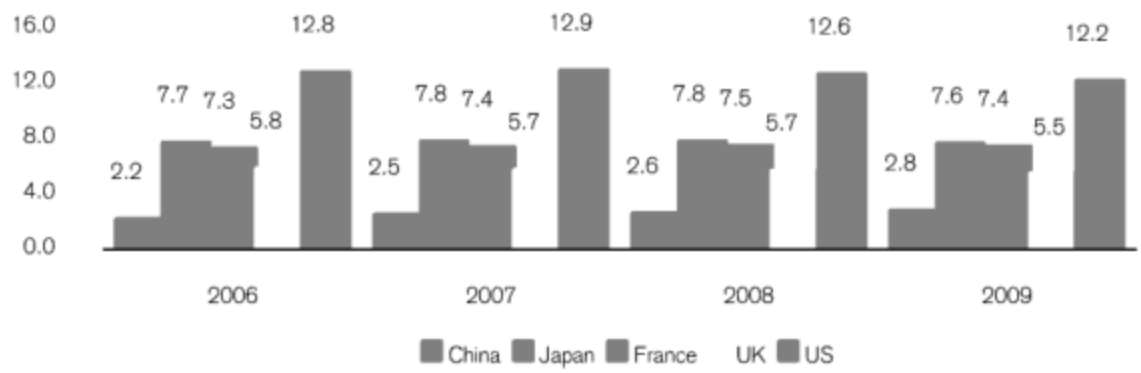
Compared to LED lamps, EMDL lamps are capable of coping with less optimal climatic conditions, such as high humidity, providing an interesting advantage especially in outdoor applications.

[5] Source: Morgan Stanley.

Energy saving devices

China's strong GDP growth is driven by fast urbanisation, a booming real estate market and fast industrialization, all driving power consumption. With China's economy increasing dependence on heavy industries with high energy usage, the need for energy saving solutions becomes even more apparent. In addition, in international comparison, China's energy consumption per capita is still at a low level. As such, China's demand for energy remains high and consumption for electricity has continued to grow, even against the backdrop of a slowdown in exports as seen during the financial crises.

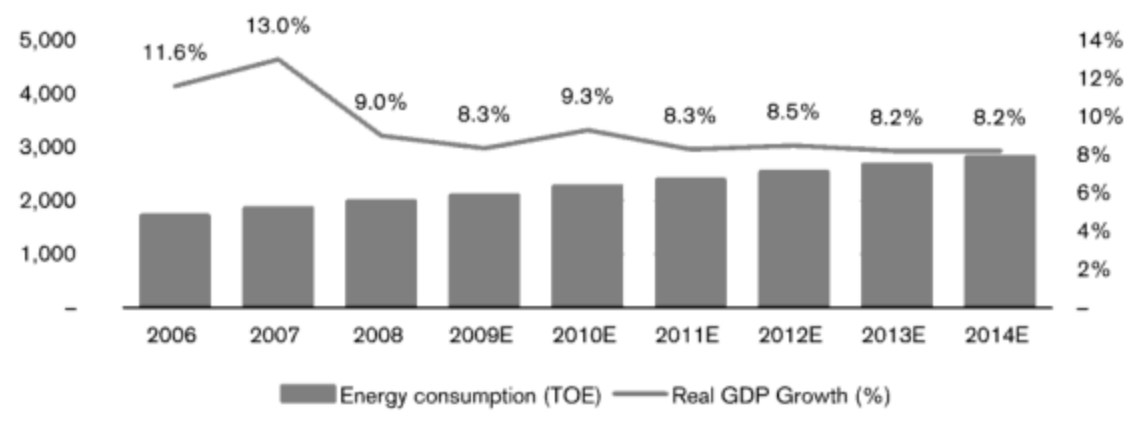
Energy consumption per capita (mwh per head, 2006–2009)



Source: EIU.

On a per-capita basis, China still consumes substantially less energy than developed economies. Starting from this relatively low base, China's consumption per capita is expected to grow at a CAGR of 6.2% between 2005 and 2014, making the country one of the fastest growing users of energy.

China energy consumption and real GDP growth



Source: EIU.

4.2. Competitive landscape

CSPS is active in the lighting market, providing lighting solutions. It also provides energy saving devices used in connection with lighting systems as well as motors of different sorts.

Lighting

The global lighting industry is highly consolidated with the three largest players, Philips, Siemens (Osram) and GE, controlling approximately half of the world market.

- Philips: the company manufactures and sells a complete range of products including lamps, consumer and professional luminaries, lighting electronics, automotive, and LED components. The company adopted the "Green Lightning" concept and expects it to be an important growth driver. Core elements of its growth strategy are
  - License LED technology to accelerate adoption of its developments
  - Grow in emerging markets
  - Perform bolt-on acquisitions to gain customer proximity
  - Invest in R&D (4-5% of sales)

Philips' energy saving technology

Energy saving technology	Old technology	New technology	Energy savings(1)	CO2 savings / lamp/ year
Road lighting	High pressure mercury	CosmoPolis	57%	109 kg
Road lighting	High pressure sodium	CosmoPolis	10%	n/a
Shop lighting	Halo	CDM	80%	115kg
Office & industrial lighting	T8 fluorescent	T5 fluorescent	61%	77kg
Home lighting	Incandescent	Compact fluorescent	85%	34kg

Source: Philips.
(1) Compared with conventional incandescent bulbs or similar light output.

- Siemens (Osram): sells lamps, LEDs, LED systems and luminaries. The company also sees green lighting as being an important growth driver. Core elements of its further development include:
  - Move production to low cost countries viewed as critical to remain competitive
  - Phase out "basic" plants and focus on "green" plants
  - Focus on launching "world class" products
  - Invest in LED (R&D is approx. EUR 100m p.a. equivalent to 15% of LED sales)
  - Provide an integrated LED offering (components, modules and LED-LUM)

Siemens' energy saving technology

Energy saving technology	Old technology	New technology	Energy savings(1)	CO2 savings / lamp/ year
Road lighting	High pressure mercury	High pressure sodium	40%	130 kg
Shop lighting	Halostar	Ceramic metal halide	80%	210kg
Office & industrial lighting	Fluorescent with halophosphate	Fluorescent with 3-band phosphate	80%	140kg
Home lighting	Incandescent	Compact fluorescent	80%	30kg

Source: Siemens.
(1) Compared with conventional incandescent bulbs or similar light output.

- GE: the lighting business unit, part of the Consumer and Industrial division, has been put into discontinued operations and management is looking to dispose of the business. Key steps of the refocusing measures include:
  - Continue major restructuring: lay off 2,500 employees from GE lighting division in Hungary over two years, with possibility of total shutdown of its Hungarian operations and transfer of production to low-cost countries
  - Focus on compact fluorescent light bulb (CFL) product enhancement to maintain innovation leadership position in the light bulb category
  - Deliver innovations in LED outdoor area lights to capture technology shift
  - Expand China presence through major strategic partnership with Sichuan Changhong Partners to rebuild Sichuan city
- Cree: produces semiconductors used in LED lighting, light fixtures, high electron mobility transistors among other products. As an upstream producer of LED chips, it provides players in the lighting sector with highest quality material. With its entry into the down stream market, it now also offers a wide range of lighting-grade LED products ranging from buildings and street lighting to video displays, laptops, digital cameras, traffic signals
- Epistar: located in Taiwan it is one of the key LED players worldwide. The group's principal activities are researching, developing, manufacturing and selling LED wafers and chips. Products include phosphorus aluminium gallium indium (AlGaInP) wafer and chip, arsenic aluminium gallium (AlGaAs) wafer and chip, indium gallium (InGaN) Epi wafer and chip, Si photo diode and Si photo transistor. The group exports its products to Asia and other regions. It is currently focused on the upstream business.

Energy saving devices

The market for energy saving devices is mainly targeted by local players. Large international companies are mostly focused on the production of new equipment with higher energy efficiency, and provide their customers with replacement equipment. The only major international player active in the provisioning of energy efficiency boxes in China is Schneider Electric.

- Schneider Electric: It is a world leader in offering energy efficiency solutions. It offers products for electrical distribution, industrial control and automation, as well as products for secured power supply including batteries, surge protection, and UPS

As a fast growing segment, the provisioning of energy saving devices also attracts interest of local players. They tend to be mostly smaller in scale, and focused on the sale of inexpensive lower technology energy saving devices and lamps, while not being focused on providing a service element to their customers.

5. Company overview

5.1. History

CSPS develops, assembles and sells a wide range of energy saving solutions, including new generation lighting products and energy saving devices for lighting systems and motors. The Company is headquartered in Hong Kong and has two operating subsidiaries in the People's Republic of China (PRC).

The Company develops and provides clean and intelligent energy saving products and solutions to commercial, institutional, and industrial organizations. Its technologies have also been widely applied in municipal street lighting projects.

The Company was established in Hong Kong by Ian Cheng. He acquired the operations of two Chinese companies, namely Hongdeqin and Nenghua, and has grown its operations over the last years from a single location to an extensive service network spanning across China.

Over the years, CSPS and its Founder have been awarded several recognitions for their contribution to the sector's development. In 2008 the Company listed in Paris, enabling it to strengthen its international profile.

Milestones	
2005	Only energy saving manufacturer recommended by the Shenzhen government
Mar. 2006	Obtains ISO 9001:2000 certification
Aug. 2007	Establishment of China Super Power Saving Holdings Limited
2007	CSPS acquires all outstanding shares in Hongdeqin and (indirectly) Nenghua
Feb. 2008	Lists on Marché Libre, France
May 2008	Starts to explore its market potential in Europe and the Middle East
2008	Obtained first CE certifications for its key products
Dec. 2008	Obtains a Green Electricity Certificate issued by Obser'ER

5.2. Vision and strategy

Vision

CSPS' vision is to be the best energy saving solution provider in China, as well as elsewhere in Asia and Europe.

Strategy

CSPS supplies a complete range of services to China's major electricity users and provides a quality service for China's street lighting sector. The Company differentiates itself from international and local competitors by offering a unique one-stop shop service to its customers.

Key differentiating factors include:

- Solution oriented, rather than just selling a product: service is tailor made to suit its customer's needs, usually combined with an onsite energy audit
- Value added offerings: product warranty or guarantee, supports customers in application for government subsidies, engineering supervision, offers innovative financing solution with free installation & sharing of savings made
- Quality products at competitive price levels
- Dedicated after-sales service

- Flexible style of cooperation with agents and partners

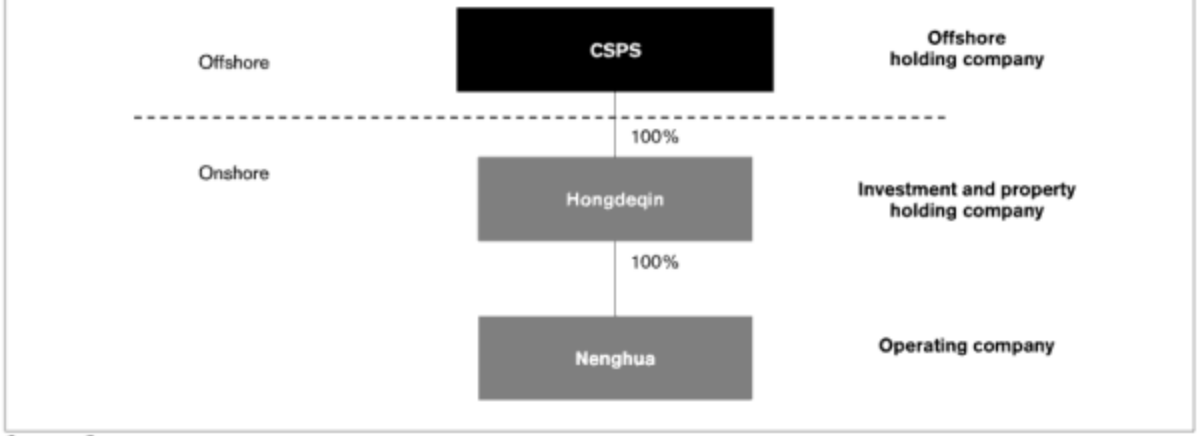
Having established these core competencies, CSPS also spends great effort to improve the relationship with local authorities and its agents. A key initiative derived from such efforts is CSPS' recently established partnership with Schneider Electric (China) Investment Co., Ltd. ("Schneider"). CSPS has become the partner of choice for several of Schneider's projects in the lighting segment, which involve installations of CSPS' energy saving devices and new generation lighting products. CSPS has also equipped Schneider's own offices in Beijing with these energy saving lamps and lighting systems. The testing and checks done by Schneider on CSPS' projects give the Company an additional quality certification for its services by one of the world's renowned players in this segment.

5.3. Legal structure

CSPS was incorporated under the laws of Hong Kong on August 15, 2007. It is registered with the Hong Kong companies register under the number 1158791, having its registered office at Flat 1702, 17/F, Eastern Commercial Centre, No. 393-399 Hennessy Road, Wanchai, Hong Kong.

After the group's legal restructuring in 2007, CSPS became the holding company for its operating businesses based in the PRC.

Legal structure



Source: Company.

The Company was converted from a private company to a public company according to Hong Kong corporate law and on February 25, 2008, the Company was listed at the French Marché Libre.

The Company holds hundred percent of its PRC based investment company, Hongdeqin, which in turn holds 100% of the PRC based operating business, Nenghua. Hongdeqin is registered as a wholly-foreign-owned enterprise under PRC law. All operating assets are owned by and all operating business is performed out of Nenghua.

Particulars of the holding company and its subsidiaries

Company name	% of equity held by CSPS	Place and date of incorporation	Registered office address	Registered capital
China Super Power Saving Holdings Limited 中国超节能控股有限公司	n.a.	Hong Kong SAR (August 15, 2007)	Flat 1702, 17/F Eastern Commercial Centre No. 393-399 Hennessy Road Wanchai Hong Kong SAR	HKD 10'000'000
Hongdeqin Energy Saving and Environmental Technology Limited 深圳市鸿德勤节能环保科技有限公司 ("Hongdeqin")	100% (directly)	Shenzhen, PRC (December 27, 2006)	3/F, No. 2 Zhuzilin Jianye Industrial Park Futian District Shenzhen P.R. China	RMB 500'000
Shenzhen Nenghua Energy Saving and Environmental Protection Limited 深圳市能华科技节能环保有限公司 ("Nenghua")	100% (indirectly through Hongdeqin)	Shenzhen, PRC (November 9, 1999)	2301 Tower East Qiushi Centre Shennan Avenue Futian District Shenzhen P.R. China	RMB 10'000'000

Source: Company.

The Company is liable to pay tax in both the PRC and Hong Kong SAR. Key components are:

- PRC incorporated entities, namely Nenghua and Hongdeqin are liable to pay corporate income tax in the PRC
- CSPS Holdings Limited is subject to profit tax at 16.5% in Hong Kong. No payments have been made to date, as no assessable profits have arisen in Hong Kong
- Any potential dividend flow from a PRC entity to a Hong Kong entity is taxable at 5% in the PRC (reduced tax rate for holdings of at least 25% of outstanding shares) under current applicable regulations

5.4. Location and premises

CSPS designs, prototypes and assembles its key chipset components in its assembly facility located in the city of Shenzhen, Guangdong Province, PRC. The Company outsources the manufacturing of all other components to subcontractors and focuses its resources on the assembly of its products.

The Company is also present in the Yangtze river delta region. It plans on increasing its assembly capacity in this region in order to integrate the logistical resources and political support offered by the local government. The new site in Wujiang city, which offers over 15,000 m² of space, also serves as the warehouse connecting to the neighbouring regions Jiangsu, Zhejiang, Anhui and Shanghai.

The next expansion phase will include the construction of a second assembly line in its Wujiang plant. The Company also considers the acquisition of an additional plot in Wujiang Industrial Park to further grow its presence there.

Assembly facilities

Assembly facility in Shenzhen

- Located at No. 2 Jianye Industrial Zone, Futian District in Shenzhen, Guangdong Province, PRC
- Monthly assembly capacity of about 2,000 sets of energy saving devices and 110,000 T5 nano ceramic tube sets
- Assembly area
- Research and testing facility
- Surface area of 2,252 square meters
- Rental term: 5 years until 2014; RMB 48,418 per month

Shenzhen assembly facility

Assembly facility in Wujiang

- Facility located at 1536, Yun Li Road in Wujiang Economic Development Zone, Wujiang, neighbouring Suzhou in the province of Jiangsu, PRC
- Covers 15,000 square meters
- Monthly assembly capacity of about 154,000 T5 nano ceramic tube sets
- Conveniently located near Shanghai, this new plant will allow CSPS to substantially increase assembly capacities and reduce shipping costs over China
- Rental term: 3 year term until 2012; free in first year, RMB 12/m² per month in the following years, which can be offset against local business tax paid

Wujiang assembly facility

Management office

- The Company's offices are located at 2301-2308, Tower East, Qui Shi Building, Futian District in Shenzhen, Guangdong Province, PRC
- Size: 210 square meters
- Rental term: 5 years term until 2014; RMB 19,514 per month

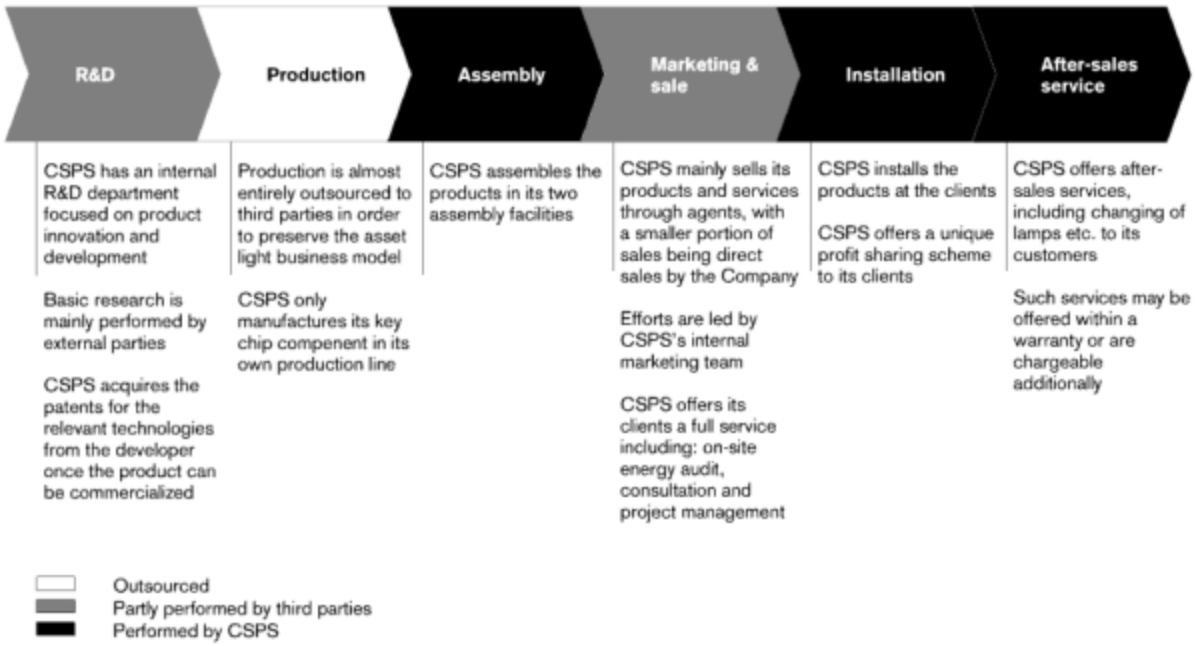
Management office

6. Business model

6.1. Overview

The Company is offering a one-stop shop service for companies looking for energy savings. It offers its customers with a complete service including i) analysis of the current situation and energy saving potential, ii) engineering of the most suitable energy savings solution iii) assembly of the energy saving equipment, iv) installation of the equipment at the client's facilities, as well as v) after-sales services.

While offering a complete service package to its customers, CSPS runs an asset light business model, allowing it to adapt to changing business needs of its customers.



6.2. Research and development

The core technology behind CSPS' energy saving devices relies on a controlling system, which combines over 10 years of research & development. It is comprised of microprocessors, transformers and timing circuits, which are designed to work together to regulate and monitor the flow of electricity from the main electricity delivery unit to the device using such electricity. This regulation and monitoring is designed to lower the use of electricity by such devices, but still maintain their performance. The controlling system has allowed CSPS to substantially increase the electricity saving capacity of existing products. Even though the basic elements of EMDL lamps do not rely on any new technology, the Company has considerably increased its lamps' capacity by combining smart reverse engineering with its proprietary software. All products are designed to be easily installed, with no wiring alterations or circuit modifications, and fully automated upon installation.

Intellectual property

The patent portfolio the Company holds, presents a key barrier to entry and a protection against competing technologies in the market. The Company developed and purchased innovative technologies that will benefit its end customer by helping to achieve a higher efficiency level relative to its competitors.

The table below outlines the main patents the Company holds to date. All patents are registered in the PRC by MTI Technology Laboratory Ltd. and are protected under Chinese law.

Patent	Serial number	Date	Group[1]
■ Fluorescent lamp switch	200430032790.9	02/20/2004	Light
■ Energy saving device (power equipment) design patent	200530063470.4	07/14/2005	Light
■ Light energy saving device design patent	200530063475.7	07/14/2005	Light
■ Energy saving device for fluorescent lamps	200530063476.1	07/14/2005	-
■ Street light electricity saver design patent	200530063471.9	07/14/2005	Light
■ New patterned electronic energy-saving lamp	200820091517.6	07/14/2005	-
■ Intelligent electricity saver for lighting system (high efficiency) design patent	200530063477.6	07/14/2005	-
■ Pipeline hydraulic generator patent	200520066800.X	11/08/2005	-
■ Light energy saving device design patent	200530066371.1	08/12/2005	-
■ Magnetic suspension bearing patent	200620017183.9 (Patent applied)	05/25/2006	-
■ Magnetic electrode-less discharge lamp of high frequency	200620016425.2	12/12/2006	EMDL
■ Guard alarm with tension stabilizer	200720196027.8	12/12/2007	-
■ Intelligent street light electricity saver (DK-J-TNLD-K)	03114306.7	12/11/2008	Light

Source: Company.
(1) Indicates for which key product group the patent is being used. Only indicates usage for existing revenues.

The Company performs research and development in collaboration with renown scientists from well recognized academic institutes and companies. Patents basic to such research are transferred to Ian Cheng or one of his partners during the time of further development, and usually acquired by the Company at the patent's commercialization stage.

The below provides an overview of patents related to the Company's business and currently held by the Founder personally or his partner, Han Yi.

Patent	Serial number	Date	Patent holder	Group(1)
Transformer (three-phase auto-zeroing)	200530063472.3	07/14/2005	Ian Cheng	Power
New patterned electronic energy-saving lamp	200820091517.6	01/04/2008	Ian Cheng	-
Energy saving device (three phase sewing machine)	200530063473.8	07/14/2005	Ian Cheng	-
Pipeline hydraulic generator patent	200530063469.1	07/14/2005	Ian Cheng	-
Fast rechargeable battery	200820213786.5	11/26/2008	Ian Cheng	-
Reformation of hydro-turbine for cooling tower	200820213098.9	10/31/2008	Ian Cheng	-
LED street light (DK-L-70W) design patent	200930167139.5 (Patent applied)	06/30/2009	Ian Cheng	-
LED street light (DK-L-45W) design patent	200930167137.6 (Patent applied)	06/30/2009	Ian Cheng	-
LED street light (DK-L-85W) design patent	200930167138.0 (Patent applied)	06/30/2009	Ian Cheng	-
Automatic infrared sensor	200920131540.8	05/06/2009	Han Yi	-
Frequency convertor patent	200920130827.9	04/14/2009	Han Yi	-
Frequency convertor for power supply of air-conditioner	200920130824.5 (Patent applied)	04/14/2009	Han Yi	Motor
Nano ceramic discharge lamp	200920130826.4	04/14/2009	Han Yi	T5
Rotor of rare-earth permanent magnet synchronous motor	200920130825.X	04/14/2009	Han Yi	-
Electrode for fluorescent lamps	200920129882.6	02/13/2009	Ian Cheng	Light
Solar power LED semiconductor street light	200920133329.X (Patent applied)	06/30/2009	Ian Cheng	-
Wind power charge unit with rechargeable battery	200920204100.0 (Patent applied)	08/26/2009	Ian Cheng	-
Solar window-shutter	200920204098.7 (Patent applied)	08/26/2009	Ian Cheng	-
Solar energy generator with auto-tracing system	200920204101.5 (Patent applied)	08/26/2009	Ian Cheng	-

Source: Company.
(1) Indicates for which key product group the patent is being used. Only indicates usage for existing revenues.

The below table provides an overview of the key current revenue driving product groups requiring patents. It further provides an estimate of what part of the Company's revenues in 2009 can be attributed to the respective product group.

Product group	Group code	Revenue share (2009E)
Energy saving device for lighting systems	Light	40.0%
EMDL lamps	EMDL	23.6%
Energy saving device for motors	Motor	18.4%
General energy saving device – high power	Power	10.3%
T5 lamps	T5	4.6%

Source: Company.
(1) Table only reflects existing product groups that have shown revenue in 2009. Estimates based on Nenghua forecasts only.

The Company intends on continuing its research and development efforts in order to remain competitive in the market and offer its customers the most efficient energy saving solutions. The EMDL series represent an array of products that CSPS plans on developing further.

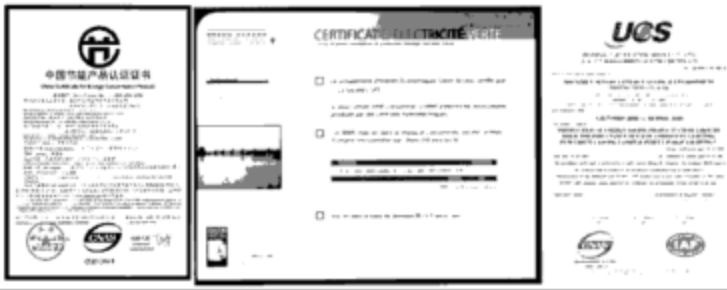
Development strategy	
Product / Technology	**Description**
■ Fully automated electrodeless power voltage control system	■ The Company is in advanced stages of developing a computerized monitoring system. The system will allow to regulate (increase / decrease) power voltage stepless. It will also allow long distance remote control
■ Low frequency lamps	■ Development of a low frequency lamp, suitable for indoor applications, such as in areas with low ceiling or desktop lighting. The lamps will minimize radiation impact

Source: Company.

CSPS has successfully passed various audit tests, with both public and private organizations in China and Europe. Successful audits include:

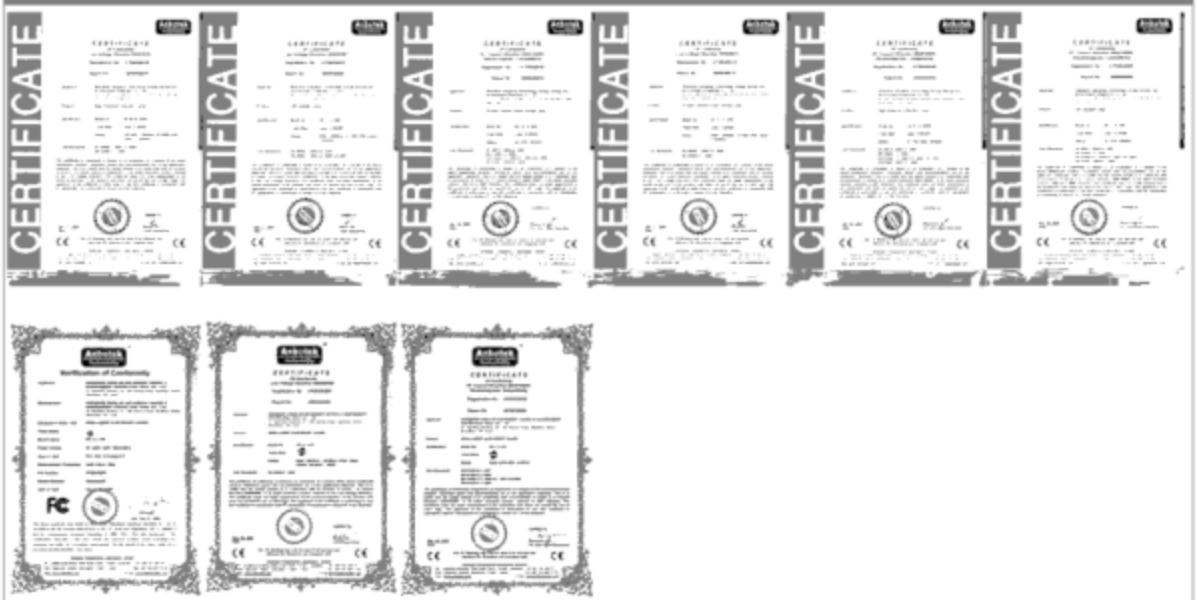
- ISO 9001 certification of all assembly facilities
- CE mark for its T5 tubes and its energy saving devices
- Applied for CCC certification of its T5 tubes, EMDL lamps and energy saving devices
- Audits from Schneider, now partnering with CSPS on several projects
- Certificate of Approval for CSPS products from the Chinese Government (China National Scientific Technology Products Committee) confirming a high saving rate of 28%–34%
- Several authentication certificates from local authorities and development centres, incl. the National Electric Light Source Quality Supervision Inspection Centre of China, the Beijing Energy Saving Inspection Centre, the Dalian Energy Using Inspection Centre and the Shenzhen Quality Inspection Institute

Selected Company certificates



Source: Company.

Selected product certificates



Source: Company.

Selected Company awards

Source: Company.

6.3. Manufacturing and assembly

CSPS runs a capital light business model, which provides it with large flexibility to respond to changing market demand. It self-manufactures the key software component used in its energy saving devices. Apart from this, the Company outsources production to third party suppliers and focuses on the assembly of its energy saving devices and the engineering of solutions for its clients.

The below outlines CSPS' current assembly capacities. The Company has recently enlarged its potential assembly capacity by adding a second facility in Wujiang, in the larger Shanghai area.

Assembly capacity

Product / Technology	Current daily assembly volume	Current monthly assembly volume	Assembly capacity per month
■ T5 nano ceramic tube (sets)	16,000	352,000 (1)	264,000
■ Energy saving device for motors	40	880	960
■ Energy saving device for lighting systems	40	880	960

Source: Company.
(1) The additional assembly volume is outsourced to CSPS' OEM providers.

Supplier

The Company runs an asset light business model. It sources bulbs, as well as all its components for the energy saving devices, such as contactors, switches, saver boxes, converters, transformers, wire, electronic components etc., from third party suppliers.

With its operations conveniently located in Shenzhen, it benefits form a large number of potential suppliers being located in its close proximity. Its 10 largest suppliers account for less than 45% of the total material cost incurred. The variety of suppliers available also provides the Company with flexibility to negotiate best conditions on purchases and to purchase material from various suppliers depending on its own client's quality and cost considerations. The Company also sources components from overseas suppliers depending on client's requests.

Energy saving devices are assembled in the Company's assembly facilities and undergo quality controls prior to delivery to the client. Where bulbs and other components are sourced directly from suppliers, CSPS ensures quality by undertaking quality control on samples of the deliveries.

6.4. Marketing, distribution and sales

CSPS sells its products through distributors and agents in order to reach the largest-coverage area. With a strong distribution network in place the Company can focus on research and development of new technologies and improvements on its current product portfolio.

Marketing

The Company's marketing efforts are driven by a dedicated Marketing Department with over two dozen employees.

The Company sells all its products under its own brand:

- 德勤电工（English: WESS）
- Until recently the Company used Dicken as its English brand name in China and CSPS for international distribution of its products

Brand	Registration number	Status
	■ Not yet available (PRC)	■ Application being processed
德勤电工 DICKEN	■ 3237107 (PRC)	■ Expires on August 27, 2013
CSPS China Super Power Saving	■ 301029096 (Hong Kong)	■ Expires on January 9, 2018 (renewable for another 10 years)

Source: Company.

The Company markets its products through participation in exhibitions and fair, its websites and a number of product brochures offered to customers.

Company websites:

- www.csps.fr
- www.dickenhitech.com

Company product brochure:

- http://www.csps.fr/down/WESS-CSPS_Catalogue_2010_fr.pdf

CSPS regularly participated in various product shows and fairs. The below table shows selected events, in which the Company has participated over the last three years.

Date	Exhibition / Fair
16/01/2010	World Future Energy Summit 2010, Abu Dhabi
09/12/2009	Wujiang Energy-saving Exhibition
04/01/2009	MIECF (Macao International Environment and Cooperation Forum and Exhibition)
12/17/2008	SIREME Exhibition in Paris
05/27/2008	Exposition Lumiville in Lyon
02/27/2008	Daqing Electric Power Group Energy Symposium
06/29/2007	2007 Shanghai Energy-saving Environmental Protection Expo
06/10/2007	National Energy Conservation Publicity Seminar in 2007, Guizhou

Source: Company.

Fairs and exhibitions

Agent network

The Company markets its products almost exclusively through agents. It has one of the largest distribution networks of its kind in China, with over 140 agents in 28 provinces. It is also building a distribution network in Europe and the Middle East, where it currently has 16 agents in total.

The Company chooses its agents according to the following criteria:

- Commitment to energy saving and environmental protection
- Financial strength
- Industrial connections to develop strong sales
- Willingness to participate in marketing activities and to share client information with CSPS

An agent will be assigned to a specific region and will be ranked according to the area's size and importance. Dependent on the agent's rank, a certain minimum annual turnover will be agreed. Such terms are outlined in the standard agent agreement which CSPS signs with its agents. Other terms and conditions outlined in the agreement include:

- Product pricing: agents are advised to keep pricing for standard products within a percentage range of the pricing list. Special discounts are available for services involving bidding processes or government guarantees
- Ordering: according to a standard order form, which serves as contract between the parties
- Delivery: delivery costs are to be born by the agent
- Product guarantee: defect products can be exchanged within a month upon purchase. The Company then offers a guarantee for 18 months on lamps and 30 months on energy saving devices

- Technical support and client service: CSPS offers educational training to its agents, sends its technicians on sight for survey, installation and technical support under certain conditions
- Performance awards: the Company provides a bonus to agents that exceeded their annual minimum quota
- Regulations: disregarding agreed rules and regulations may lead to a downgrading in ranking, loosing of annual performance award, or even the cancellation of the contract
- Rights and obligations of both sides
- Confidentiality agreement

Most agent contract have a duration of one year and are automatically renewed, unless a cancellation notice is issued. The agency network has been very stable over the years. The fluctuation of approximately 15% annually, mainly reflects smaller agents leaving their positions after having exhausted their respective contact networks.

Agent network

Source: Company.

Agents profit from the Company's marketing initiatives, and acquire the products and services at a given price from CSPS. They are then free within the boundaries of their agent contract as to their price politics, sales approach and targeted client base. Dependent on the agent's professional level, the agent serves as a plain sales agent, or may offer some of the advisory and after-sales services itself.

The core markets for CSPS are currently the highly developed regions along the East coast of China, with an especially strong foothold in the Yangtze river delta region.

2008 revenue split by region

Source: Company.

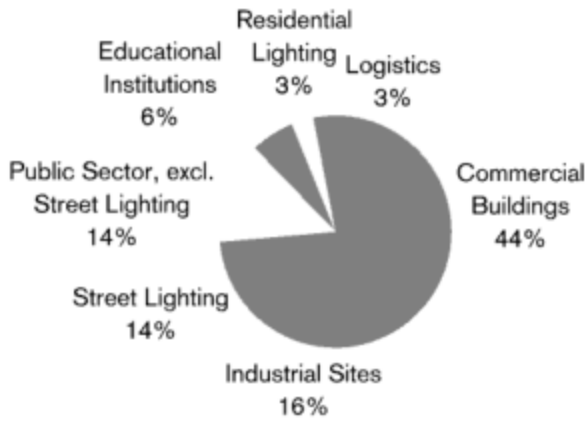
Customers

The Company focuses on creating value for its clients through savings on energy consumption. Since inception, more than 600 clients including municipal government's street lighting systems, hotels, hospitals, factories, large businesses, residential compounds and shopping malls have been using their products and services.

Its target clients are mid-sized companies and government funded projects. Its core clientele uses electricity consuming equipment, which our operating 16 hours or more per day, which maximises the energy saving potential achievable through the installation of CSPS products.

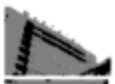
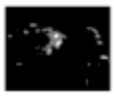
The following graph shows an overview of the end customers targeted by CSPS.

Customer segmentation



Source: Company, based on 2009E sales estimates.

The following highlights some of the Company's key reference projects:

Project	Location	Product installed and saving rate achieved
	■ Commercial building: A-Best Supermarket	■ Product: Energy savers ■ Saving rate: over 20%
Schneider Electric	■ Commercial building: Schneider Electric Beijing Office	■ Product: Energy savers, T5 tube ■ Saving rate: over 30%
	■ Commercial building: Carrefour	■ Product: Energy savers, T5 tube ■ Saving rate: over 30%
	■ Public services: Shanghai Chest hospital	■ Product: Energy saver for A/C system ■ Saving rate: 29%
	■ Public services: Nanjing Subway	■ Product: Energy saver for fluorescent lighting ■ Saving rate: over 20%
	■ Street lighting: Shenzhen	■ Product: Energy savers, T5 tube ■ Saving rate: over 30%
	■ Street lighting: Qingdao	■ Product: Energy saver for street lighting ■ Saving rate: 30%
	■ Residential lighting: Shenzhen Feng Dan Ya Yuan residential garden	■ Product: Energy saver for street lighting ■ Saving rate: 26%
	■ Industrial site: Shaoyang Water	■ Product: Energy saver for pumps ■ Saving rate: 40%
	■ Industrial site: Chiwan Electricity Station	■ Product: Energy savers for lighting ■ Saving rate: 19%
	■ Educational institution: Hong Kong University of Science and Technology	■ Product: Energy savers ■ Saving rate: over 20%
	■ Educational institution: Beijing Normal University	■ Product: Energy saver for lighting ■ Saving rate 15%

Source: Company.

6.5. Installation and after-sales services

CSPS offers its clients product installation and after-sales services adding to the value of its service offering. Such services are offered by CSPS within the first 3 days upon product purchase, or as otherwise agreed. The agent may also offer such services dependent on his level of professionalism, in which case CSPS will supervise and quality control such services. Depending on the client's needs, such services may include:

- On-sight product installation
- Measurement and testing of energy saving achieved
- Lamp replacement service
- Other onsite replacement services
- 18 months warranty on lamps and 30 months on energy saving devices
- Equipment related product schooling

7. Products and services

7.1. Products and services description

The Company has developed a wide range of energy saving products including energy saving devices (used in combination with fluorescent lights, street lights, sewing machines, pumps, fans, etc.) and low consumption lamps series.

The China National Scientific Technology Products Committee issued a "Certificate of Approval" for CSPS products stating that average energy savings range reached from 28% to 34%. Products have also been approved by the National Light Source Quality Inspection Centre of China, Beijing Energy Inspection Centre, Dalian Energy Using Inspection Centre and Shenzhen Quality Inspection Institute. The Company holds 13 patents, controls 19 further patents held under the Founder's and his partner's name, and has built a long-term R&D cooperation with a variety of players including Shenzhen Energy Conservation Association.

With strong R&D partnerships, CSPS is constantly developing new products. The Company recently developed new products leveraging on its controlling system including its multi-user electricity saver and high voltage electricity saver.

CSPS' core offering currently includes solutions around its three product categories, namely: i) new generation lighting products, ii) energy saving devices for motor and lighting systems, and iii) new energy saving sets.

For a detailed description of CSPS' core products, including their key features, technical parameters and main fields of application, please refer to the Appendix.

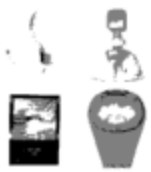
New generation lighting products

CSPS' comprehensive series of lighting products include: EMDL lamps, LED street lights, LED spot lights, T5 nano ceramic tubes and energy saving bulbs among others.

Compared to traditional incandescent lamps, HM lamps or sodium lamps, CSPS lighting products reduce electricity consumption by about 30%. With an ultra long lifespan, for example 10,000 hours for T5 nano ceramic tubes, the products also help reduce cost of maintenance.

The Company further offers its lighting products as light saving sets, which combine low consumption lamps with a controlling system that monitors the installation. Working both indoors and outdoors, they have been designed to retrofit into any existing installation without requiring modifications on light fittings. They can be used in many configurations, from the lighting of a small office to street lighting with a power ranging from 40W to 1,000W.

The Company's portfolio of new generation lighting products includes:

	Product category	Description / Offering
	T5 nano ceramic fluorescent lamp	■ Fluorescent lamps based on a patented technology to save energy ■ Superior life of over 10,000 hours and results in lighting twice as strong as a normal fluorescent tube (no flickering) ■ Saves up up to 50% of electricity consumption ■ Considered to be the successor for traditional T8 tubes
	T8 LED tube	■ Offers optimum efficiency, great energy saving results and high mechanical resistance ■ CSPS has a wide line of products for different power and various colour temperatures, which make the lamp adaptable to all kinds of environments
	Electrodeless magnetic discharge lamps (EMDL)	■ Offers a major technological improvement for lighting products through a combination of the advantages of the traditional fluorescent lamps and the high frequency of magnetic fields ■ This technology is free from usage of strands or electrodes, which considerably increases the working life of the lamp to more than 60.000 hours ■ With a colour temperature range from 2700 to 6500 K, the emitted light is more pleasant and adaptable
	Light emitting diode lamps (LED street lighting)	■ Highly efficient LED lamps with a very long lifespan and excellent colour rendering ■ Represent a substitute to the current high power consumption street lamps ■ CSPS offers a complete range of street lighting, from car park lighting to the traditional street lighting

Source: Company.

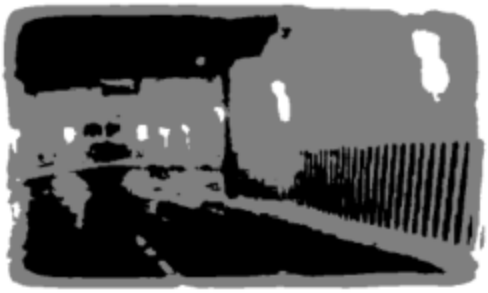
The controlling system of a light saving set is based on proprietary software that automatically adjusts voltage according to time and sensor detection. For example, would maximum voltage only be supplied to turn a light on. Afterwards, the controlling system automatically switches to economic voltage. Similarly, when additional lights are turned on, the controlling system automatically increases the power voltage. This additional monitoring system ensures maximum energy savings.

Once installed, CSPS light saving sets drastically reduce electricity consumption, while extending the life of the lights and lowering the bulbs' operating temperature. Major benefits include:

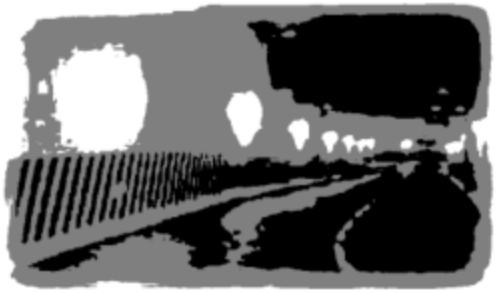
- Unmatched energy savings: light saving sets allow up to an average of 70% savings on electricity consumption
- Greater lifetime: CSPS lamps operate for over 30,000 hours, 30 times as much as incandescent bulbs
- Better lighting efficiency: CSPS lamps have a lighting efficiency 8 times superior to incandescent lights and twice as high as compact fluorescent lights
- Lower heat: CSPS bulbs produce limited heat, increasing energy savings in air-conditioned environments where each watt of incandescent lighting adds another watt required for air conditioning

Tunnel projects

Traditional installation – 250W classic sodium lamps



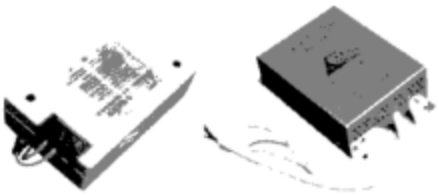
Energy saving installation – CSPS 85W EMDL lamps



Energy saving devices for motor and lighting systems

The basic technology applied to the energy saving devices is a controlling system comprised of microprocessors, transformers and timing circuits, which are designed to work together to regulate and monitor the flow of the electricity from the main electricity delivery unit to the energy consuming equipment, e.g. lighting devices, air conditioners or motors. This regulation and monitoring is designed to lower the use of electricity by such devices, while maintaining their performance. The energy saving devices are designed to be easily installed, with no wiring alternations or circuits modifications, and are fully automated upon installation. The energy saving devices series cover usage for elevators, air-conditionings, heating, injection moulding machines, sewing machines, water pumps, fans, air compressors, fluorescent lamps and street lights.

Energy saving devices



New energy saving sets

CSPS has developed a range of solutions based on renewable energies including solar panels, water turbines and wind turbines. Its product range is continuously growing based on changing market demand and client requests. Recently introduced products include:

	Product	Description / Offering
	Water turbines	■ CSPS offers an alternative to engine driven fans used widely in industrial and commercial buildings with cooling system ■ CSPS' system removes the engine and replaces them with a turbine connected to the water circuit. Using the existing pressure in the water circuit, the turbine will drive the fan and therefore allows saving the energy normally used to drive the engine
	Solar panels	■ The range of CSPS photovoltaic panels offers different powers from 60W to 250W. Using latest technologies and submitted to strict quality controls, these products aim to provide a clean energy source tailored to client's needs ■ Combined with the Company's wind turbine systems, it creates a self sustaining solution for street lighting and other applications in remote locations
	Wind turbines	■ The Company developed a patented vertical wind turbine system, especially efficient in urban areas on high building rooftops ■ The system makes use of modern magnetic routine technology and microelectronics

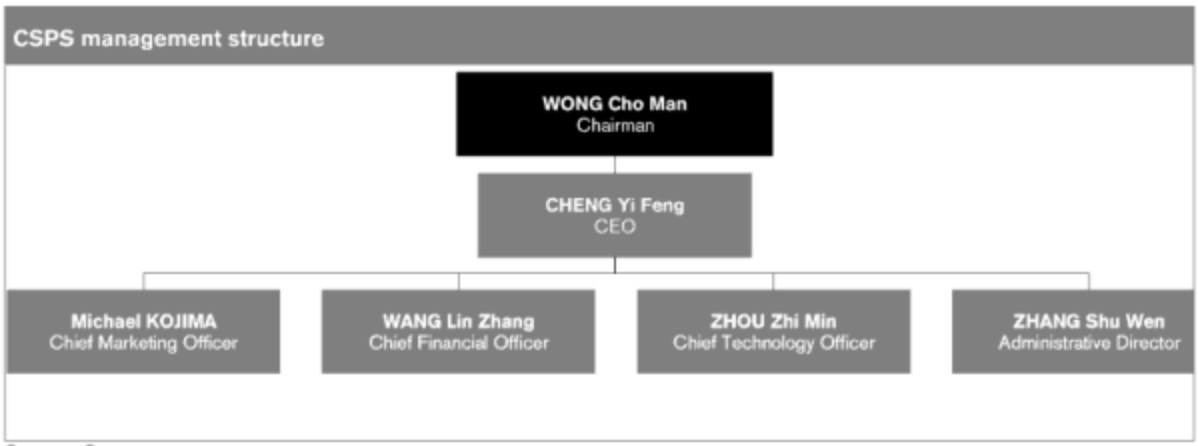
Source: Company.

8. Management, directors and employees

8.1. Organisational structure

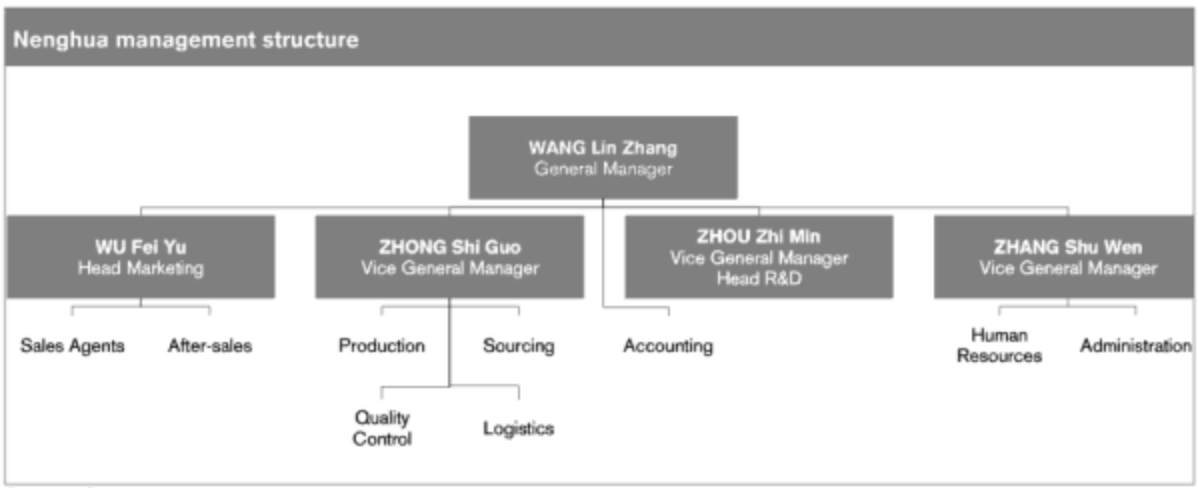
The Company's management team consists of seasoned professionals, who have strong experience in the energy efficiency sector. Since establishment of CSPS the management team has grown the Company continuously and positioned it as a respected player in the field of energy efficiency in China.

CSPS management structure



Source: Company.

Nenghua organization



Source: Company.

8.2. Management and board biographies

Management biographies

	Name and title	Qualification details
	**WONG Cho Man** **Chairman and Executive Director** CSPS board member: yes Age: 55 Nationality: British, Hong Kong	■ In charge of the Company's corporate strategy. Has over 24 years experience in corporate management ■ Graduated from Sun Yat-sen University with a masters in Business Administration. Holds a masters in Medical Science from Tongji Medical University and a bachelor from Sun Yat-sen University ■ Chairman and president of Guo Hui Industrial Group Limited, China Hui Run Sanitary Articles Co., Ltd and Yue Li International Ltd ■ Managing Director of Chinese Wudang Mountain International Travelling Agency Ltd, Chairman of China Wild Resource Investment Limited and Executive Director of China International Exchange and Promotive Association for Medical and Health Care
	**Ian CHENG Yi Feng** **Chief Executive Officer** CSPS board member: yes Age: 54 Nationality: Canadian	■ 20 years experience in factory management and energy saving technology ■ Obtained a masters in Business Administration from Anhui University, PRC ■ Serves as President and Chief Executive Officer of Nenghua since 2002 ■ Senior member of Shenzhen Energy Saving Association and China National Lighting Association
	**WANG Lin Zhang** **Chief Financial Officer & General Manager Nenghua** CSPS board member: yes Age: 48 Nationality: Chinese	■ Holds a college degree in Engineering Management ■ President of Shenzhen De Qin Leasehold Hypothecate Co., LTD since 2005 ■ Worked previously as an operation manager in a state-owned industrial company in Shanghai ■ Strong experience in project management
	**ZHOU Zhi Min** **Chief Technology Officer & Vice General Manager Nenghua** CSPS board member: no Age: 69 Nationality: Chinese	■ Previous positions as Vice-Director and engineer of Jiangsu Hai Xing Radar Co., Ltd, and Executive Manager of the JV project with Cummins (USA, NYSE:CMI) in motor technology supporting system ■ He was also the Vice Chairman of China Electrical Equipment Industrial Association, Jiangsu Electrical Technology Association of Motor Technology and Modern Industrial Design Association, Executive Director of Wuxi Institute of Electrical Engineering, Vice President of Wuxi Standardization Association ■ Vice Director of National Rare Earth Permanent Magnet Motor Engineering Technology Research Centre in Jiangsu

Source: Company.

	Name and title	Qualification details
	**Michael KOJIMA** **Chief Marketing Officer** CSPS board member: no Age: 59 Nationality: American	■ BA and MBA from San Francisco University and MBA from Yokohama University, PRC ■ 7 years at Kanematsu Gosho Co Ltd., an international trading house ■ Advisor to the US Department of Commerce for 4 years, personnel inspector for the US Department of Energy for 4 years, reserve officer at a CIA branch for 12 years ■ Heading his private companies active in the field of investment, trading, property management and hospitality for 10 years ■ Fluent in Japanese, English and Chinese ■ Strong understanding of the Asian markets
	**ZHANG Shu Wen** **Administrative Director & Vice General Manager Nenghua** CSPS board member: yes Age: 54 Nationality: Chinese	■ Diploma in foreign languages from the Engineering Professional Institution of the Chinese Army, PRC ■ Highly experienced in logistics and production management, with strong esprit of organization and coordination ■ 1989-1998: Factory manager of Yasi Scarf and Fabric Dying (Shekou) Co., Ltd ■ 1999-2003: Director of Shenzhen Bo Ao Xin Industry Development Co., Ltd ■ 2003-Present: Director of Nenghua (Director of CSPS since 2008)
	**ZHONG Shi Guo** **Vice General Manger Nenghua** CSPS board member: no Age: 47 Nationality: Chinese	■ Manufacturing Manager at Nenghua ■ Holds a college degree in Machinery Manufacturing from College of Specialised Education of Ningbo, PRC ■ Almost 20 year experience in the electronics production sector, incl. positions at Ningbo Jia Mei Plastic Machinery Factory, Shenzhen Qin Zhong Electronics Co., Ltd. and Shenzhen Cheng Zhi Wei Wei CD-ROM Production Co., Ltd ■ Vast experience in the manufacturing sector, with a special focus in the field of factory management

Source: Company.

Non executive board member biographies

	Name and title	Qualification details
	**ZHAO Da Kuan** **Non-executive director** Age: 55 Nationality: Chinese	■ Since 2001 he has served as Vice President and Executive Director of China Hi-Tech Fund Ltd, as well as Chairman of China An Bang Investment Ltd. ■ College of Chinese Army, Management major ■ Years of experience in administration in Shenzhen Airlines and as director of Shenzhen Airlines Cargo Co., Ltd

Source: Company.

8.3. Employees

Employees overview

The Company currently employs over 300 staff. The majority of which are located in the two assembly facilities, as well as active in the sales and marketing departments. The Company is keeping its cost structure flexible by hiring employees on a part time and contractual basis. Management, members of the financial department and R&D staff are hired on a permanent basis. For production / assembly work only staff in key functions are hired on permanent contracts, such as senior engineers in charge of energy saving device assembly and supervisors. The temporary staff headcount varies according to the intensity of projects on hand and the need for extra employees on the assembly lines.

Permanent employees	Headcount	Temporary employees	Headcount
Management	10	Production / assembly	185
Engineering	45	Marketing	14
Accounting	8	Other	5
Administration	10		
Marketing	12		
Production / assembly	13		
Total permanent employees	**98**	**Total temporary employees**	**204**

Source: Company.
Note: Headcount as of end of February 2010.

CSPS has been able to retain its core staff over many years. About one third of its employees have been with the Company for over 5 years.

Employee benefits

Pursuant to relevant regulations of the PRC government, the Company participates in a local municipal government retirement benefits scheme, whereby companies in the PRC are required to contribute a certain percentage of the basic salaries of its employees to the scheme to fund their retirement benefits. The local municipal government undertakes to assume the retirement benefits obligations of all existing and future retired employees of the Company. The only obligation of the Company with respect to the Scheme is to pay the ongoing required contributions.

The Company also provides medical, work related injury, education and unemployment insurance to its permanent staff as required by national, state and city regulations.

The Company provides its staff with an extensive 'Employee Handbook' outlining general company regulations, including guidelines covering:

- Working hours
- Working standards
- Holidays
- Public holidays
- Other permitted leave days
- Overtime
- Staff quarter
- Education
- Work clothing
- Employee participation

- Social insurance
- Resignation

The Company further buys extra insurance coverage for its technicians and engineers. As of September 10, 2009 the life insurance covered 23 employees. The insurance includes payments in case of:

- Death resulting from illness
- Death resulting from accident
- Medical costs incurred
- Hospitalization due to an accident
- Disability resulting from an accident

9. Selected case studies

9.1. Carrefour China

Through its partnership with Schneider, CSPS has secured a range of projects to install its energy saving products at Carrefour's outlets in China. As to date, the Company has successfully equipped 23 outlets with new lighting systems.

After initial audit checks by Schneider and CSPS at Carrefour, CSPS made a proposal to Carrefour. Its focus was on the main lighting load, i.e. the shopping area lighting. This lighting system consisted of T8 fluorescent tubes which are relatively inefficient. The Company suggested to replace them with their patented T5 nano ceramic tubes resulting in a substantial energy saving. To increase the efficiency of the whole solution further, CSPS proposed to add their energy saving devices for fluorescent lighting.

After approval by Carrefour, contracts were signed, allowing for a staged payment over the signing, installation and warranty period (3 years).

CSPS had the product components produced at its OEM suppliers and shipped to the CSPS facility for assembly and quality testing. Finished products where then delivered to Carrefour and installed at the sites. Following the completed installation, CSPS provides after-sales services to Carrefour including: site checks, inventory checks, product guarantee. CSPS has also supported Carrefour in its application for energy saving rewards from the Chinese government.

The complete solution allows a real energy saving of 30%. Additional cost savings come from an increased expected lifespan of the installation and a reduction in maintenance cost due to increased quality and lifespan of the new tubes used.

The below highlights installations completed at two outlets in more detail.

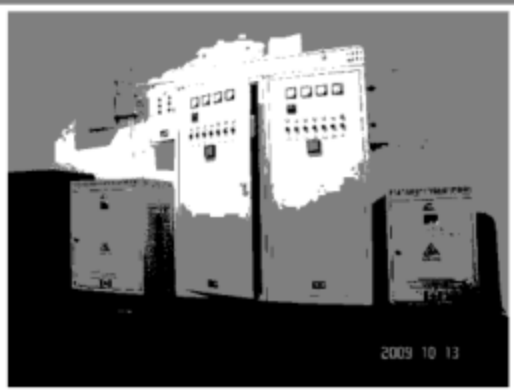
Shanghai

- Date of installation: 12/04/2009
- Existing equipments
  - T8 fluorescent lamps 36W: 6456 sets
  - T8 emergency lamps 36W: 455 sets
  - Metal halide lamps: 119 sets
- CSPS solutions
  - T5 nano ceramic tubes: 6456 sets
  - EMDL lamps 135W: 28 sets
  - EMDL lamps 40W: 91 sets
  - Energy saving device: DK- J-DZ-3P (from 5K to 50K)
- Energy saving rate: 30%

Beijing

- Date of installation: 11/23/2009
- Existing equipments
  - T8 fluorescent lamps 36W: 10600 sets
- CSPS solutions
  - T5 nano ceramic tubes: 10600 sets
  - Energy saving device: DK- J-DZ-3P (from 5K to 50K)
- Energy saving rate: 30%

Carrefour installation



9.2. Qingdao street lighting

CSPS provided an energy saving solution to the Qingdao city municipality. The equipped area of Qingdao city street consists of poles with one or two lamps each and a height of 8 to 14 meters.

CSPS performed an audit of the existing situation in Qingdao city. Based on its analysis, the Company suggested to install its energy saving devices. The contract included a full upfront payment of the amount due. Production of the necessary products was outsourced to CSPS' OEM manufacturer. The installation was performed by Qingdao's street management company. CSPS performed on-site quality controls upon installation.

CSPS' installation of its energy saving device for discharge lighting system on several main routes is achieving an energy saving rate of 29.77%, as well as an improvement in street lighting quality.

- Date of installation: 04/03/2006
- Existing equipments:
  - Sodium lamps: 250W to 400W
- CSPS solutions:
  - Energy saving device for discharge lighting system: DK-J-TNLD-50K
- Energy saving rate: 29.77%

Qingdao street lighting

10. Financials

CSPS' financial year runs to December 31. Both historical and projected figures provided in the Information Memorandum have been prepared in accordance with accounting policies complying with IFRS.

With the creation of CSPS in August 2007 in Hong Kong, the Company consolidates the accounts of both its subsidiaries from 2007 onwards. Since then, it reports under IFRS accounting policies and is subject to the Hong Kong companies ordinance. Previously, it reported under the relevant accounting principles and financial regulations applicable in the People's Republic of China. Financial results of the years 2005 and 2006 represent accumulated date, rather than consolidated.

Listed below are the principal sources for the financial information:

- Company accounts for the four years ended December 31, 2008 and first half of 2009
- Since 2009, the Company has adopted for the first time the following new interpretations and amendments to IFRS: IFRS1 and IAS27 amendments, IFRS 8, IAS 23, IAS 32 and IAS 1 amendments, IAS 34, IAS 39 amendments and IFRIC-INT 15
- The forecast for the year ending 2009 is based on first half of actual results from the audited accounts and 6 months of unaudited results
- Forecasts for the three years ending December 31, 2012 are based on the management expectations and guidance going forward

10.1. Administration and finance

The Company's finance department prepares the financial statements of the two PRC incorporated companies, namely Nenghua and Hongdeqin on a semi-annual basis. Figures are based on Chinese accounting principles and are recorded in accounting/management software, Kingdee. This also allows the Company's management a detailed analysis on its income base on a monthly basis.

On Group level, financials are adjusted to comply with IFRS accounting principles, and consolidated on a semi-annual basis by the Company's auditor, KTO CPA Limited, based in Hong Kong.

10.2. Historical financials and analysis

Historical profit and loss statement					
(RMB in millions)					
	2005	**2006**	**2007**	**2008**	**H1 2009**
Revenue	**48.9**	**110.7**	**170.8**	**262.4**	**145.4**
% growth		*126.5%*	*54.3%*	*53.6%*	–
COGS	(28.3)	(67.6)	(103.7)	(151.7)	(88.9)
Gross profit	**20.6**	**43.1**	**67.1**	**110.6**	**56.5**
% sales	*42.1%*	*38.9%*	*39.3%*	*42.2%*	*38.8%*
Sundry income	0.0	0.0	0.0	0.1	0.7
Selling & distribution expenses	(1.9)	(7.1)	(14.4)	(13.5)	(0.7)
Administrative expenses	(4.8)	(2.6)	(3.3)	(14.6)	(2.1)
Other operating expenses	–	–	(0.1)	(2.2)	(0.2)
EBITDA	**13.9**	**33.4**	**49.4**	**80.4**	**54.2**
% sales	*28.5%*	*30.2%*	*28.9%*	*30.6%*	*37.2%*
D&A	0.1	0.1	0.1	12.1	16.3
Operating profit	**13.9**	**33.4**	**49.3**	**68.3**	**37.8**
% sales	*28.4%*	*30.1%*	*28.9%*	*26.0%*	*26.0%*
Interest income	0.0	0.2	0.5	1.2	0.5
Profit before tax	**13.9**	**33.6**	**49.8**	**69.5**	**38.4**
Income tax	(1.4)	(5.0)	(7.5)	(15.8)	(8.9)
% tax rate	*10.1%*	*15.0%*	*15.1%*	*22.7%*	*23.3%*
Net income	**12.5**	**28.5**	**42.3**	**53.7**	**29.4**
% sales	*25.5%*	*25.8%*	*24.8%*	*20.5%*	*20.2%*

(1) Includes sundry income.

Revenues

Volumes have been more than doubling over the last two years. This was mainly driven by the increase in the agent network and larger volume contracts signed. Volume increase was the main driver for the sales growth. Pricing had a mixed effect on the overall revenue figures, some of products benefited from a lift in pricing while other products such as the energy saving devices for air-conditioning units and freezers, street light systems, and electric induction systems were sold at a more competitive pricing because of increased competition. Overall revenue increased by c.54% in 2007 and 2008. In the first half of 2009, order levels were lower than expected due to the financial crisis, this trend reversed in the second half with orders and volumes increasing again and new projects and contracts with Schneider.

The Company recognises revenue, when it is probable that the economic benefits will flow to the Company and when the revenue can be measured reliably. This usually relates to the Company recognising revenue once the invoice has been issued to the customer.

Gross margin

The Company has steadily increased its profitability over the last three years due to a favourable product mix shift towards higher margin products, phasing out of energy saving systems for outdated technology and lower cost of goods purchased.

EBITDA

EBITDA more than doubled over the last three years to RMB 80 million. EBITDA margins improved in 2008 and the first half of 2009, this trend is expected to continue going forward. In 2008, the Company had higher administrative expenses because of its listing on the Marché Libre.

Selling and distribution expenses are significantly lower in 2009E onwards due to a shift in policy with regards to delivery expenses. Such costs used to be born by CSPS but have been pushed onto the customers starting in 2009.

Historical balance sheet

(RMB in millions)

	2005	2006	2007	2008	H1 2009
Assets					
Cash & cash equivalent	9.3	29.4	23.6	92.7	55.8
Inventories	6.8	4.1	2.0	1.7	3.4
Trade receivables	13.8	7.3	25.6	22.2	85.7
Other receivables, prepayment & deposits	10.8	9.1	40.7	4.3	2.0
Due from related parties	0.7	11.1	4.4	2.1	–
Intangible assets	0.2	0.2	0.2	24.1	68.1
PP&E	0.4	0.3	0.3	6.1	5.7
Total assets	**41.9**	**61.6**	**96.7**	**153.1**	**220.7**
Liabilities					
Trade payables	9.9	11.1	15.1	9.2	15.7
Other payables, accruals & deposits received	3.5	3.1	9.0	11.9	9.3
Due to related parties	10.0	–	8.6	13.8	45.6
Tax payable	1.4	1.7	3.2	3.8	6.1
Total liabilities	**24.7**	**15.9**	**35.9**	**38.6**	**76.7**
Total equity	**17.2**	**45.7**	**60.84**	**114.5**	**143.9**

Working capital

Days of sales of inventory has been fluctuating over the last years of operation. The Company tends to send the energy saving devices and machines directly to its clients and agents and keeps an optimum inventory levels.

The receivable level is dependent on the sale terms and agreements signed with its clients. Payments on small project are usually required up-front at ordering. On larger projects, payment terms are normally staged, with an upfront payment at signing, and the remaining amount due at installation and after the guarantee period ends. The Company has good credit terms with its suppliers and has some flexibility to defer payments.

Receivables peaked at the end of H1 2009 due to the receipt of large contracts just prior to the 30. June 2009 cut-off date.

Intangible assets

The increase in intangible assets in 2008 and first half of 2009 relates to the acquisitions of patents.

Due to related parties

This position reflects the shareholder loan provided by the Founder to the Company.

Historical cash flow statement					
(RMB in millions)	2005	2006	2007	2008	H1 2009
Operating profit	13.9	33.4	49.3	68.3	37.8
Depreciation	0.0	0.0	0.1	0.1	0.3
Amortisation of intangibles	0.0	0.0	0.0	12.0	16.0
Impairment of trade receivables	–	–	–	2.5	–
Reversal of trade receivables	–	–	–	(0.2)	(0.4)
Taxes paid	–	(4.8)	(6.0)	(15.1)	(6.6)
Increase in inventories	(0.9)	2.7	2.1	0.3	(1.7)
Increase in trade receivables	(12.6)	6.4	(18.3)	0.9	(63.5)
Increase in other receivables	(9.1)	1.6	(31.6)	36.7	2.8
Increase in due from related parties	(0.5)	(10.4)	6.8	2.3	2.1
Increase in trade payables	5.0	1.2	3.9	(5.9)	6.6
Increase in other payables, accruals & deposits	0.2	(0.4)	5.9	2.8	(2.6)
Increase in due to related party	3.3	(10.0)	8.6	5.1	31.8
Cash flow from operations	**(0.8)**	**19.8**	**21.0**	**109.7**	**22.6**
PP&E	0.0	–	(0.1)	(5.8)	–
Purchase of intangible assets	–	–	(0.0)	(36.0)	(60.0)
Acquisition of subsidiaries	–	–	(0.2)	–	–
Cash flow from investing	**0.0**	**–**	**(0.3)**	**(41.8)**	**(60.0)**
Interest income	0.0	0.2	0.5	1.2	0.5
Capital injection / proceeds from the issue of shares	9.0	–	3.0	–	–
Dividend paid	–	–	(30.0)	–	–
Cash flow from financing	**9.0**	**0.2**	**(26.5)**	**1.2**	**0.5**
Change in cash	8.3	20.0	(5.8)	69.1	(36.9)
Cash end of period	**9.3**	**29.4**	**23.6**	**92.7**	**55.8**

Source: Company.

Operating cash flow decreased in the first half of 2009 due to the sharp increase in receivables. The Company also invested RMB 60 million to acquire new technology patents used in the Company's energy saving devices.

10.3. Business plan

The Company has positioned itself strongly in China, allowing it to benefit from stable margins. CSPS will continue to focus on a service oriented offering combined with a high flexibility in its product offering to adjust to ever changing client demands.

The Company plans to increase its market penetration and gain market share in its existing sales regions and will continue expanding within other areas of China and abroad. It will focus on the following directions:

- Further strengthen its marketing network and promote the brand
- Focus on R&D
- Increase assembly capacity (installation of additional assembly line and expansion to new assembly plants)

The research and development team will be the main driver for new product launches. Over the next few years, CSPS plans to invest mainly into the development of a fully automated electrodeless power voltage control system, as well as into low frequency lamps.

With the fast development of the business in the region of the Yangtze river delta, CSPS is planning to increase its assembly capacity in this zone and integrate the logistical resources and political support offered by the local government. The Company currently utilises a new site in Wujiang city, which is over 15,000 m² large and

serves as the warehouse connecting the neighbouring regions Jiangsu, Zhejiang, Anhui and Shanghai. CSPS is planning on building a second production line and buy out another area of about 80 mu (approx 13 acres) in the Wujiang Industrial Park.

Profit and loss statement forecast

(RMB in millions)

	2009E	2010E	2011E	2012E
Revenue	**353.5**	**515.9**	**782.3**	**1,198.4**
% growth	*34.7%*	*45.9%*	*51.6%*	*53.2%*
COGS	(216.9)	(318.8)	(486.4)	(749.2)
Gross profit	**136.5**	**197.1**	**295.9**	**449.2**
% sales	*38.6%*	*38.2%*	*37.8%*	*37.5%*
Sundry income	0.7	–	–	–
Selling & distribution expenses	(1.2)	(1.3)	(1.3)	(1.3)
Administrative expenses	(4.7)	(4.7)	(4.8)	(4.8)
Other operating expenses	(0.7)	(0.9)	(1.1)	(1.4)
EBITDA	**130.6**	**190.2**	**288.7**	**441.7**
% sales	*36.9%*	*36.9%*	*36.9%*	*36.9%*
D&A	(27.6)	(34.6)	(24.3)	(13.0)
Operating profit	**103.0**	**155.6**	**264.4**	**428.7**
% sales	*29.1%*	*30.2%*	*33.8%*	*35.8%*
Interest income	0.8	1.2	3.0	5.2
Interest cost	–	–	–	–
Profit before tax	**103.8**	**156.8**	**267.4**	**433.9**
Income tax	(26.0)	(39.2)	(66.8)	(108.5)
% tax rate	*25.0%*	*25.0%*	*25.0%*	*25.0%*
Net income	**77.9**	**117.6**	**200.5**	**325.4**
% sales	*22.0%*	*22.8%*	*25.6%*	*27.2%*

Source: Based on Company forecasts.

Revenue contribution per product group

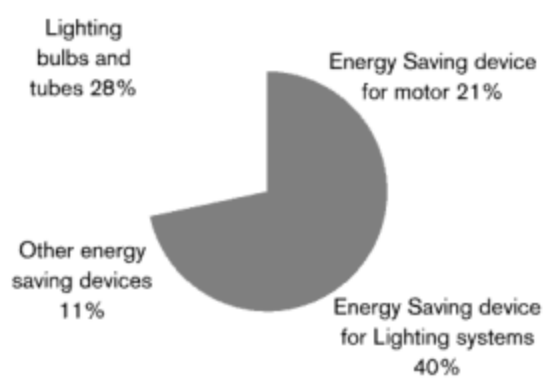
(RMB in millions)

	Historical		Forecast			
	2008	2009 H1	2009E	2010E	2011E	2012E
Energy saving devices for motors	**66.9**	**27.7**	**74.0**	**100.3**	**141.1**	**202.5**
Growth %			*10.6%*	*35.5%*	*40.7%*	*43.5%*
Energy saving device for lighting syst.	**156.7**	**50.2**	**141.4**	**216.7**	**334.6**	**521.4**
Growth %			*(9.7%)*	*53.2%*	*54.5%*	*55.8%*
Other energy saving devices	**33.2**	**13.9**	**38.3**	**55.7**	**83.2**	**125.3**
Growth %			*15.7%*	*45.2%*	*49.5%*	*50.6%*
Lighting bulbs and tubes	**2.5**	**56.6**	**99.7**	**139.9**	**217.1**	**337.5**
Growth %				*40.3%*	*55.2%*	*55.5%*
Renewable energy products	**–**	**–**	**–**	**3.4**	**6.3**	**11.7**
Growth %					*85.2%*	*85.6%*
Total Revenue	**259.2**	**148.4**	**353.5**	**515.9**	**782.3**	**1,198.4**
Growth %			*36.4%*	*45.9%*	*51.6%*	*53.2%*

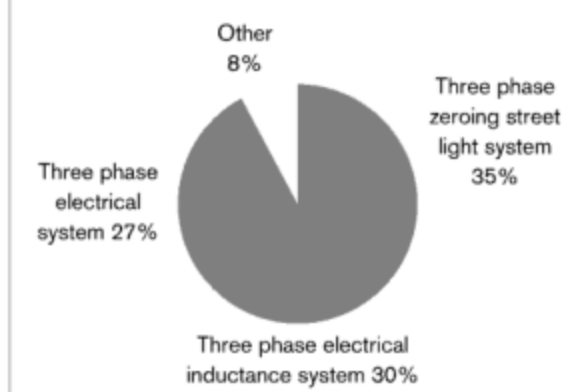
Source: Based on Company forecasts.
Note: Reflects Nenghua figures only and may therefore deviate from consolidated accounts.

The below provide a more detailed revenue split of the largest three product groups. The figures are based on the Company's forecasts for Nenghua revenues in 2009E.

2009 revenue contribution per product

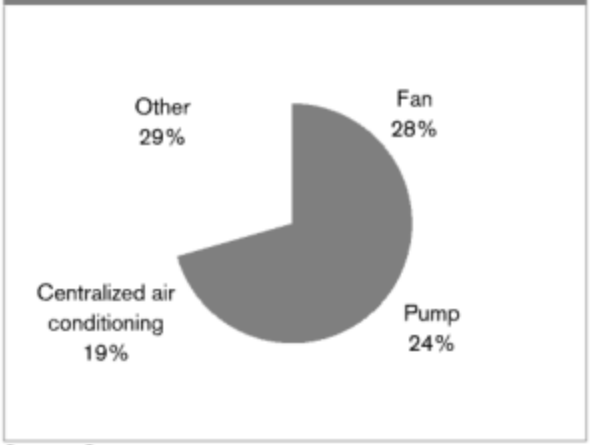


2009E revenue - Energy saving devices for lighting systems

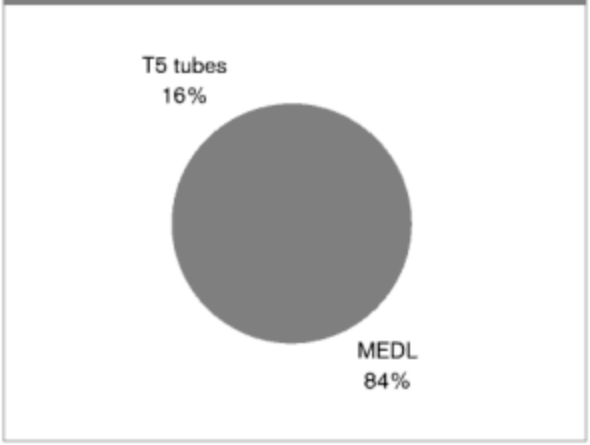


Source: Company.

2009E revenue - Energy saving devices for motors



2009E revenue - Lamps



Source: Company

The revenue and COGS projections are developed on product by product basis. Prices are expected to increase with inflation. Volumes will vary according to product and management have set a conservative forecast based on market demand and assembly plant capacities. New products will be launched in 2010 (renewable energy) and strong growth is expected for lighting bulbs and tubes from 2009 onwards. The Company decided to phase out some product lines due to diminishing demand (e.g. energy saving devices for sewing machines). The current forecasts do not incorporate any potential additional revenues generated from overseas agents and resulting from the Company's international expansion.

Selling and distribution expenses and other operating expenses are expected to be lower than historical levels and vary between 0.5%-2.5% and less than 1% as a percentage of sales, respectively.

Balance sheet forecast

(RMB in millions)

	2009E	2010E	2011E	2012E
Assets				
Cash & cash equivalent	97.4	214.0	387.6	651.4
Inventories	26.7	39.3	60.0	92.4
Trade receivables	58.1	84.8	128.6	197.0
Other receivables, prepayment & deposits	18.7	24.3	33.9	55.5
Due from related parties	4.6	11.9	20.3	25.2
Intangible assets	58.0	26.0	6.0	–
PP&E	12.5	21.3	34.3	53.8
Total assets	**276.0**	**421.6**	**670.6**	**1,075.3**
Liabilities				
Trade payables	44.6	65.5	100.0	153.9
Other payables, accruals & deposits received	19.1	26.1	40.2	65.5
Due to related parties	13.8	13.8	13.8	13.8
Tax payable	6.1	6.1	6.1	6.1
Total liabilities	**83.6**	**111.5**	**160.1**	**239.3**
Total equity	**192.4**	**310.0**	**510.6**	**836.0**

Source: Based on Company forecasts.

Working capital forecast				
(RMB in millions)				
	Forecast			
	2009E	2010E	2011E	2012E
Inventories	26.7	39.3	60.0	92.4
Trade receivables	58.1	84.8	128.6	197.0
Other receivables, prepayment & deposits	18.7	24.3	33.9	55.5
Trade payables	44.6	65.5	100.0	153.9
Other payables, accruals & deposits received	19.1	26.1	40.2	65.5
Net working capital	**39.8**	**56.8**	**82.2**	**125.4**
Days of sales of inventory	45.0	45.0	45.0	45.0
Days of sales outstanding	60.0	60.0	60.0	60.0
Days of sales outstanding - other	19.3	17.2	15.8	16.9
Days payables outstanding	75.0	75.0	75.0	75.0
Days payables outstanding - other	32.2	29.9	30.2	31.9

Source: Based on Company forecasts.

The Company estimates inventory days, days sales outstanding and days payable outstanding at a slightly higher than historical level, but expects them to remain relatively constant going forward. Working capital is expected to grow in line with forecasted sales and COGS.

Cash flow statement forecast				
(RMB in millions)				
	2009E	2010E	2011E	2012E
Operating profit	103.0	155.6	264.4	428.7
Depreciation	1.4	2.6	4.3	7.0
Amortisation of intangibles	26.1	32.0	20.0	6.0
Impairment of trade receivables	–	–	–	–
Reversal of trade receivables	–	–	–	–
Taxes paid	(23.7)	(39.2)	(66.8)	(108.5)
Increase in inventories	(25.0)	(12.6)	(20.7)	(32.4)
Increase in trade receivables	(35.9)	(26.7)	(43.8)	(68.4)
Increase in other receivables	(14.4)	(5.6)	(9.6)	(21.6)
Increase in due from related parties	(2.5)	(7.3)	(8.5)	(4.8)
Increase in trade payables	35.4	20.9	34.4	54.0
Increase in other payables, accruals & deposits received	7.3	7.0	14.1	25.2
Increase in due to related party	–	–	–	–
Cash flow from operations	**71.8**	**126.7**	**187.9**	**285.2**
PP&E	(7.8)	(11.4)	(17.3)	(26.5)
Purchase of intangible assets	(60.0)	–	–	–
Acquisition of subsidiaries	–	–	–	–
Cash flow from investing	**(67.8)**	**(11.4)**	**(17.3)**	**(26.5)**
Interest income	0.8	1.2	3.0	5.2
Capital injection / proceeds from the issue of shares	–	–	–	–
Dividend paid	–	–	–	–
Cash flow from financing	**0.8**	**1.2**	**3.0**	**5.2**
Total change in cash	**4.8**	**116.6**	**173.6**	**263.8**

Source: Based on Company forecasts.

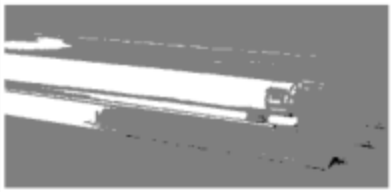
Appendix

1. Key products

1.1. Lighting

CSPS T5 nano ceramic tube

Description



CSPS T5 nano ceramic fluorescent lamp is a new-fashioned energy saving light. tube; It is the successor of older T12, T10, T8 series fluorescent lamps.

Key features

- Energy saving efficiency: compared to a traditional T8 lamp it saves 40%—60% energy
- Prolongs lifetime of lamps, ballast, switch and circuit
- Advantages for eyesight: high frequency, no twinkling
- Exceptional colour rendering: soft and close to the natural daylight, displaying objects' true colour
- Simple installation and maintenance
- Short ignition time, without any noises
- Operating normally in various conditions
- Total harmonic index is lower, but high brightness, strong power saving and environmental benefit

Technical parameters

- Rating power: 28W / 21W
- Range of voltage: AC 160-250V/50Hz
- Rating voltage: AC 220V
- Input current: 0.143A / 0.91
- Power factors: ≥0.98
- Lighting strength: 292Lx(1m) / 216Lx(1m)
- Colour rendering index: ≥85 Ra
- Operating temperature: -15°C～55°C
- Luminous flux: 2600Lm / 1900Lm
- Working lifetime: ≥10, 000h
- Overall Size: Φ16×1200mm / Φ16×900mm
- Current harmonic ratio: 14% / 17.8%
- Voltage harmonic ratio: 3%

Typical fields of application

- Office building, school, hospital, library and other buildings
- Restaurant, shopping centre, super market, hotel, chain stores
- Factory, manufacturing line and laboratory

Source: Company.

CSPS electrodeless magnetic discharge lamps ("EMDL")

Description

CSPS offers a wide range of EMDL lamps. This is a high efficiency product, with a low consumption and offers an exceptional rendering. The absence of electrode allows an ultra-long lifetime and the luminous flux of these lamps remains in high level for a long duration, reducing the maintenance cost for the customers. Instant ignition, over 80 Ra colour rendering, CSPS EMDL are ideal for all urban and industrial lighting.

Key features

- Lifetime ultra long: 60000 hours or more (lifetime effective)
- Less than 1/10 maintenance cost
- Reduce electricity cost up to 50%
- Ignition time less than 1 sec: avoids 4 to 7 min loss
- High colour rendering: more than 85 Ra, leading to bright, warm and clear sight
- Low radiative heat: less than 110°C, avoiding fire accident and cut air-conditioning cost
- Reduce environmental burden
- Adaptable to renewable

Technical parameters

- Voltage: 110/220V
- Eligible voltage: 118-265V
- Frequency: 50/60Hz
- Operating frequency: 2.65MHz
- Power factor: 0.99
- Operating temperature: -20 ~ 50°C
- Intensity
  - XL-50W: 0.23
  - XL-85W: 0.39
  - XL-100W: 0.49
  - XL-135W: 0.61
  - XL-165W: 0.75
- High light output: 80 lm / W
- Low levels of mercury
- Application dual AC / DC (48V ~ 265V)

Typical fields of application

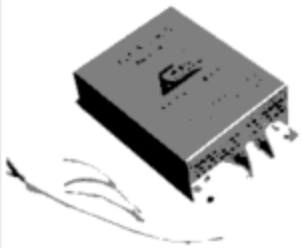
- Underground parking lot
- Roads, tunnel systems
- Industrial sites
- Shopping malls

Source: Company.

1.2. Energy saving devices for motors

Energy saving device for sewing machine

Description



Traditional sewing machines are designed with a motor power exceeding the actual power demand by more than 20%. During the sewing process the machine is often in an idle status, wasting further energy.

CSPS offers Best-03, an energy saving device for industrial sewing machines. The device performs real time analysis of actual power usage, dynamically adjusting the voltage and current required. The machine cuts down motor heating, and reduces noise and iron loss.

Key features

- Advanced module design, high integration
- Small volume, convenient installation
- Saves energy up to 35%-50%
- Imported durable main machine parts at stable performance
- Microcomputer controlled, intellectualized energy saving
- Low speed separation interface technology, prolonging service life of clutch blade and the motor
- Embedded bypass device

Technical parameters

- Outer dimension: 13×8×3.5(cm)
- Weight: about 400g
- Input voltage: single phase 220V (±5%), three-phase 380V (±5%)
- Frequency: 50HZ ~ 60HZ
- Relative temperature: -40°C ~ 50°C
- Relative humidity: = 98%
- Scope of application: 100-500W for single phase motor, 100-750W for three phase motor
- Atmospheric pressure: 86 – 106kpa

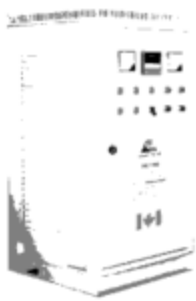
Typical fields of application

- Industrial sewing machine

Source: Company.

Energy saving device for fan, water pump and air compressor

Description



Reduces input power with the frequency conversion velocity modulation, according to signal sensors . The system has an automatic control, and offers the possibility for manual control. It uses 4~20mA electric current signal or the 0~5V voltage signal. According to the sensor's signals, the transducer changes the current capacity and the motor's rotational speed. The control system is greatly simplified and the flow control is more precise compared to the traditional air operated regulating valve. In addition, the soft start system reduces the current impact and protects mechanical parts. The device increases the lifespan of the engine and reduce maintenance costs.

Key features

- Reduces energy consumption, and saves production cost with energy saving rate up to 20%
- Improves the power factor of power grids and saves on-site compensation devices
- Smooth start-up, eliminates great current impact during start-up, motor current during start-up can be limited within 150% of its rated current
- Reduces wear-off degree of motor bearing etc. moving parts, prolongs its service life
- Available with perfect protection and self-protection functions, ensures safe equipment running
- Reduced equipment failure rate, increased reliability, minimizes consumption of spare products and reduces repair cost
- Microcomputer control, features a strong self-learning function that adapts automatically to variation of situations without any need of manual adjustment
- Configures sensor in various operating status through an embedded PID adjuster or external transmitter allowing an automatic follow-up and timely dynamic adjustment
- Electric supply / energy saving switch.. In case of any failure in energy saving device it switches automatically to electric supply running without any influence to normal equipment operation
- Perfect running indication and failure search function, convenient for daily routine maintenance of equipment management

Technical parameters

- Product Series: 5KW-280KW
- Control Method: optimized space vector PWM control
- Rated input voltage: single phase: 220V, three phase: 380V
- Maximum overload voltage: 1 minute at 150%, 0.2 second at 180%, and continuous (rated) at 100%
- Input command signal: various
- Frequency setup input: keyboard, keyboard potentiometer, 0 ~ 5V, 0 ~ 10V, 4 ~ 20MA and combination there-between, embedded PID adjuster
- Frequency control range: 50HZ
- External output signal: failure relay signal, three-line programmable open-circuit collector output, and two-line analog output signal
- Protection grade: IP23 for less than 7.5KW, IP10 for more than 11KW
- Cooling method: closed self-cooling for less than

Typical fields of application

- Draught fan
- Water pump
- Air compressor, oil compressor
- Central air conditioner cooling water pump, cooling water pump, constant pressure water supply
- Textile mechanism and blast moulding machine

Energy saving device for fan, water pump and air compressor

0.75KW, close strong wind cooling for others

- Applicable environment: -10℃ ~ + 40℃ (naked machine: -10℃ ~ + 50℃) , 20% ~ 90%RH (without condensation)
- Insulation voltage: 2KV between machine cover and main current or control circuit

Source: Company.

Energy saving device for injection moulding machine

Description

The hydraulic oil pump accounts for over 80% of the total electric power consumption of an injection moulding machines. CSPS' energy saving device controls the oil pump motor, converting a traditional pump into an energy saving variable displacement pump, and minimizing the quantity of reflux through an overflow valve. It increases efficiency of the whole machine, reduces energy consumption and also improves its performance.

Key features

- Energy saving rate of up to 23% - 60% through:
  - Adoption of advanced microcomputer control technology
  - Matching of the power demand of the hydraulic system of the injection moulding machine and the entire machine running
- High reliability
  - Keeps original control method and oil-way of injection moulding machine unchanged
  - Computerized monitoring for timely acousto-optic alarm in case of any failure
  - Electric supply / energy saving control method adopted to minimize influence to production in case of failure
- Soft start
  - Reduces vibration during mould start-up and locking, prolongs service life of equipment and moulds
  - Minimizes noises, improves working environment
  - Reduces system heating, stabilizes oil temperature, and saves cooling water of up to 30%
  - Prolongs service life of sealing components and reduces machine halt repair percentage
- Easy operation: Synchronously running with the injection moulding machine without requiring any adjustments
- High return rate: Investment return within 6 – 12 months through saving on electricity expenses
- Energy Saving Principles: Main electricity savings in lowered consumption by the hydraulic system oil pump, the heater and the recycled cooling water pump

Technical parameters

- Rated input voltage : 3 phase 380V
- Rated input frequency : 50HZ/60HZ
- Voltage fluctuation : ±5%
- Frequency fluctuation : ±5%
- Frequency control range : 0.1—60HZ

Typical fields of application

- Injection moulding machines

Source: Company.

Energy saving device for centralized air conditioning

Description

In a central air conditioner system, the cooling water pump and its capacity are chosen based on the maximum designed heat load and the water pump system keeps running under the fixed maximum water flow. Due to usage variations, the actual heat load of the air conditioner is general much lower, resulting in a large amount of energy being wasted. CSPS' energy saving device causes the water pump to adjust its rotary speed automatically along with variations in outdoor temperature.

Key features

- Adopts a P.W.M energy saving closed loop control motor, allowing for software configurations and temperature setup as per specific requirements for PID adjustment
- Advanced PLC system provides an automatic control to start or stop the cooling water pump group by the temperature variation. This function is different to the normal manual control mode, which can greatly improve energy savings by smoothing the peak current of the motor (maximum start-up current with PLC system is only 1.5 times of rated current, while that of common motor start-up current can reach up to 4-7 times higher)
- Prolonged repair cycles and service live, improved MTBF value (mean time between failure), increased system reliability due to lower running speed and soft start-up resulting in a reduction of vibration, noise and friction of equipment
- Advanced setup monitoring and adjustment functions improve running characteristics of the system and enable more convenient applications
- Various protection measures greatly improve running rate and reliability
- Average annual energy saving rate up to about 30%
- Allows switching to the original operation mode in case of repair and maintenance to the energy saving device without any influence to normal equipment application

Technical parameters

- Product Series: 5.5KW-350KW
- Rated input voltage: three phase: 380V
- Maximum overload voltage: 1 minute at 150%, 0.2 second at 180%, and continuous (rated) at 100%
- Frequency setup input: keyboard, keyboard potentiometer, 0 ~ 5V, 0 ~ 10V, 4 ~ 20MA and combination there-between, embedded PID adjuster
- Frequency control range: 50HZ
- Protection grade: IP23 for less than 7.5KW, IP10 for more than 11KW
- Cooling method: closed self-cooling for less than 0.75KW, close strong wind cooling for others
- Applicable environment: -10℃ ~ + 40℃ (naked machine: -10℃ ~ + 50℃) , 20% ~ 90%RH (without condensation)
- Insulation voltage: 2KV between machine cover and main current or control circuit

Typical fields of application

- Centralized air conditioning system

Source: Company.

Energy saving device for oil pump

Description

CSPS' oil field pump energy saving device adopts an advanced microcomputer control technology and module control technology. It uses a unique algorithm enlarging the actual load driven by its motor, through dynamic measurement and analysis of the surface and underground power diagram as well as real time monitoring of the oil field pump. It also selects the optimal power point as per variation of motor load rate. Its unique energy saving software accurately decides the pump's empty status, and automatically controls the running and stopping of the pump device, therefore eliminating ineffective usage.

Key features

- Optimizes oil pump functioning, accurately controls stop time and effectively improves yield
- Reduces peak power demand and ineffective oil pumping time
- Eliminates liquid hammer effect and reduces mechanical system failure
- Prolongs equipment service life, and reduces repair and maintenance expenses
- Accurate estimation of the oil reserve
- Overall well, ground and motor control
- Peak and minimum load protection
- Frequency conversion control options
- Automatic energy optimization control
- Failure bypass system
- Available with perfect protection and failure alarm functions

Technical parameters

- Supply voltage: about 380V±10%
- Supply frequency: 50HZ ~ 60HZ
- Energy saving rate: 20% ~ 40%
- Power factor improvable to: 0.8
- Power control range: 5.5KW ~ 185KW

Typical fields of application

- Energy saving for oil field pumps

Source: Company.

Energy saving device for personal A/C and freezer

Description

CSPS Energy Saving Device for Personal A/C and Freezer combines a low-consumption single-chip microcomputer, a digital integrated circuit and other features with new design and convenience. The device optimizes the operation curve to improve the cooling system, through:

- Maintaining minimum temperature and power: According to the working curve of the compressor, when the minimum temperature is reached, the temperature of the whole A/C set will raise as well as the current, increasing the consumption of electricity. With the ambient temperature barely changing. The energy saving device sends a signal to stop the compressor and restart allowing the A/C system to cool down and unnecessary waste of energy will be saved
- Avoid frequent start of compressor: The switch of the compressor is controlled by a temperature sensor. It will start or stop the motor when the temperature goes higher or lower than the target temperature, every few minutes. Frequent start may cause strong current and relatively higher power consumption. Adjusting the start-up period according to the actual needs can avoid frequent starts of the A/C system to reduce power consumption and prolong the compressor's lifetime

Key features

- Prolongs the conditioner's lifetime
- Leads to energy saving rates of 16%-30%

Technical parameters

- Product Series: 0.75KW-15KW
- Rated input voltage: three phase: 220V
- Frequency control range: 50HZ
- Protection grade: IP23
- Applicable environment: -10℃ ~ + 40℃ , 20% ~ 90%RH (without condensation)

Typical fields of application

- Family use
- Stores, factories and other public places with air conditioners and/or freezers

Source: Company.

Energy saving device for elevators

Description

The normal load in an elevator constantly changes during usage. The Elevator motor is designed to function on maximum load, making it oversized for most of its usage time. The system is a speed sensorless vector control of the VVVF concept. A signal is emitted for each user, when the escalator is at the original operating speed (50 Hz), the escalator can slow down or stop running low. According to the sensors signals, the Economizer automatically adjusts the frequency from low to high speed operating, depending on the passenger flow and load.

Key features

- Energy saving rate: 8% to 50%
- Soft-start function which reduces the current impact on start, increase the life-time of electric and mechanic parts
- Improves the power factor of the installation
- Auto- start/stop control, providing adjustable running speed, with great smoothness and comfort
- Integrated bypass system, automatic or manual running. In case of system failure, the bypass is used and the elevator is still working
- Overload, overflow protection system

Technical parameters

- Product Series: 5.5KW-185KW
- Rated input voltage: three phase: 380V
- Maximum overload voltage: 1 minute at 150%, 0.2 second at 180%, and continuous (rated) at 100%
- Frequency setup input: keyboard, keyboard potentiometer, 0 ~ 5V, 0 ~ 10V, 4 ~ 20MA and combination there-between, embedded PID adjuster
- Frequency control range: 50HZ
- Protection grade: IP23 for less than 7.5KW, IP10 for more than 11KW
- Cooling method: closed self-cooling for less than 0.75KW, close strong wind cooling for others
- Applicable environment: -10℃ ~ + 40℃ (naked machine: -10℃ ~ + 50℃) , 20% ~ 90%RH (without condensation)
- Insulation voltage: 2KV between machine cover and main current or control circuit

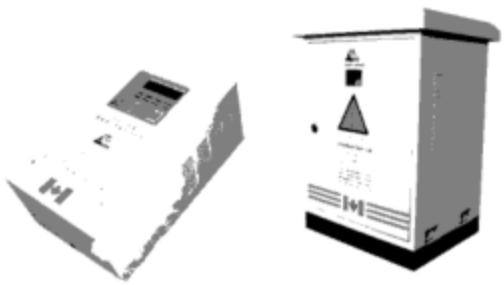
Typical fields of application

- Designed for the furniture, building materials market
- High-grade office buildings, hotels and other escalator system

Source: Company.

Energy saving device for fluorescent lamps

Description



Fluorescent lamps require high voltage and strong current during start-up to activate the fluorescent tubes. The lamp's illuminating efficiency varies by voltage and current. A high voltage or current contribute little to the illumination, causing fluorescent tubes to overheat and enable ballast with noises. CSPS' fluorescent lamp energy saving device is composed of a microcomputer controlled system that defines the optimal illumination efficiency level, and adjusts the power fed to lamps accordingly. In addition the device automatically adjusts the output voltage and current according to the often fluctuating voltage in China (between 190V – 240V). This allows saving of energy as well as minimizing tube aging.

Key features

- Full automatic online voltage and current inspection, automatic power adjustment; ensures normal lamp switch and electricity application status conversion
- Simple installation without any alteration to original circuits in user's existing lighting system
- Patented slow release switch system, comprehensive inspection, prevents fluorescent tubes from darkening or flavescent resulted in voltage fluctuation, and prolongs service life of lamps by 30% without any increase to the total harmonic wave of circuits
- Safe "bypass" device ensures lamps functionality is not negatively influenced by any potential energy saving device failure
- Energy saving of up to 20%-45% during operation, and reduces glaring flares, allowing for eyesight protection function

Technical parameters

- Model: V60/V100
- Supply voltage: 22 V (±5%)
- Output power: 2400VA/4800VA/10000VA (special specification custom available)
- Supply frequency: 50HZ-60HZ
- Product Series: 5KW-500KW
- Input voltage: three-phase 380V±5%+N (single phase 220V±5%)
- Input frequency: 50HZ±6%
- Output voltage: 180-230V (auto-adjustable)
- Insulation voltage: 2KV between machine cover and electrical parts and components
- Protection grade: IP23 for less than 7.5KW, IP10 for more than 11KW
- Energy consumption: 1A < 5W
- Harmonic wave distortion: 0
- Efficiency: 99%
- Temperature: -10 to + 40°C
- Humidity: 95%, without condensation

Typical fields of application

- Fluorescent lighting system

Source: Company.

Energy saving device for street lighting systems

Description

Electric power applications vary strongly from more than 100V up to 240~250V greatly influencing circuits and severely wearing off lamps. In addition, the illumination level of a lamp is not directly proportional to the power fed to it. When the voltage becomes lower or higher than needed, the illuminating efficiency is reduced, while the additional energy will cause lamp heating and circuit loss, substantially wasting electric energy.

CSPS' automatic street lamp energy saving device provides a solution to such problems. It tests, analyzes and calculates in real time through microcomputer the optimum power point for dynamic adjustment, thereby protecting the lamps, and saving electric energy.

Key features

- Application of control technology combined with advanced and unique design, reliable quality and control software. It provides automatic control adapted to high pressure sodium lamps, mercury lamps, and metal halide lamps with induction ballast, etc.
- Full solid electronic components fitted with different protection grades for various indoor and outdoor environments
- Made up of special energy saving coils without harmonic wave interference to the power grid resulting in high reliability and great resistance capability against surge voltage impact and instantaneous great load impact
- By controlling the energy saving coils, the system can adjust automatically the voltage in accordance with the electricity supply tension and provide full inspection of the voltage and current as well as controls automatically the power consumption. Provide timer function and automatic switch for different modes
- High reliability resulting in reduced maintenance expenses and repair workload due to emitting of rotary framework and carbon brush
- Simple installation without any alteration to original circuits in user's existing lighting system, directly connectable before the lamp wire switch in rear of the electric meter for street lamp
- Safe "bypass" device ensures street lamps will never be affected by a potential failure of the energy saving device
- Slow release switch system, comprehensive inspection, prevents lamps from darkening or flavescent resulting from voltage fluctuation

Technical parameters

- Input voltage: three-phase 380V±5%+N (single phase 220V±5%)
- Input frequency: 50HZ±6%
- Output voltage: 180-230V (auto-adjustable)
- Insulation voltage: 2KV between machine cover and electrical parts and components
- Energy consumption: 1A < 5W
- Harmonic wave distortion: 0
- Efficiency: 99%
- Temperature: -10 to + 40°C
- Humidity: 95%, without condensation

Typical fields of application

- High pressure sodium lamps, mercury lamps, metal halide lamps

Source: Company.

High power energy saving device (common type)

Description

CSPS' common type energy saving device allows for energy savings through i) a buffer, ii) a temperature decrease and iii) increased cleanliness. It operates between the main distribution cabinet and the secondary distribution cabinet of 380VAC low voltage distribution system. It adopts state-of-the-art means of harmonic wave restraint with electromagnetic balance and a unique circuit design for real time monitoring, filtration, absorption, and restraint of transient, surge and harmonic wave and power pollutions in distribution network. The system protects against interference and damage.

Key features

- Intended for automatic protection and energy saving control of low voltage distribution system
- Available with the fastest response speed, the greatest withstand current and the least dimension as compared with similar products
- High withstand voltage grade, small leakage current and great energy leakage capacity
- Full automatic response, no debugging, and sound repeatability
- Stable performance, no pollution, and rise superior to weather, temperature, humidity and illumination
- Full metal cover, applicable to various severe industrial application environments
- Special 12AWG multi-twisted copper-core wire as connection down-lead

Technical parameters

- Product Series:5kw-250kw
- Input voltage: three-phase 380V±5%+N (single phase 220V±5%)
- Input frequency: 50HZ±6%
- Output voltage: 180-230V (auto-adjustable)
- Insulation voltage: 2KV between machine cover and electrical parts and components
- Protection grade: IP23 for less than 7.5KW, IP10 for more than 11KW
- Energy consumption: 1A < 5W
- Harmonic wave distortion: 0
- Efficiency: 99%
- Temperature: -10 to + 40°C
- Humidity: 95%, without condensation

Typical fields of application

- Lighting system of industrial sites, commercial buildings, hospitals, etc.

Source: Company.

1.3. New energy saving sets

Water turbine system (cooling tower)

Description

Cooling is provided by huge fans run by engines with heavy usage of electricity. The CSPS system removes the engines and replaces them by a turbine connected to the water circuit. Using the existing water pressure to drive the turbine, which in turn will drive the fan. CSPS manufactures custom systems according to the needs and technical characteristics of each facility.

Key features

- Reduces 100% electricity consumption by removing the traditionally used engine
- Lowers water consumption by up to 10%
- Improves security over risk of leakage current and by lower gravity centre
- Lower maintenance cost and noise suppression by reducing mechanism
- High reliability and durability up to 100,000h
- Installation time reduced and maintenance time reduced

Technical parameters

- Pump power range: 50-4000 RT
- Lifespan: 10 years
- Noise reduction: -30db
- Temperature: 0-50
- Efficiency: 97%
- Explosion protection: T5

Typical fields of application

- Industry
- Other buildings with central air conditioning

Source: Company.