

SIEMENS

Siemens in China

Siemens AG, founded in 1847, is a global technology powerhouse active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient and resource-saving technologies, Siemens has leading positions in efficient power generation and power transmission solutions, infrastructure solutions, automation, drive and software solutions, as well as medical imaging equipment and laboratory diagnostics.

The history of Siemens in China dates back to 1872, when the company delivered the first pointer telegraph to China. The company manufactured the first steam generator and built the country's first tram line by the end of the 19th century. In 1985, "Memorandum of Comprehensive Co-operation between Machinery, the Electric and Electronics Industries of the People's Republic of China and Siemens AG" marked a comprehensive cooperation between Siemens and China. For 145 years, Siemens has pioneered cooperation with the country with its solutions, technologies and products, and has been known in the country for its quality and reliability, technological excellence and innovation.

Siemens has witnessed the tremendous changes that have taken place since China opened up and embarked on its reform drive. In Fiscal Year 2016 (October 1, 2015 – September 30, 2016), Siemens generated revenue of €6.44 billion in China. With about 31,000 employees, Siemens is one of the largest foreign-invested companies in the country.

Siemens has become an integral part of the Chinese economy and society. Offering a wide array of Environmental Portfolio and innovative solutions in

cooperation with local partners, Siemens is committed to the sustainable development of China. In 2016, Siemens launched the new brand claim “Ingenuity for life”. On the way to “Vision 2020”, the company will focus on electrification, automation and digitalization, and make real what matters to create sustainable values for the customers, employees and the society.

Innovation for China’s development

To further strengthen its power of innovation, Siemens plans to increase its global investments in R&D in fiscal 2017 by some €300 million to around €5 billion.

In addition, Siemens has set up the separate unit next47 globally to foster disruptive ideas more vigorously and to accelerate the development of new technologies. Activities at next47 will focus on five fields of innovation: artificial intelligence, autonomous machines, distributed electrification, connected mobility and blockchain applications that are designed to simplify and increase the security of data transfers in areas such as industrial operations and energy trading.

With diverse market needs and customers willing to try new things, China provides an ideal environment for world-class innovations. Keen to China’s development, Siemens has been committed to designing and producing products and solutions that meet demands of local customers. The company also takes constant efforts to establish strong partnerships with Chinese customers, integrate itself into the local innovation system and meanwhile contribute to global technological innovations.

By fiscal 2016, the company had 20 R&D hubs, more than 4,500 R&D researchers and engineers, and more than 11,000 active patents and patent applications in China. Siemens’ top-notch innovators are working in world-class innovation labs in Beijing, Shanghai, Suzhou, Nanjing, Wuxi, Wuhan, Qingdao, Tianjin, etc. to contribute to China’s “Indigenous Innovation”.

Siemens Wuxi Innovation Center was established in 2013. Based on local demands, the innovation center carried out extensive cooperation with local enterprises in fields including intelligent equipment, transparency factory, PROFINET, etc. to support industry upgrade and enterprise automation. Wuxi Innovation Center has cooperated with Miracle Automation Engineering Co., Ltd. to develop the digital car assembly line in an Internet of Things demonstration project, helping the company to increase quality of products and services and realize fast business growth.

Moreover, in Tianjin, Siemens cooperated with Sino-Singapore Tianjin Eco-City Investment and Development Co., Ltd. to establish Siemens Eco-City Innovation Technologies (Tianjin) Co., Ltd., focusing on developing and promoting demand-based innovative solutions about ecological technologies to support sustainable development of China.

In 2016, Siemens launched Siemens China Innovation Center initiative, focusing on innovation in the area of digitalization. Under this initiative, Siemens Qingdao Innovation Center was set up in March 2016. As Siemens' first innovation center of intelligent manufacturing outside Germany, this center further enhances Siemens' R&D in China. In September 2016, the Siemens Corporate Technology Suzhou opened with the focus on researches of big data, the web of systems, connected mobility, cyber security solutions and industrial robotics.

In January 2017, Siemens opened Wuhan Industry Maker Space to explore and establish innovation models and industrial ecosystem of intelligent manufacturing in China together with partners. Siemens will also cooperate with local universities and scientific research institutions to accelerate innovations in medium-sized, small and micro enterprises. Wuhan Industry Maker Space was a part of Siemens Wuhan Innovation Center. The center was established in 2013, focusing on R&D in areas including Industrial Internet of Things data integration and application support technology, intelligent manufacturing, smart water, etc.

In China, Siemens' network of innovation centers combines the company's global R&D systems with local business demands. Siemens brings in cutting-edge global technologies in the fields of digitalization and automation to intelligent infrastructure industry of China. The network also propels development of local innovation industries with demand-driven projects of industrial digitalization. Meanwhile, Siemens will cooperate with local innovative medium-sized, small and micro enterprises to initiate pilot projects, and join hands with local companies to establish innovation platforms, aiming to achieve win-win with local governments and partners.

Comprehensive and partner-oriented portfolio

As China's manufacturing industry experiences a significant transition from "Made in China" to "Innovated in China", Siemens helps manufacturers enhance production efficiency and flexibility, product quality, and shorten the time-to-market of new products.

In June 2016, Siemens signed the Memorandum of the Extension of Comprehensive Cooperation with National Development and Reform Commission of China. The company will cooperate with China in areas such as intelligent manufacturing, intelligent infrastructure and sustainable energy. Siemens has also signed a series of cooperation agreements with China's leading companies such as Baosteel Group Corporation, China Shipbuilding Industry Corporation, China Electronics Corporation and China Aerospace Science & Industry Corporation to jointly develop intelligent manufacturing.

Siemens has teamed up with Mengniu Group to build new digital factories. With Siemens' Simatic IT Unilab and Totally Integrated Automation systems, Mengniu has established Laboratory Information Management System, covering its 34 labs at production factories and two R&D-oriented central labs. Mengniu has now achieved digital documentation of quality data to ensure food safety and scientific management of the entire value chain.

In the process industry, Siemens focuses on creating long-term value and increasing return on investment for customers. In October 2015, Siemens signed a strategic

partnership framework with Sedin Engineering Co., Ltd., whereby the two parties joined forces to create “Industrie 4.0” solutions for the coal chemical sector. Integrated engineering and operation solutions from Siemens for process industries are fully deployed at Sedin to underpin the latter’s digitalization initiative.

In 2016, Siemens provided an advanced power system including the DP3 Closed Ring Power System for “Bluewhale 1”, the semisubmersible drilling rig with the greatest operating water depth and drilling depth, built by Yantai CIMC Raffles Offshore Limited., to ensure energy-efficient, stable and safe operation of the rig.

As a committed partner to China’s energy industry, Siemens has always been pursuing energy efficiency and reducing greenhouse gas emission. In early 2017, Siemens received an order from Castle Peak Power Company Limited to deliver a power block for a new combined cycle in the Black Point Power Station in Hong Kong. This is the first H-class power plant project in Greater China. Scheduled to be in operation by 2020, the plant will have an installed total capacity of 550 megawatts to supply approximately 1 million households with electricity per month.

In 2016, Siemens signed a Memorandum of Understanding (MoU) with Hangzhou Steam Turbine Co., Ltd. (HTC) and Golden Concord Power Group Limited (GCL). Building on Siemens’ and HTC’s leading technologies and abundant experiences in manufacturing, operation and maintenance of gas turbines, steam turbines and gas-fired combined cycle applications, the three parties would take the opportunities of GCL’s distributed energy projects to strengthen development and utilization of natural gas powered distributed energy, and maintain long-term strategic cooperation in utilization of other clean and efficient energy in the future. Prior to this, Siemens received its first order for the delivery of four SGT-800 gas turbines in China. The turbines will be installed in the Baode and Xiyang decentralized energy projects of Shanxi Provincial Guoxin Energy Development Group Co., Ltd. in Central China. The two combined heat and power plants will have an overall capacity of 300 megawatts.

In power generation services, Siemens will continue to push forward localization in China, aiming to help local customers maximize operation efficiency and reduce risks. In 2016, Siemens was awarded an order by Zhengzhou Gas Power Generation Co., Ltd. (ZGPGC), a subsidiary of SPIC Henan Electric Power Co., Ltd., for the second long-term service program. Under the new contract, Siemens will continue to provide professional services including scheduled maintenance, spare parts, remote diagnostics, performance monitoring, etc. for ZGPGC's two SGT5-4000F gas turbine units. In addition, Siemens will also provide ZGPGC with multiple tailor-made modernization and upgrade solutions to help improve emission levels, flexibility of unit maintenance and operation, and overall unit performance.

Meanwhile, by adopting Siemens advanced SGT5–4000F gas turbine technology and professional service program, and combining them with its own indigenous innovations, Beijing Jingxi Gas Thermal Power Co., Ltd. won the Gold Award of Innovative Power Technology of the Year at the 2016 Asian Power Awards.

Facing multiple challenges in the energy system, Siemens also provides comprehensive products and solutions to power utilities, industries, infrastructure and buildings in China to make power supply more reliable and efficient.

Together with local partners, Siemens delivered the world's first 1,100 kilovolt (kV) converter transformers for the world's first 1,100 kv high-voltage direct-current (HVDC) transmission link between Changji and Guquan. These converter transformers are also the most powerful converter transformers in the world with a capacity of 587.1 megavolt amperes. The transmission link, currently the world's biggest HVDC project, is 3,284 km long with a transmission capacity of 12 gigawatts.

Siemens also equipped China's tallest super high-rise Shanghai Tower with advanced energy management and intelligent building systems, including power transmission and distribution, energy automation, fire alarm control and intelligent lighting system, enabling intelligent management of the building, making it safer and more reliable. The

power consumption of Shanghai Tower is equivalent to that of a small town with a population of 50,000.

In the rapidly growing data center market, with rich experiences in power solutions, Siemens won major orders. It provided over 1,000 units of SIVACON S8 low-voltage switchgears for China Construction Bank's data center in Beijing. This data center is China's largest Financial T4 data center (T4 is the highest level of data center under the international standard, representing top-notch infrastructure security, stability and reliability).

Siemens is also actively pushing forward the urbanization process in China in various fields like transportation, building and infrastructure. In September 2015, the first phase of Zhuhai Traffic Information and Comprehensive Service Platform, also Siemens' first integrated traffic management project in China, was accepted by the customer. The Platform, which adopts the "green traffic index system" tailored by Siemens to the city, is able to integrate all transportation information relevant to local residents and collect, sort out and analyze mass data in real time to effectively provide a quantitative basis and criterion for the city's decision-makers, and bring tangible mobility convenience to residents. In September 2016, Siemens was awarded the order of Zhuhai Traffic Management System Phase Two project. Siemens will further upgrade and improve functions of the existing platform and systems, and also add in more traffic management functions such as traffic application, assistant decision making, comprehensive dispatch, etc., to optimize traffic resources and support Zhuhai to achieve sustainable and intelligent traffic.

In fiscal 2016, Siemens provided signaling systems for eight new metro lines that have come into operation. By fiscal 2016, metro lines with a total length of over 1,000 km in 14 cities have been equipped with Siemens' safe and reliable signaling systems.

In the area of building technologies, Area A of the China Import and Export Fair Complex, where Siemens contributed to an energy renovation project, has received a

gold LEED certification for “Existing Buildings: Operations & Maintenance”, becoming China’s first LEED Gold-certified exhibition center.

As for commercial real estates, Siemens provided integrated solutions to electrical works and building automation of Lilacs International Commercial Center in Shanghai. The solutions included transformers, medium- and low-voltage switchgears, building automation systems, fire safety systems, EIB lighting control system, etc.

Besides, Siemens has also provided the Chinese Academy of Sciences Wuhan Institute of Virology’s P4 Laboratory with a stable control solution for five redundant air-handling units (AHU) and nine standard AHUs to maintain different pressures in different working areas, helping prevent viral leakage and improve the security level of the laboratory.

As one of the world’s leading suppliers of healthcare solutions, Siemens offers customers medical products and solutions covering prevention, early detection, diagnosis, treatment and aftercare to support China’s medical institutions at various levels. Through the six business areas including Diagnostic Imaging, Advanced Therapies, Laboratory Diagnostics, Point of Care Diagnostics, Services and Ultrasound, Siemens provides various products including CT, MR, X-ray, ultrasound and in-vitro diagnostic equipment, and also provides angiography system and combined operating room solution, integrated mammary solution, tumor diagnosis and treatment solution, etc., to customers from China and worldwide. With advanced technology, Siemens keeps innovating in high-end medical imaging and diagnosis, helping customers with efficient, accurate and safe medical diagnosis services. The company has become a trusted partner to medical organizations.

Utilizing its cutting-edge technology and strong capital, Siemens also provides worldwide customers with professional and reliable financial solutions. In China, the company drives business success with customized leasing solutions for Siemens equipments and third party products in sectors such as machine tools, manufacturing, infrastructure, construction machinery and transportation. Since 2004, Siemens

Financial Services has financed more than RMB 10 billion of healthcare assets in China, helped thousands of hospitals and small and medium-sized enterprises to upgrade equipment and established strong relationships with hundreds of renowned manufacturers and dealers.

Committed to corporate social responsibility and focusing on creating values for society

As a trusted partner dedicated to China's economic and social development, Siemens has been actively engaged in corporate social responsibility programs and activities to promote access to technology and access to education, and contribute to sustainable community. Founded in 2012, the Siemens Employee Volunteer Association (SEVA) has organized volunteering activities in 15 cities and benefited tens of thousands of people across China.

Siemens is committed to aligning business activities with the interest of future generations. The company aims to become the world's first major industrial company to achieve a net-zero carbon footprint by 2030 and plans to cut its CO₂ emissions by half by as early as 2020. To achieve these goals, Siemens will invest some €100 million over three years from fiscal 2016 to reduce energy footprint of its production facilities and buildings.

In 2016, Siemens renewed the MoU on Educational Cooperation with the Ministry of Education in a bid to boost cultivation of innovation-oriented talents for China's national strategy "Made in China 2025". By fiscal 2016, Siemens has established good relationships with over 200 Chinese universities and vocational schools and helped universities and institutions build labs. The company also set up Siemens scholarships to further promote the cooperation on scientific and technical exchanges, as well as talent cultivation. Siemens has been sponsoring the "Siemens Cup" China Intelligent Manufacturing Contest for 10 years to support development of innovative engineering talents.

Moreover, in 2016, Siemens signed a MoU on Cooperation with Department of Education of Shandong Province. The two parties will join hands to introduce German experiences in engineering education, as well as Siemens engineering technology and experiences, to higher vocational schools and universities. Besides, they will also cooperate in setting up innovation bases for “intelligent manufacturing”, cultivating talents, improving competence of teachers, and initiating engineering contests.

As for primary education, Siemens I-Green Education Program is an educational program for China’s migrant children in primary schools to raise their awareness of environmental protection and help them better integrate into city life. Since its launch in 2009, the program has benefited more than 20,000 students. More than 2,500 Siemens employee volunteers have devoted about 20,000 hours to this program.

Moreover, Siemens is also supporting the development of NGOs, providing social assistance to disadvantaged groups, and providing immediate technological and humanitarian assistance after natural disasters.

In 2007, Siemens joined hands with Nanjing University, Consulate General of the Federal Germany in Shanghai and other partners to establish Development Fund for John Rabe and International Safety Zone Memorial Hall and John Rabe International Research and Exchange Center for Peace and Reconciliation. In 2016, Siemens renewed the sponsoring agreement to make further contributions to the fund for the next five years to continue promoting John Rabe’s humanitarian and volunteering spirit.

###

For further information, please contact:

Mr. Hu Yue
Communications
Siemens Ltd., China

P.O. Box 8543, No, 7 Wang Jing Zhong Huan Nan Lu,
Chaoyang, Beijing

Tel.: (+86 10) 6476 2758

Fax: (+86 10) 6476 4922

E-mail: yue.hu@siemens.com