

Context

The rapid growth of China's economy has been accompanied by a high demand for energy. With more than 3 billion tons of CO2 emissions in 2006, China had already become the world's second largest producer of CO2. By now, China is the world's top emitter of CO2. The ineffective use of electric and fossil energy in China has led to excessive strains on the environment and climate as well as to high levels of resource consumption. The root cause of this inefficiency is the lack of technical expertise, particularly at intermediate and lower administrative levels. Additionally, integrated perspectives and holistic approaches are largely absent. Extensive legislation enacted to protect the environment has not taken hold as envisaged due to the lack of effective and timely feedback and correction mechanisms for ensuring its implementation. Even today, too little use of market economy-based steering instruments is made (such as tariffs, taxes, and public dues) to create incentives to save resources and employ environmentally sound technologies.

While large enterprises are increasingly able to meet and even influence international standards, small and medium sized enterprises face difficulties in adapting themselves to international CO2 emission and specific energy consumption standards. Closing this gap is one of the main objectives of the current 12th Five-Year Plan as well as what the EPEE program aims to achieve through its consulting activities.



Energy Policy and Energy Efficiency (EPEE)

Client: German Federal Ministry for Economic Cooperation and Development (BMZ)

Country: People's Republic of China

Lead executing agency: National Energy Administration (NEA)

Overall term: December 2008 to November 2013



Primary Objective

The energy policies of key institutions at the national and sub-national levels are guided by the overall objective of achieving sustainability and successfully implementing measures to increase resource and energy efficiency.

Approach

The program intends to achieve its objectives by way of a multi-level approach. This entails providing assistance on various levels, with various partners and in various provinces with the aim of enhancing the sustainable utilisation of energy within Chinese industry.

As part of the programme's political consulting aspect, strategies, concepts, regulations and standards for enhancing energy and resource efficiency will be developed. This includes offering the Chinese partners access to external know-how and tailor-made consulting from high-level German political, economic, research and consultancy experts. In offering training and capacity development, the consulting competence of the involved institutions shall be improved, enabling them to independently offer expertise to industry and politics in the future. Important elements of this information exchange include conferences, workshops and study tours.

The program consists of four individually developed but mutually agreed upon components. These draw from various approaches in cooperation with their Chinese partners for achieving agreed objectives.

Component 1 provides energy policy advice at the national (National Energy Administration (NEA)) and provincial levels (Energy Department of the Provincial Development and Reform Commission of Ningxia (PDRC Ningxia)), e.g.:

- Supporting the NEA and PDRC Ningxia in developing a sustainable energy strategy and formulating objectives in its Five-Year Plans
- Providing and processing information regarding current energy policy in Germany
- Supporting the PDRC Ningxia in fulfilling its 12th Five-Year Plan objective of utilising low-energy coal for power generation



Component 2 assists in the establishment and qualification of consultancy structures for energy efficiency in cooperation with the State Grid Corporation of China (SGCC), aiding in the transformation of the SGCC from an energy distributor to an energy service provider. e.g.:

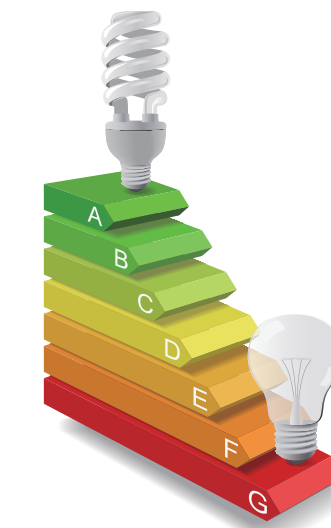
- Carrying out energy audits in the industrial and public sectors
- Training of energy auditors
- Establishing energy efficiency networks (EEN)
- Training of EEN moderators and advisors supporting the SGCC in the establishment of an energy efficiency consulting platform
- Supporting the SGCC in the creation of energy service companies (ESCOs)

Component 3 offers support in the development of regulative instruments for promoting energy efficiency in cooperation with the Chongqing Municipal Economic Commission (CQMEC) as a partner institution, e.g.:

- Supporting in the development of the 12th Five-Year Plan within the energy sector
- Developing energy consumption standards in Chongqing
- Training of energy managers
- Creation of competency centres for improving the circular economy of chemical parks
- Creating capacity development for detailed energy audits in thermal power plants

Component 4 supports in the efficient utilisation of energy resources and their by-products in cooperation with the Provincial Development and Reform Commission of Shanxi (PDRC Shanxi), e.g.:

- Offering consulting for the restructuring of the coking sector in Shanxi province
- Providing advice on upgrading the technology and management of coking plants
- Developing concepts for integrated coke and coal chemistry industrial parks
- Advising on the processing of coke oven by-products for the sake of increasing the value chain



Results – What has been achieved so far

As a result of the program's activities, political institutions at various levels have been made capable of developing incentive systems, regulations and standards. These have already started to be put into administrative practice with the objective of increasing energy efficiency of the industrial and public sectors.

SGCC has successfully been put on the path of transforming itself from an energy distributor to an energy service provider. Subsidiary energy service companies have been established in a number of provinces and are actively consulting customers. Employees of the SGCC have been made capable of independently carrying out energy audits and the corresponding energy efficiency consultations. Furthermore, 343 energy efficiency networks have been founded, a wide-ranging approach for the improvement of energy efficiency in over 3500 companies.

In Chongqing, four energy consumption standards for several industrial sectors have been developed and already been put into effect by the respective political institutions. Numerous training workshops for energy managers of countless companies have been held, increasing the effectiveness of energy saving measures within the industry.

In order to increase resource efficiency in Shanxi, numerous concepts for integrated coke and coal chemistry parks have been developed in cooperation with German industry. Along with coke production, the processing of by-products within the coking process was also a target of this project. These concepts serve the local development and planning authorities in the reorganisation of the local coking sector.