

# Topmotors China Project

## Background

Motors are the driving devices of fans, pumps, compressors and other industrial appliances; widely applied in metallurgy, petrochemical, coal and building materials industries, etc. It is the most power-consuming machinery. In China, motors account for 64% of the total electricity usage of the society and 75% of the industrial electricity consumption in China. The average energy efficiency of electrical motors in China is 3% to 5% below the international level and the average energy efficiency of motor system is 10% to 20% lower than that of the countries with advanced technology. The energy-saving potential for China's electrical motor systems is enormous.

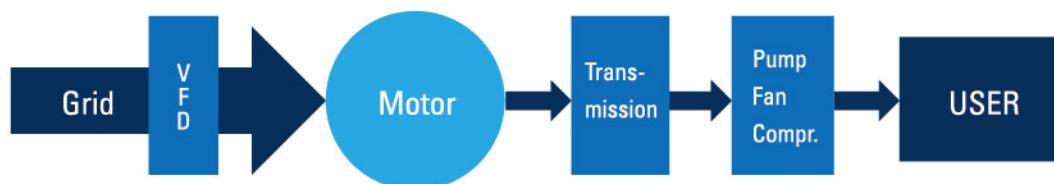
On 10th June 2013, the Ministry of Industry and Information Technology (MIIT) and the General Administration of Quality Supervision, Inspection and Quarantine (AQISQ) have co-released the National Motor Energy Efficiency Improvement Plan (2013-2015) to improve policy, technology and industrial development model on efficiency of motors and motor systems.

## Topmotors International

Countries like Switzerland have generated years of experiences in improving motor system efficiency, including effective policy and technical tools.

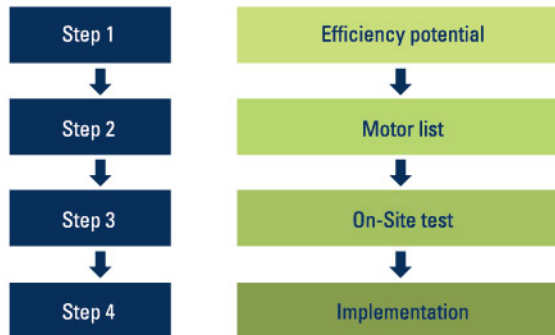
Topmotors was initiated in Switzerland in 2008, supported by Swiss government and international Energy Agency (IEA). Topmotors holds World Motor Summit every two years that aims at building cooperative and exchange systems. The summit also pushes ahead with improving industrial energy efficiency at international level.

## Motor System Efficiency



In the process of transferring electricity into mechanical power, every step could influence the overall efficiency. Topmotors focuses on improving the overall efficiency of the system, rather than that of motors alone.

## MOTOR-CHECK AUDIT METHOD



Topmotors has developed a 'Motor-Check' methodology and tool kit. Through system analysis and on-site test, it could maximize the overall system efficiency. Most importantly, it is an experience that could be trained and adopted to help improving the motor system management of energy-using factories.

## Topmotors China pilot project



In order to strengthen cooperation on improving energy efficiency between China and Switzerland, especially on cross-boarder experiences exchange on improving motor system efficiency, Top10 China has built cooperative relations with Zhenjiang, Jiangsu Province where international best practices are expected to be transformed into

effective actions under China context. Under this framework of cooperation, Topmotors China Pilot Program was set up in Zhenjiang New Area. It will provide motor system check, capacity building and system optimization to main energy-using factories in Zhenjiang New Area, and in cooperation with energy service companies (ESCOs), a new verifiable, replicable and sustainable model of diagnoses and optimization of the motor system will be established.

In this pilot program, all participating parties are to share liabilities of financial and technological input. Government will be responsible for organization and coordination, as well as providing financial and policy support to push and pull main energy-using factories to change. As an independent third party, Top10 will introduce international best practices in technology and management to explore energy saving potential of motor systems in pilot companies and train energy management personnel of pilot companies. ESCOs will provide financial support and equipment for motor system modification where pilot companies decide to optimize existing system to achieve a valuable energy savings.

## Topmotors Chief Technical Expert



Conrad U. Brunner  
Topmotors co-founder, Chief technical expert

Mr. Brunner has worked in motor efficiency for more than 40 years. He is also the chairman of World Motor Summit and Operating Agent of IEA Implementing Agreement 4E.

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