

**China-U.S. Energy Efficiency Steering Committee Meeting**  
**Energy Efficiency Motor Systems Team Report**  
**August 27, 2001**

**Achievements Since the June 1999 Steering Committee Meeting**

- Co-sponsored International Motor Standards and Testing Forum in Beijing, November 1999
- Held several meetings in US to discuss cooperative activities and continued cooperation with IIEC and TCAPP under China Motor System Energy Conservation Program
- Co-taught pumping workshop with Chinese engineers in Beijing November 1999
- U.S. delegation visited potential Showcase sites in November 1999, but planning of Showcase project was deferred pending implementation of UN-funded project
- Submitted application to UN Foundation in early 2000 to initiate Chinese motor systems program pilot in Shanghai and Jiangsu province; received initial approval 3/00; project documents accepted in summer 2000; Chinese contractor (CECIC) selected 8/01; and project has started. Sponsors are: United Nations Industrial Development Organization, US Department of Energy, China State Development Planning Commission, China State Bureau of Technology Quality Supervision, Packard/Energy Foundations. The US Team comprises representatives from Lawrence Berkeley National Laboratory and American Council for an Energy-Efficient Economy
- Initiated a study of the markets for industrial fans and pumps

**Issues and Opportunities**

- Opportunities for improving the efficiency of motor systems in China include improved efficiency motors, variable speed drives, motor-driven equipment (fans, pumps and compressors), system design, and operations and maintenance. Over the long term (by 2010), the program will seek to reduce motor system energy use in China by 10%.
- Chinese enterprises, design institutes and other system designers lack information and training on benefits of and approaches for optimizing motor systems.
- Difficulties in obtaining financing are another barrier to facilitating the development and use of high-efficiency motor systems in China.
- China has developed its Tenth Five-Year Plan covering 2001-2005 and the China Motor Systems Electricity Saving Program is included in this plan; this will be an important step for advancing efforts to improve motor system efficiency in China.

**Next Steps**

Most of the next steps concentrate on implementation of the Chinese motor systems program pilot in Shanghai and Jiangsu province. In addition, the Chinese and U.S. teams will work together to help plan and raise funding for the national China Motor Systems Electricity Saving Program. Specific next steps follow:

- Organize an international team of motor system experts to develop materials and provide training for Chinese experts
- Develop educational materials and application tools to assist motor system experts and factory engineers to assess and better optimize motor systems
- Complete market study on pumps and fans
- Revise existing Chinese national standards on the economic operation of motors, fans and pumps

- Train a group of at least 10 motor system optimization experts who will work in Shanghai and Jiangsu
- Implement and evaluate a series of 8 motor system improvement demonstration projects in different industrial sectors in Shanghai and Jiangsu and prepare case studies of these projects
- Provide training to at least 200 additional Shanghai and Jiangsu factory managers and engineers
- Provide technical assessments to at least 30 additional Shanghai and Jiangsu factories to assist them to identify and undertake their own motor system optimization projects
- Evaluate the different project components and assess how the project can be improved
- Prepare application for PDF funding and then GEF funding to develop a national program based on findings from the pilot programs
- Assist the Chinese government to develop a major national motor system improvement program

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