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China Motor System Energy Conservation Program

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Abstract

China Motor System Energy Conservation Program is an international cooperation program between the Chinese Government and UNIDO with funding from UN Foundation, and inputs from the US government and the Chinese side. The goal of this program is to promote greater efficiency in industrial motor driven systems. As the sub-contractor of this program, CECIC takes responsibility to complete several tasks of this program. Under the leadership and support of UNIDO and the Chinese Government, through hard work and devoted efforts of all parties related, the program is successfully completed in the middle of 2005.

1.0 Financial Report

1.1 CECIC Expenses--See attached Financial Report—CECIC

2.0 Detailed Report

2.01 Tasks assigned for CECIC

According to the contract signed between UNIDO and CECIC, CECIC is responsible to complete the following tasks:

- (i) Train a group of at least 10 motor system optimization experts who will work in Shanghai and Jiangsu;
- (ii) Implement and evaluate a series of eight motor system improvement *demonstration projects in different industrial sectors in Shanghai and Jiangsu* and prepare case studies of these projects;
- (iii) Provide training to at least 200 additional Shanghai and Jiangsu factory managers and engineers and 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.

2.02 Program preparation and mplementation infrastructure

1. Signing contracts. On October 26, 2001, CECIC signed contracts, on November 22, 2001, CECIC signed subcontracts with Shanghai and Jiangsu Energy conservation Centers.
2. Revise work plan. From August 21 to August 30, 2001, CTA and CECIC revised the work plan for Phase 1, and developed project management task

- plan for CECIC, Shanghai and Jiangsu Energy Conservation Centers.
3. Establish local program implementation infrastructure. CECIC, Shanghai and Jiangsu energy conservation centers have established their project teams. Local advisory committees are also established both in Shanghai and Jiangsu.
 4. Developed the database software based on the database requirements provided by the international experts.
 5. Developed an awareness campaign material.
 6. Completed the translation of the training materials.
 7. Completed equipment purchase.
 8. Selected sites for training according to the site selection criteria provided by international experts

2.03 Tasks completed and results

1. Train the trainer training.

- 04/08/02—04/18/02, completed Pumping System Optimization training including on-site training, 22 local experts from Shanghai and Jiangsu are trained.
- 06/05/02—06/14/02, completed Motors, Drives and Fan System optimization Training including on-site training, 21 local experts from Shanghai and Jiangsu are trained.
- 10/20-10/25/02, completed compressed air system optimization training, 23 local experts from Shanghai and Jiangsu are trained.

2. Factory training

By the end of 2004, Shanghai and Jiangsu energy conservation centers have completed all together 19 sessions of factory training, more than 1000 people have been trained.

Jiangsu center has completed 12 sessions of factory trainings, all together 788 people being trained. List of factory trainings held in Jiangsu:

Shanghai center has held all together 10 sessions of factory training, the number of trained people is 250.

The trained number of people is 2.5 times the target settled by the contract.

3. Plant assessment and pilot project

By the end of year 2004, Jiangsu center had completed 19 plant assessments, 7 pilot projects, 4 case studies. Shanghai center had completed 24 plant assessments, 6

pilot projects, 5 case studies. 3 more pilot projects are done than the settled targets, 3 more plant assessments are done.

2.04 Achievements

1. Through the implementation of this Program, a team of local motor system optimization experts has the ability to do system assessments and system optimization program.

2. More than 1000 managers and technical people in factories improve their awareness of the importance of system optimization, and have the knowledge and skill to propose system optimization projects.

3. The pilot projects completed have generated significant energy consumption reduction and economic benefits.

4. More factories are influenced by this program and more system optimization projects are anticipated in the future.

5. The capacity of Shanghai and Jiangsu energy conservation service centers are strengthened which have the capability to implement motor system optimization projects in their region and the whole country.

6. The implementation of this program provides a laboratory to test concepts for the national program..

7. The project management level of CECIC, Shanghai and Jiangsu energy conservation centers is improved.

2.05 Thanks

At the time of completing the program, we give our sincere thanks to:

UNIDO and its Beijing Office;

The UN Foundation;

U.S. Department of Energy;

American Council for an Energy Efficient Economy;

Lawrence Berkeley National Laboratory,

Packard/Energy Foundation;

The State Development and Planning Commission

The international experts

Shanghai Government

Jiangsu Government

Shanghai Energy Conservation Service Center

Jiangsu Energy Conservation Service Center
The factories involved in this program.

1.2 Financial Report-CECIC

1. Professional Services									
Name	Title	Days Worked	Cost/Day	Man-Months	Cost/Man-Month	Total Cost			
A. CECIC Field Work in Shanghai and Jiangsu									
Han Zhi	Team Leader								
Yuan Zhijun	Technical Expert					\$0			
Wang Zhengyuan	Technical Expert					\$0			
Zou Guijin	Project Manager					\$0			
Wu Xiaohua	Project Manager					\$0			
Yang Lixin	Support Staff					\$0			
B. CECIC Headquarters									
Han Zhi	Team Leader					\$0			
Yuan Zhijun	Technical Expert					\$0			
Wang Zhengyuan	Technical Expert					\$0			
Zou Guijin	Project Manager					\$0			
Wu Xiaohua	Project Manager					\$0			
Yang Lixin	Engineer					\$0			
Lu Di	Secretary					\$0			
Professional Services Subtotal:									
2. Subsistence									
A. CECIC Field Expenses(Shanghai/Jiangsu)									
B. Other (Specify)									
Subsistence Subtotal:		0	\$125						
3. Travel and Transportation									
Traveler	Mode of Transport	Destination	RT/ 1-way	Days of Travel	Time to Destination	Cost	Purpose		
				0					
Travel Subtotal:						0			\$0

4. Support Staff								
Name	Title							
Support Staff Subtotal								\$0
5. Materials Preparation			Days Worked	Cost/Day	Man-Months	Cost/Man-Month		Total Cost
Staff time								\$5,500
Translation								\$4,000
Printing								\$3,000
Materials Preparation Subtotal:								\$12,500
6. Database Management								
Staff time								
Database Management Subtotal								
7. Report Preparation								
Staff time		50		\$168				\$8,400
Translation								\$4,500
Printing								\$1,600
Report Preparation Subtotal:		50			0.00			\$14,500
8. Equipment, Materials, Supplies								
Equipment								
Materials, Supplies								\$1,800
Equipment Subtotal:								\$1,800
9. Other Direct Cost								
10. Indirect Cost (office rent, telephone etc.)								
Office Rent								\$12,000
Telecommunication								\$2,900
Indirect Cost Subtotal								\$14,900
SUBTOTAL CECIC COSTS:								\$43,700
11. Subcontract Expenses (see Shanghai and Jiangsu Details)								
8. GRAND TOTAL								\$43,700

Note: Exchange rate: 1\$=8.26 RMB