



## United States ~ Asia Environmental Partnership

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### Energy Wise India

**Implemented by THE LOUIS BERGER GROUP, INC.**

**DATE:** October 15, 2003

**TO:** Azza El-abd, CTO, USAID/ANE

**FROM:** Shehnaz Atcha, Project Manager, Energy Wise India

**CC:** Lori Hatton, Deputy Chief of Party, US Asia Environmental Partnership  
Julie Haines, Senior Vice President, Louis Berger Group, Inc.  
Development Experience Clearinghouse

**SUBJECT:** Energy Wise India Quarterly Report (7/15/03 – 10/15/03)  
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#### **Summary:**

Over this quarter Energy Wise India (EWI) undertook several activities to better understand the challenges and strategies for implementing energy efficiency improvements in Indian industry. From surveys conducted by participants in this spring's EWI Executive Workshop, the challenges facing companies include:

- Inadequate information on energy performance, conservation strategies, and technology;
- Unclear incentives for adopting energy efficient practices;
- Inadequate financial resources focused on energy conservation, and;
- Insufficient venues to exchange technical information.

EWI is addressing these challenges by identifying energy conservation opportunities with the greatest potential for replication in a number of industrial sectors. The EWI Project Manager, Shehnaz Atcha, spent the majority of this quarter in India in order to oversee activities and build the EWI network in the industrial sector, including identifying Corporate Champions. The first EWI newsletter was released to many accolades, including major industrial companies asking to participate in future EWI activities.

Working with our Corporate Champions, the US Asian Environmental Partnership and other partners, EWI completed a series of energy audits in several industrial sectors. In particular, through the support of USAEP India's Country Director Kris Easter and the TSSC engineers with the Louis Berger Group, EWI was able to undertake a series of technical activities and utilize in house expertise for tool and protocol development. By testing different models for energy audits, developing protocols and standards, and engaging a wide variety of experts from energy service companies to equipment manufacturers, EWI is identifying a range of appropriate and cost-effective energy efficiency options for industrial companies. Three specific areas were the focus during this quarter: expanding energy efficiency awareness through working with industrial clusters; finding

strategies to improve energy efficiency in the pulp and paper sector; improving generation from waste heat recovery.

Industrial clusters provide an excellent venue for reaching hundreds of companies through a single program. The Peenya Industrial Cluster, in Bangalore, Karnataka, is one of the largest in Asia, accommodating over 2000 small, 400 medium, and 100 large businesses. The cluster also represents the largest tax-paying base in Bangalore. Working closely with the Peenya Action Task Force and Corporate Champions within Peenya, EWI is identifying and sharing energy conservation opportunities with companies in the cluster. The Corporate Champions in Peenya include ABB, Ace Designers, and Therelek, three companies representing a range of machine industry. These Corporate Champions agreed to open their facilities to an EWI energy audit and make public the audit findings and subsequent project implementation. Kim Mihalik, an engineer with the USAEP program, and a local energy services company, INTESCO Asia, conducted audits at the three facilities. The energy managers from these companies will also be taking an active role in the practitioner training workshops, sharing their energy conservation strategies with other companies in the Peenya and other clusters around India. ABB will be hosting the Peenya practitioner workshop in February. Important deliverables from this activity include the energy management tool and handbook, to help companies understand what they need to know about their facilities to assess their energy conservation opportunities. In addition, fact sheets about working with energy service companies, the value of energy auditing, and performance contracting are also being developed.

The pulp and paper sector is an energy intensive industry and has been identified as a 'designated sector' by the Indian Bureau of Energy Efficiency. EWI is focusing on medium and small mills producing brown industrial paper, one of the most common mill products in India, produced at over 150 mills throughout the country. During this quarter several mills were visited and a walkthrough was conducted of two mills by the EWI team and representatives from the Indian Agro and Recycled Paper Mills Association. Ruchira Paper was chosen as the EWI Corporate Champion, and will be helping to develop standard models and protocols for undertaking energy audits and implementing energy efficiency projects at similar mills throughout the country. In addition, this will be the basis for benchmarking the performance of brown paper mills in India.

EWI is also evaluating a waste heat to energy project in Orissa with Indian Metal Ferro Alloys. This project is of interest to many industrial companies that are releasing waste heat that could be utilized rather than grid power. Energy efficiency improvements in conjunction with the generation project will increase the overall performance and viability of the project. A walkthrough to identify opportunities was conducted by Martin Steinson, an engineer with the USAEP program.

The groundwork laid during this quarter will lead to a rich set of education and outreach materials, and a distinguished set of Corporate Champions to expand understanding of industrial energy efficiency opportunities.

### **Key Activities this Quarter:**

- ✓ Undertake outreach activities within industrial cluster to increase awareness of energy efficiency opportunities
  - Undertake energy audits and three facilities within Peenya Industrial Cluster
    - Corporate Champions are ABB (assembly), Ace Designers (manufacturing), and Therelek (job shop for heat treatment)

- Cluster Champion is Peenya Action Task Force
    - Made presentation to CEO members of Peenya Action Task Force
  - Present findings to companies and follow implementation of project recommendations
- ✓ Identify pulp and paper Corporate Champion
  - Complete initial walkthrough of facility
    - Completed walkthrough of two brown paper facilities: Ananda Tissues, Ltd. and Ruchira Paper.
- ✓ Undertake walkthrough of metal alloy plant to evaluate energy efficiency improvements to waste heat generation project
  - Began economic viability of project
- ✓ Presented activities at USAID Partners' Meeting
  - TSSC engineers presented specific activities to Kris Easter and USAEP team in India on behalf of EWI's Project Manager.

### **Next Steps:**

- ✓ Preparation for workshop on Peenya findings, to be hosted at the ABB Training Center in Peenya in February
  - Provide information on audit findings, project implementation, and energy efficiency management strategies and equipment
- ✓ Complete and test run energy management tool and handbook
- ✓ Undertake energy assessment at pulp and paper facility to define potential energy efficiency projects
  - Develop standard RFP to solicit ESCO response for energy efficiency projects
- ✓ Complete initial feasibility evaluation of waste heat to energy project

### **Deliverables Completed this Quarter:**

- ✓ Mailed out first installment of EWI Newsletter to over 400 companies throughout India increase awareness of EWI and energy efficiency activities

### **Deliverables in Process:**

- ✓ Energy Efficiency Management Tool and related Handbook
- ✓ Completing second EWI Newsletter on Peenya Industrial Cluster activities
- ✓ Completing fact sheets for companies
  - ESCOs and Performance Contracting
  - Collecting and Managing Energy Data
- ✓ Practitioner training session in Peenya Industrial Cluster

### **Planned Activities for 4th Quarter 2003:**

- ✓ Outreach activities:
  - Completion and mailing of second EWI Newsletter
  - Completion and distribution of first set of Fact Sheets

- ✓ Technical activities:
  - Completion of pulp and paper energy assessment
  - Analysis of waste to heat generation project
- ✓ Training activities:
  - Preparation for Peenya Practitioner Training Workshop in February 2005

**Expenditures to Date:**

As of August 30, 2003, total billed to date on the EWI contract is \$223,680 with \$766,320 remaining.