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**ECO**

**Energy Conservation and Commercialization Project**

**A Program of USAID, Ministry of Power and ICICI**

**QUARTERLY PROGRESS REPORT #2  
JULY 1 – SEPTEMBER 30, 2000**



**23865-809-0002**

*Implemented by:*

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**23865-809-0002**

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## **PREFACE**

This is the second Quarterly Report (July – September 2000) written for the USAID ECO Project in New Delhi, India. The ECO project is being implemented by Bechtel National Inc (Nexant Inc) under a USAID contract, LAG-I-00-98-0000. This contract has been issued by the USAID Mission in New Delhi as a part of the IQC (indefinite Quantity Contract) currently in place through USAID's Global Bureau. The project contract was signed on February 29, 2000, with project mobilization occurring during March, April and May, 2000. The technical assistance work began officially on June 1, 2000.

## EXECUTIVE SUMMARY

Efforts continued during the second quarter to finalize the project staff. Vijay Deshpande was added to the Delhi office staff, as an additional technical resource person. Gurveen Dugal was added in Delhi, as the project receptionist. And Brinder Kaur joined the project towards the end of the quarter. Brinder will be responsible for producing and maintaining project reports. In Mumbai, PK Sen was terminated, and Sunil Kulkarni took his place, on a temporary basis while a search for a replacement was initiated. Also, the search for an office site in Mumbai continued. Several suitable offices were identified, but the lease agreements proposed by the landlords were not agreeable. The search continued for several weeks, until a suitable office space with an agreeable lease arrangement was found.

The Nexant technical Staff started focusing on developing terms of reference (TORs) and scheduling training programs for the first project Milestones. The training schedule for the remainder of 2000 was drafted, with dates and suggested cities identified. The city locations were selected by the program topics, so that programs addressing a particular interest group would be held where those groups were the most populous. The training schedule for year 2000 was reviewed with USAID staff, and several changes were suggested and made. The training schedule for year 2000 includes 13 training programs (please refer to on pages 31 and 32. These programs are being planned in coordination with both Conserve and IIE.

Consultants for the initial Milestones were identified. The initial Milestones were bid, with TORs developed and sent to project subcontractors and consultants. TORs were also sent to a few firms that were not part of the project proposal team. Bids were received from approximately one half of the firms to whom the TORs were sent. These bids were evaluated, and scored on a numerical basis. The firms scoring the most points became the preferred firms, and this information was forwarded to USAID for review and approval. The subcontracting / approval process with USAID took some time to clarify, but was eventually worked out. Since one of the preferred firms was not on the original proposal, the process needed to be clarified. It was determined that only new subcontractors (companies that are not part of our proposal team) need to have RCO approval prior to being utilized on the project. Existing companies and individuals do not need RCO approval. New companies need to be competed, with a minimum of three bids, on specific tasks. Complete submittals (RFP, proposals, evaluation, and costs) need to be provided to USAID for their review.

A newspaper advertisement for our senior financial analyst was placed in the Times of India. Six candidates were interviewed, and it is expected that the top candidate will be offered the position in the Mumbai position.

Preparatory work is being done for the other workshops/training programs to be held in the year 2001. Cities and venues for the training programs have been suggested, and will be finalized over the next several months.

## STAFFING

Three additional staff members were added to the New Delhi office. Vijay Deshpande was added as a senior consultant, mainly to work on central government activities. Gurveen Dugal was added as receptionist, and Brinder Kaur joined as a technical writer. In Mumbai, P.K. Sen left the project. His position remained unfilled for several weeks, in order to determine if the level of work required the position to be filled. After several weeks it was determined that the position should be filled. Therefore the position of Finance/ESCO Specialist was advertised in the Times of India dated September 11, 2000. The advertisement was tightly written, in order to try to get responses from serious candidates who were qualified. Approximately thirty-five individuals sent in applications. Out of this number, six were short-listed and interviewed. The results of the interviews were discussed with USAID, and it was decided to offer the top candidate the Mumbai office position.

### Finance/ ESCO Specialist

**A US based company is looking for an Energy Efficiency/Energy Conservation Project Finance specialist with the following**

- An exceptionally strong financial lending/ESCO background capable of developing and assembling innovative financing packages to fund performance-based energy efficiency and energy conservation projects.
- Experience in project development, lending, credit appraisal, finance, marketing and sales; ability to present and sell your ideas to the project team as well as to key stakeholders (financial institutions and lenders, industrial customers, energy service companies).
- The ability to lead group discussions and make presentations on energy efficiency financing/ESCO opportunities.

Minimum requirements include fluency in English, a university degree in finance, marketing or a related field and at least 10 years experience in the energy sector or in the energy banking and investment environment. Proficiency in Microsoft Word, Excel and PowerPoint is required.

This position is based in Mumbai but will require travel throughout India.

**Send applications by fax or post along with CV and salary history within 7 days to:  
NEXANT Office Manager, 408, Dalamal Tower, Nariman Point, Mumbai – 400 021.  
Fax #: 022 – 288 4555**

## INTERNATIONAL TRAVELERS

Matt Addison (Nexant IQC manager) came to New Delhi, to work with USAID on the SARI and ECO projects. The SARI project is to start in early October, and Matt coordinated details with the RCO. Matt also spent time with the ECO project staff, and helped in providing coordination details between ECO and the Nexant home office.

Mark Tribble (Nexant) came to India to assist in setting up the Mumbai office and in getting it operational. Mark has previously worked in India for about 3 years and headed the EMCAT – DSM Project. He will work in the Mumbai office on short-term trips over the next two to three months. His main assignment is to coordinate activities on the financial tasks, and to start work in setting up the Lender's Forum. He will also coordinate frequently with ICICI staff, and keep them briefed on the status of the ECO project.

The first technical tasks are scheduled to take place during the last three months of 2000. Several US subcontractors/consultants are scheduled to travel to India to work on specific tasks.

### Summary of travel from the U.S.:

<u>Name</u>	<u>Activity</u>	<u>Approximate dates in India</u>
1. Matt Addison	General administrative	Sept. 15 – Sept. 22, 2000
2. Mark Tribble	ESCO/financial tasks	Sept. 19 – Oct. 19, 2000

### Anticipated Travel next 90 days:

<u>Name</u>	<u>Activity</u>	<u>Approximate dates in India</u>
1. Brian Wood	4A, 4B, 5A Coordination trip	Oct. 1 – Oct. 7, 2000
2. Mark Tribble	ESCO/Financial tasks	Nov. 1 – Nov. 21, 2000
3. Jim & Shirley Hansen	1A & 3A workshops	Oct. 29 – Nov. 11, 2000
4. Consultant to be named from Schiller Assoc.	3A, M&V training	Dec. 3- Dec. 16, 2000
5. Larry Good	7A training	Dec. 3 – Dec. 16, 2000

## ACTIVITIES

This section describes specific work done on various Milestones. The Milestones are being worked on based on their completion date – those with the earliest completion date are being conducted first. The information below provides a brief summary of the Milestone, its completion date, Nexant staff managing the task, selected consultants for the task, the work completed, and the work remaining. Also included is a summary of the expected work for the next quarter. In general, Milestones A and B are shown for each Activity. However, for some Activities, Milestone B is not scheduled for many months, and therefore no work is planned under that Milestone for this quarter. Therefore those Milestones are listed but no work is shown.

### A. Market Component

Activities 1-6 are included in the Markets Component. Activities 1-3 involve project development and financing, either through conventional means or involving ESCOs. Work in these Activities are designed to provide more financing opportunities for energy efficiency projects, as well as strengthen project sponsors and promoters (ESCOs). Activities 4-5 involve the promotion of new energy efficient technologies and products. And activity 6 is aimed at broadening the industrial applications for the use of cogeneration technology.

### ACTIVITY 1: TECHNICAL AND PROJECT STRUCTURING SERVICES FOR SPONSORS

- Milestone A:*
- 1. Select 10 EE projects (including four in commercial sector)*
  - 2. Conduct 2 workshops on ESCO/financial structure*

#### **Work completed this quarter:**

Many potential energy efficiency projects were forwarded or submitted for consideration under the ECO project. Most of these projects were looking for concessionary loans, and these could be financed through conventional means. Discussions were held with ICICI staff to obtain their viewpoint on the type of projects that should be considered for ECO. It was also indicated that during the three plus project years, this list of projects will have to be dynamic. That is, the list will have to be open-ended, with new projects continually being added as required. Since most projects are either implemented or dropped within a year of promulgation, the original list of projects will disappear after the first project year. Therefore new projects will have to be added to continue to provide projects to test funding mechanisms.

The name 'ECO loan fund' has caused some confusion simply from its name. According to the project RFP, this fund is to be utilized to develop and test new financial mechanisms and incentives. Strictly speaking, it is not to be used as a loan fund, unless that becomes one or more of the mechanisms that are developed. However, many project developers and promoters have assumed that this fund would be utilized for concessionary loans. Project information has been kept on a list, which includes the type of project, name and address of project, plus pertinent project information. This list will

be an active list, with projects continually being added to it. Once the financing mechanisms have been developed, then the project list can be reviewed to determine which projects might be utilized in 'testing' each mechanism. Therefore the project list will not be screened at this time, since the funding mechanisms are not yet designed.

The scope of work for the ESCO/financial structure workshops was developed, and sent to several Indian subcontractors for review and proposals. After reviewing the submitted proposals, 3EC was selected as the Indian subcontractor and Kiona was selected as the US subcontractor. Kiona has significant experience in ESCO/financial project details. In addition, Kiona has India experience, having working in India on ESCO work under the EMCAT project. 3EC has significant project development and financial experience, and knows the Indian firms and agencies very well. The agenda for the training workshops was developed, as well as a general list of participants to invite to the workshops.

**Work planned for next 90 days:**

Finalize all details for the two workshops on "ESCO/Financial Strategies" to be held in Mumbai for two days (November 1-2) and two days in Delhi on November 7-8, 2000. Conduct the workshops, then finalize the Milestone by preparing the Milestone deliverables and submitting by the Milestone completion date (December 31, 2000).

**Scheduled completion date:** December 31, 2000

**Nexant Coordinating Staff Member:** Vijay M. Deshpande

**Sub-contractors/Consultants:**

**US:** Kiona  
**Indian:** 3 EC

- Milestone B:**
1. *Conduct three training courses on Project Screening*
  2. *Complete 8 investment grade feasibility studies (including 3 in the commercial sector)*

**Work completed this quarter:**

Activity on this Milestone has not yet begun.

**Work planned for next 90 days:**

Begin selection of both Indian and U.S. consultants, and contract process.

**Scheduled completion date:** September 30, 2001

**Nexant Coordinating Staff Member:** Mumbai staff

**Sub-contractors/Consultants:**

**US:** not yet selected  
**Indian:** not yet selected

**ACTIVITY 2: DEVELOPMENT OF FINANCIAL INCENTIVES FOR CREDIT ENHANCEMENT/ RISK MITIGATION**

***Milestone A: 1. Submit initial implementation plan***

This Milestone on project mobilization has already been completed and approved.

***Milestone B: 1. Develop EE financial incentive mechanisms (at least 5 mechanisms)***

**Work completed this quarter:**

Preliminary meetings and discussions have taken place on this Milestone, although consultants have not yet been selected. The workshop on ESCO/Financial structure conducted under 1A will provide input towards this activity. Mark Tribble worked to identify possible participants for the Lender's Forum. Mark met with many of the proposed individuals to gauge their interest in participating in this event.

**Work planned for next 90 days:**

Select Indian and US consultants for this activity. Develop a scope of work, and coordinate with consultants so that they can participate in significant activities, including meetings of the Lender's forum. Begin discussions with lenders to develop the strategy for the financial mechanisms. Coordinate and conduct the first lender's forum meeting. Utilizing ideas and information from the lender's forum, proceed to develop basic ideas for the financial mechanisms. Meet with ICICI as well as other stakeholders to discuss possible mechanisms.

**Scheduled completion date:** August 30, 2001

**Nexant Coordinating Staff Member:** Mumbai staff

**Sub-contractors/Consultants:**

**US:** not yet selected  
**Indian:** not yet selected

**ACTIVITY 3: SUPPORT TO ENERGY EFFICIENCY SERVICES INDUSTRY**

- Milestone A:**
1. *Develop business plan and 1<sup>st</sup> year agenda for an Indian ESCO trade association;*
  2. *Conduct 2 workshops on formation of an Indian ESCO Association;*
  3. *Draft a model M&V protocol for verifying energy savings and benefits;*
  4. *Conduct 2 workshops on international examples of M&V protocol;*
  5. *Conduct 2 courses on M&V protocol*

**Work completed this quarter:**

Since there are two main topics within this Milestone, the Milestone is split into two parts, the first being related to ESCO activities and the second related to M&V work. Kiona was selected as the US subcontractor on the ESCO work, with Conserve being the Indian counterpart. Schiller Associates was selected as the US subcontractor on the M&V work, with Intesco being their counterpart.

Training locations, dates and venues were developed for the three training programs. Details of the programs was coordinated between the consultants, as well as the technical assistance work was coordinated between the consultants.

**Work planned for next 90 days:**

The consultants continue to coordinate on the technical assistance work and the training programs. The training programs are scheduled to be held in November and December: a 1 day workshop to be held on "Formation of an Indian ESCO Association" in Mumbai on November 3 and in Delhi on November 6; a 1-day workshop on "International examples of Measurement & Verification protocol to be held on December 5 in Mumbai and on December 11 in Delhi; and a 3-day training program on "Measurement and Verification protocol" to be held in Mumbai on December 6-8 and in Delhi on December 12-14.

**Scheduled completion date:** December 31, 2000

**Nexant Coordinating Staff Member:** Vijay M. Deshpande

<b>Sub-contractors/Consultants:</b>	<u><b>ESCO work</b></u>	<u><b>M&amp;V work</b></u>
<b>US:</b>	Kiona	Schiller Associates
<b>Indian:</b>	Conserve	Intesco

- Milestone B:**
1. *Create a business exchange program;*
  2. *Conduct 2 workshops on EE business partnerships*

**Work completed this quarter:**

The TOR for this activity is being developed.

**Work planned for next 90 days:**

Complete the terms of reference, and select consultants. Develop contracts for consultants, and initiate the tasks.

**Scheduled completion date:** February 28, 2001

**Nexant coordinating staff member:** Mumbai staff

**Sub-contractors/Consultants:**

**US:** not yet determined

**Indian:** not yet determined

## **ACTIVITY 4: EFFICIENT TECHNOLOGY PROMOTION**

### ***Milestone A: 1. Complete 2 courses on efficient technology and systems***

#### **Work completed this quarter:**

Developed the terms of reference for subcontractors/consultants, and forwarded them to Indian firms for bidding. Reviewed the submitted bids, evaluated and ranked them by numerical score. Based on the submittals, MK Raju was selected as the Indian subcontractor. Brian Wood of Nexant will team with MK Raju in conducting these two courses.

Worked with MK Raju and Brian Wood regarding the details of the courses and the content. Coordinated the dates and locations for the training programs.

#### **Work planned for next 90 days:**

Plan for a preliminary trip to India by Brian Wood. The trip is being planned in order to coordinate with MK Raju staff, and to discuss specific details of the training programs. Continue planning and coordination activities prior to the courses, then conduct the courses in early November (Chennai and Baroda on November 8-10 and November 13-15, respectively).

#### **Scheduled completion date:**

December 31, 2000

#### **Nexant Coordinating Staff Member:**

Kapil Thukral

#### **Sub-contractors/Consultants:**

US:

Brian Wood

Indian:

M.K. Raju Consultants Pvt. Ltd.

### ***Milestone B: 1. Submit final market assessment report***

#### **Work completed this quarter:**

Developed the terms of reference for subcontractors/consultants, and forwarded them to Indian firms for bidding. Reviewed the submitted bids, evaluated and ranked them by numerical score. Based on the submittals, AK Sachdeva was selected as the Indian subcontractor. Brian Wood of Nexant will team with Sachdeva in conducting this assessment of energy efficient technologies.

Met with Sachdeva several times to review and to plan activities. Coordinated with Brian Wood to ensure there was mutual understanding, and worked to decide specific areas of concentration.

**Work planned for next 90 days:**

Planned for a preliminary trip by Brian Wood to come to India to coordinate efforts. Brian Wood will also be in India in November, to conduct training programs under Milestone 4A. This opportunity will also be used to again coordinate work on this Milestone.

**Scheduled completion date:** January 31, 2001

**Nexant Coordinating Staff Member:** Kapil Thukral

**Sub-contractors/Consultants:**

**US:**

Brian Wood

**Indian:**

A.K. Sachdeva

## **ACTIVITY 5: MARKET CONDITIONING AND PROMOTION**

### ***Milestone A: 1. Submit report on market potential for branded EE products (at least 2 products)***

#### **Work completed this quarter:**

Developed the terms of reference for subcontractors/consultants, and forwarded them to Indian firms for bidding. Reviewed the submitted bids, evaluated and ranked them by numerical score. Based on the submittals, AK Sachdeva was selected as the Indian subcontractor. Brian Wood of Nexant will team with Sachdeva in conducting this assessment of energy efficient technologies.

Met with Sachdeva several times to review and to plan activities. Coordinated with Brian Wood to ensure there was mutual understanding, and worked to decide specific areas of concentration.

#### **Work planned for next 90 days:**

Planned for preliminary trip by Brian Wood to India, to coordinate work on Milestones 4A, 4B, and 5A. Due to the similarities in these Milestones, Brian Wood is working on all three of these. Work with AK Sachdeva to determine a plan for selecting products. First a draft list of products will be developed, then forwarded to USAID for review. Once the two products are identified, work to determine the current market penetration of these products, the range of products within the product line (specifically the range of energy efficiency between product models), and the potential penetration rate. Evaluate all of this information for at least two products, write an assessment report and submit to USAID.

**Scheduled completion date:** December 31, 2000

**Nexant Coordinating Staff Member:** Kapil Thukral

#### **Sub-contractors/Consultants:**

**US:** Brian Wood  
**Indian:** A.K. Sachdeva

### ***Milestone B: 1. Conduct a marketing course on EE products***

#### **Work completed this quarter:**

Only preliminary work has started on this Milestone. As Milestone A is being developed (see above), reference is being made to Milestone B, to ensure that each Milestone is conducted knowing what the next objective is. Therefore the work being planned for Milestone A is done with knowledge of what is required for the work under Milestone B.

**Work planned for next 90 days:**

Select the consultants to conduct the work, which will likely be the same as the consultants currently undertaking Milestone 5A. Coordinate training parameters (currently the program is scheduled to be held in Chennai beginning on February 28, 2001 for three days). Organize and conduct the training program.

**Scheduled completion date:** April 30, 2001

**Nexant Coordinating Staff Member:** Kapil Thukral

**Sub-contractors/Consultants:**

**US:** not yet determined

**Indian:** not yet determined

## ACTIVITY 6: NON-SUGAR COGENERATION MARKET DEVELOPMENT

*Milestone A: 1. Submit a detailed market assessment of the technical and economic potential of cogeneration in the non-sugar industry*

**Work completed this quarter:**

The terms of reference for Indian subcontractors/consultants has been prepared. This Milestone is similar in scope to work that 3EC has been doing with EMC on cogeneration. Therefore 3EC was contacted to see if they were interested in doing this task. The price was negotiated, and 3EC was finalized as the Indian subcontractor on this market assessment activity. They will work alone on this, as there is no US subcontractor/consultant planned to assist them.

**Work planned for next 90 days:**

Work with 3EC staff on developing the market assessment. Review their draft documents, and suggest changes and make other pertinent comments. Prepare draft market assessment report for USAID.

**Scheduled completion date:** January 31, 2001

**Nexant Coordinating Staff Member:** Kapil Thukral

**Sub-contractors/Consultants:**

**US:** none  
**Indian:** 3 EC

*Milestone B: 1. Conduct 4 regional workshops on cogeneration systems, including technical and financial topics*

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:** February 28, 2002

**Nexant Coordinating Staff Member:** Kapil Thukral

**Sub-contractors/Consultants:**

**US:** not yet determined  
**Indian:** not yet determined

## **B. POLICY COMPONENT**

This component works with both Central and State Governments, to strengthen their energy efficiency programs and their policies and procedures. Activities 7 & 8 involved working with the Central Government, and specifically the Bureau of Energy Efficiency (BEE) once it is formed (The BEE is to be formed when the energy legislation bill is passed). These two activities involve working to develop an energy code as well as an energy auditor certification program. Activity 9 is aimed at working with local government to improve their energy efficiency and conservation policies and procedures. Activity 10 is training designed specifically for electricity regulatory commissions. Activities 11-13 involve the development of demand side management (DSM) practices into utilities, as they reform and unbundled.

### **ACTIVITY 7: ENERGY EFFICIENCY POLICY AND INSTITUTIONAL SUPPORT**

- Milestone A:*
- 1. Submit report identifying candidate institution to certify energy auditors and assessment of abilities and a need to create and sustain a certification program;*
  - 2. Present a workshop on voluntary energy auditor certification;*
  - 3. Conduct 2 workshops on energy auditor instruction (train the trainers)*

#### **Work completed this quarter:**

Met with various Indian organizations, to discuss what they do in the area of energy auditor certification. Discussions were held with the Energy Management Center (EMC) on the work being done by them in this area, especially the study being done by them on the establishment of energy auditor accreditation and energy manager certification regimes in India. PCRA was also contacted in connection with the energy auditor certification work. PCRA does not have an energy auditor certification or accreditation program, but they do have a formal procedure for "empanelment" of auditors. They invite applications from auditors who want to get empanelled. The applications are reviewed by an expert committee set up by PCRA, and those meeting the criteria (which the committee sets) are accorded "empanelment".

The National Productivity Council (NPC) was selected as our subcontractor. They were not part of the original proposal team, but company qualifications, individual CVs, bidding sheets and evaluation sheets were submitted to USAID for review. Subsequently they were approved by the RCO to work on this Milestone.

One of the first milestones for this activity involves holding a 2-day workshop in New Delhi in the third week of October 2000. Training logistics and other parameters were developed, including a lists of possible participants and names of organizations who should participate in the training.

The Association of Energy Engineers (AEE) was contracted with to do the work under this Milestone. Larry Good of AEE was selected as their representative, and Larry will work with NPC in undertaking these tasks.

**Work planned for the next 90 days:**

Finalize all training parameters for the first workshop. Conduct the workshop on energy auditor certification. Continue to work on the report of Indian institutions that are capable of implementing a certification program, as well as plan the training sessions energy auditor instruction (train the trainers).

**Scheduled completion date:** November 30, 2000 (rescheduled to January 15, 2001, due to difficulties in coordinating schedules and holiday schedules during October and November.

**Nexant Coordinating Staff Member:** Vijay M. Deshpande

**Sub-contractors/Consultants:**

**US:** Larry Good  
**Indian:** NPC

- Milestone B:**
1. *Complete a strategy paper on the charter, compliance requirements and outreach needed to create a viable certification program;*
  2. *Conduct 2 days workshops on financial training for accelerated depreciation;*
  3. *Present 2 courses on rational tariff design;*
  4. *Establish at least 2 systems for the development of market based EE strategies.*

**Work completed this quarter:**

In order to be able to decide as to what could be covered under the 2 workshops and 2 courses required, as also what needs to be covered to meet Indian needs, the following has been done:

1. Study of the report prepared by National Council of Applied Economic Research (NCAER) on the effectiveness of incentives for energy conservation
2. Study of the report prepared by EMC on financing of energy efficiency investments
3. Study of report by ASCI on tariff fixation in Utilities
4. Study of book (edited by Siddayo) on energy pricing policy
5. Surfing the net to get information/literature on energy pricing for efficiency, also to know if similar courses have been conducted else where in the World, especially by USAID, UN, ADB or World Bank

The above activities have helped in defining possible objectives and coverage/course content for the two workshops and 2 courses.

**Work planned for next 90 days:**

Select subcontractors for these tasks, and initiate the tasks. The training venues and dates will need to be determined in the near future. Continue to work with stakeholders, especially BEE/EMC on the technical issues.

**Scheduled completion date:**

April 30, 2001

**Nexant Coordinating Staff Member:**

Vijay M. Deshpande

**Sub-contractors/Consultants:**

**US:**

not yet determined

**Indian:**

not yet determined

**ACTIVITY 8: ENERGY EFFICIENCY STANDARDS AND LABELING FOR CONSUMER APPLIANCES**

*Milestone A: 1. Assist BIS in drafting the implementing regulations for appliance labeling for at least 2 appliances*

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:**

December 31, 2001

**Nexant Coordinating Staff Member:**

Kapil Thukral

**Sub-contractors/Consultants:**

**US:**

not yet determined

**Indian:**

not yet determined

*Milestone B: 1. Working with BEE, develop a comprehensive EE standards improvement plan for at least 2 appliances;  
2. Conduct 2 workshops on consumer appliance efficiency standards;  
3. Conduct 2 training courses on consumer appliance efficiency standards and EE labeling and standards*

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:**

May 31, 2002

**Nexant Coordinating Staff Member:**

Kapil Thukral

**Sub-contractors/Consultants:**

**US:**

not yet determined

**Indian:**

not yet determined

**ACTIVITY 9: ENERGY EFFICIENCY IMPROVEMENT IN GOVERNMENT FACILITIES AND PRIVATE BUILDINGS**

*Milestone A: 1. Prepare a report (using life cycle costing) on at least 2 high-energy use appliances/equipment procured by the government for which minimum standards could be developed.*

**Work completed this quarter:**

For fixing minimum standards it is essential to know the present standards that are being followed. To facilitate this, standards being followed by the central government are being collected. These can be compared with BIS wherever applicable, which will provide requisite guidelines for developing minimum standards.

**Work planned for the next 90 days:**

INNOTEM will be asked to conduct this activity, so that the work can begin. The task will be negotiated with INNOTEM, and a contract will be sent to them to initiate the work. One potential target organization will be the Indian Railways, and so a meeting will be set up with them to discuss this topic. Other target organizations or governments will be selected. Following that, a list of energy using equipment will be developed, along with energy usage figures. This information will also be presented for review, prior to commencing the detailed analysis work.

**Scheduled completion date:** January 31, 2001

**Nexant Coordinating Staff Member:** Kapil Thukral & V.M. Thakor

**Sub-contractors/Consultants:**

<b>US:</b>	none
<b>Indian:</b>	INNOTEM

*Milestone B: 1. Conduct two training courses for government staff on procurement using life cycle costs;  
2. Develop a procedure for government agencies to authorize performance contracts with ESCOs o EE projects;  
3. Train government officials on EE performance contracting*

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:** May 31, 2002

**Nexant Coordinating Staff Member:** V.M. Thakor

**Sub-contractors/Consultants:**

**US:** not yet determined

**Indian:** not yet determined

**ACTIVITY 10: ENERGY EFFICIENCY THROUGH REGULATORY REFORM AND RESTRUCTURING**

*Milestone A: 1. Assess training needs for EE through regulation in at least 3 states, and develop a curriculum for training regulatory staff.*

**Work completed this quarter:**

The training needs assessment will be conducted by IIE. IIE has already been contracted to do this work. IIE has submitted a draft schedule, showing both IETP and ECO courses as well as the training needs assessment. USAID staff have suggested that this work be a continuation of the earlier training needs assessment of regulatory staff that IIE conducted in July, 2000.

**Work planned for next 90 days:**

Continue to plan the training needs assessment. IIE will propose the states to visit, and the specific schedule as well as who will participate. The training needs assessment is scheduled for the third week of November, 2000.

**Scheduled completion date:**

March 31, 2001

**Nexant Coordinating Staff Member:**

Anita Kochhar

**Sub-contractors/Consultants:**

**US:**

IIE

**Indian:**

none

*Milestone B: 1. Prepare and conduct an integrated training program targeted at regulatory personnel (including courses on access to regulatory process for industrial and commercial customers;  
2. Awareness in regulation for residential consumers;  
3. Conduct a U.S. study tour for utility staff on the access to the regulatory process.*

**Work completed this quarter:**

IIE submitted a training schedule showing when these courses would be held. Location and venues still need to be determined. Nexant staff suggested that there be more time between the regulatory programs and the subsequent US study tour, in case any of the participants in the earlier programs should be selected for the study tour. This would allow them sufficient time to prepare the necessary paperwork for these participants.

**Work planned for next 90 days:**

Continue to plan for the training programs. One of the sites will be the focus state, after it's determined, the specific training venue will be fixed. The second training site will be in one of the other candidates for the focus state. By the end of November the second location will be determined. Planning will begin for the US study tour, although most of the planning will not take place until early 2001.

**Scheduled completion date:** May 31, 2001

**Nexant Coordinating Staff Member:** Anita Kochhar

**Sub-contractors/Consultants:**

<b>US:</b>	IIE
<b>Indian:</b>	none

## ACTIVITY 11: ELECTRIC UTILITY DSM/ENERGY CAPACITY BUILDING

### *Milestone A: 1. Establish selection criteria and identify the focus state*

#### **Work completed this quarter:**

The criteria for the selection of the focus state was drafted. The criteria is based on numerous factors, many pertaining to the status of the utility, whether it is unbundled, and whether distribution companies have been formed and are operating. The criteria also includes weighting factors, to recognize the significance of some parameters over others.

A letter was drafted previously, and sent out to four states (AP, UP, Karnataka, and Rajasthan) under the name of Shashi Shekhar of the Ministry of Power. These four states had been previously suggested by USAID to be the candidate states, based on discussions between USAID and World Bank staff. ICICI staff was also consulted, and they confirmed that these four states should be the leading candidates for the focus state consideration. The letter was introducing the ECO project, and asking the Secretary of Energy for each State to indicate if they wanted to be considered for focus state consideration under the ECO project. Affirmative responses were received from three states, with no response from UP. Mr. Shekhar telephoned the UP government, to discuss this with them. It was determined that they currently have other priorities, and did not see the DSM activity under ECO as part of their main priorities.

Plans were made to visit each of the three remaining states, and to meet with the Secretary of Energy in each state, the utility management, and also the regulatory commission (if it exists). Participants on each trip would include a Nexant representative and a USAID representative. If available, Mr. Shashi Shekhar would also participate, as would an ICICI staff member.

Visits were made to Karnataka, AP, and Rajasthan. Data was collected, both from personal discussions, as well as detailed information pertaining to the operation of the utility, number of customers, billing rate, and the percentage of customers paying their bills. The collected information and data was put into the selection matrix. In some cases, data was not provided in response to specific questions or areas of interest, although several attempts were made to collect this information. For these areas, the answer was left blank.

The initial evaluation indicated that Rajasthan was slightly preferred over Karnataka, and then AP as the focus state. Based on this information, two additional trips were made to Rajasthan, so that other members of USAID and Mr. Shashi Shekhar of MoP could also meet with various representatives of the state government and the utility, distribution company and the regulators. Rajasthan will also be the recipient of a large World Bank loan, some of which will be earmarked for DSM efforts. Following these meetings, it was still felt that Rajasthan was a good candidate for the focus state. Mr. Shashi Shekhar did suggest that two states be considered, rather than one, with one being in the north and one in the south of India. Since the contract is explicit that there should be one focus

state, it was decided to proceed in this manner, but to expand the training and technical assistance work as much as possible to include other states.

At this time, it was also suggested that ADB be consulted, as they were initiating work with several states on unbundling of the SEBs. Therefore there may be some additional states that should be considered. Based on this, visits were also made to MP and to Gujarat. Information and data was also collected from these states, and this information was entered into the selection matrix. After reviewing the selection matrix and the visits to the five states, it was felt that Rajasthan remained the primary candidate for the focus state.

During this evaluation and site visit phase, a paper on 'Energy Efficiency Processes - DSM Experience at AEC' was presented in a two-day conference at CEE- Ahmedabad on July 5<sup>th</sup> & 6<sup>th</sup>. The conference was for 'An Energy Efficient Future', co-sponsored by ASE and USAID. In addition, a presentation on DSM was made to the Delhi Vidyut Board, as they had been expressing an interest in starting a DSM cell.

**Work planned for the next 90 days:**

Develop draft report for focus state selection. Forward draft report to USAID, ICICI and MoP for review. Visit recommended state to finalize selection process. Revise draft report, and submit to USAID.

**Scheduled completion date:** November 30, 2000

**Nexant Coordinating Staff Member:** V.M. Thakor

**Sub-contractors/Consultants:**

<b>US:</b>	None
<b>Indian:</b>	None

- Milestone B:**
- 1. Establish a DSM Cell in at least 1 DISCO of the focus state and assess their staff needs;*
  - 2. Conduct at least 2 workshops on Cell Organization and Management;*
  - 3. Conduct 2 regional training programs on the role of EE.*

**Work completed this quarter:**

Although this Milestone comes later, work began on developing the training needs for the workshops and training programs. A round table was organized by USAID and ATTP in Delhi on Sept. 1, 2000 at the Habitat Center on Loard Research. A presentation was made by V.M. Thakor on 'Development of data for DSM Planning'. A number of regulators were present, and good discussions took place on this topic.

**Work planned for the next 90 days:**

Continue to plan for training events. Select subcontractors for implementing the tasks.

**Scheduled completion date:** April 30, 2001

**Nexant Coordinating Staff Member:** V.M. Thakor

**Sub-contractors/Consultants:**

**US:** not yet determined

**Indian:** not yet determined

**ACTIVITY 12: STATE ENERGY EFFICIENCY FINANCING (SEEF) SCHEMES**

*Milestone A: 1. Selection of the financial institution in the focus state.*

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:**

May 31, 2001

**Nexant Coordinating Staff Member:**

V.M. Thakor

**Sub-contractors/Consultants:**

**US:**

not yet determined

**Indian:**

not yet determined

*Milestone B: 1. Design an EE financing scheme with the financing institution for statewide programs;  
2. Conduct a workshop on state energy efficiency financing (SEEF) for government and back officials*

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:**

August 30, 2001

**Nexant Coordinating Staff Member:**

V.M. Thakor

**Sub-contractors/Consultants:**

**US:**

not yet determined

**Indian:**

not yet determined

**ACTIVITY 13: DSM/ENERGY EFFICIENCY WITHIN PRIVATIZED  
DISTRIBUTION UTILITIES**

***Milestone A: 1. Submit detailed work plan.***

This Milestone relating to project mobilization and the first year work plan has already been completed and approved.

***Milestone B: 1. Design an EE financing scheme with the financing institution for statewide programs;  
2. Conduct a workshop on state energy efficiency financing (SEEF) for government and back officials***

**Work completed this quarter:**

No work has been commenced on this Milestone.

**Work planned for next 90 days:**

No work is being planned during this quarter for this Milestone.

**Scheduled completion date:**

August 30, 2001

**Nexant Coordinating Staff Member:**

V.M. Thakor

**Sub-contractors/Consultants:**

**US:**

not yet determined

**Indian:**

not yet determined

## Training

The ECO project has over 100 training programs. These programs are scheduled to be held starting with the fourth quarter of 2000, going thru the fourth quarter of 2003. Essentially these 102 programs will be conducted over a period of thirty-eight months, averaging over two and a half programs every month. These programs will be held in numerous locations throughout the country. This will be a very intensive activity, and will require much planning and coordination.

To facilitate this effort, Nexant subcontracted with IIE to provide a local training coordinator. This person would plan and coordinate all of the training programs. This person would also work with the technical staff and subcontractors to ensure that brochures are developed, and sent out to appropriate individuals and companies. They will follow up with phone calls to encourage individuals sign up for the programs.

Initially there were many questions in completing the subcontract with IIE. Due to the need to start the training planning process, a subcontract was issued to Conserve (another ECO subcontractor) to plan, coordinate and conduct the initial seven training programs. Conserve began the planning process, and worked to develop these initial programs.

After the IIE contract was finalized, Anita Kochhar of IIE began work on the other training programs. There are thirteen programs to be held in 2000, and thirty-one total in Year 1 of the ECO project (June 1, 2000 – May 31, 2001). This total includes one U.S. study tour, which is scheduled to be held in April, 2001. The schedule and description for the Year 2000 training programs is shown on pages 31 - 32.

Quarterly Progress Report # 2 (July 1 – September 30, 2000)

DATE*	LOCATION	NUMBER OF DAYS	TYPE OF TRAINING		PROGRAM TITLE
			WORKSHOP	COURSE	

October 19, 2000	Delhi	2	x		Voluntary energy auditor certification
November 1, 2000	Mumbai	1	x		Formation of an Indian ESCO Association
November 2, 2000	Mumbai	2	x		ESCO/Financial Strategies
November 6, 2000	Delhi	1	x		Formation of an Indian ESCO Association
November 7, 2000	Delhi	2	x		ESCO/Financial Strategies
November 8, 2000	Chennai	3		x	Efficient technology and systems
November 13, 2000	Baroda	3		x	Efficient technology and systems
December 5, 2000	Mumbai	1	x		International examples of Measurement & Verification protocol
December 6, 2000	Delhi	3	x		Energy auditor instruction (train the trainers)
December 6, 2000	Mumbai	3		x	Measurement & Verification protocol
December 11, 2000	Hyderabad	3	x		Energy auditor instruction (train the trainers)
December 11, 2000	Delhi	1	x		International examples of Measurement & Verification protocol
December 12, 2000	Delhi	3		x	Measurement & Verification protocol

\* DATES ARE SUBJECT TO CHANGE

PLEASE CONTACT THE NEXANT DELHI OFFICE FOR PROGRAM DETAILS, INCLUDING VENUE OF EACH PROGRAM.

## DESCRIPTION OF TRAINING PROGRAMS – YEAR 2000

- ***Voluntary Energy Auditor Certification***  
Intended for ESCO trade association representatives, government officials and industrial customers to develop certification and training programs that meet or exceed government requirements in the energy audit area.
- ***Formulation of an Indian ESCO Association***  
Aimed at ESCO representatives and other stakeholders to ascertain interest and assist in further developing an ESCO association.
- ***ESCO / Financial Strategies***  
Designed for financial institution and ESCO managers to determine viable loan and financial incentive mechanisms for enhancing implementation of energy efficiency projects.
- ***Efficiency Technology and Systems***  
A training course on selected energy efficient technologies for plant managers and owners. All aspects of operation, application and specification will be covered.
- ***International Examples of M&V Protocol***  
A workshop to analyze international examples of M&V protocols with the intention of determining a format applicable and adaptable to Indian industry.
- ***Monitoring & Verification Protocol***  
Intended to instruct ESCOS, end-users and lenders on techniques, tools and benefits of M&V protocols to project financing and ESCO contract development.
- ***Energy Auditor Instruction***  
Aimed at building an energy auditor curriculum for use by potential certifying agencies and helping train those agencies in delivering courses ('train the trainers' format).

## Meetings

### ➤ ECO Partners Meeting

The first ECO Partners meeting was held on August 28, 2000. Representatives from ICICI, MoP, USAID and Nexant participated. Since this was the first meeting, a general presentation was made on the scope of work that is included in the ECO project. General discussion followed, with specific interests expressed in many topics. Training was discussed as one of the first areas of cooperation, and everyone was requested to share their training plans and schedules. Where possible, programs will be coordinated between projects, to maximize the available resources and to assist each project.

Following a general presentation on the ECO project, several areas of common interests were discussed. These included the following:

- status of the pending energy legislation
- activities to identify the focus state
- the details concerning the ECO load fund
- a proposal to consider total building energy management with packaged cogeneration systems and building controls under Activity 9
- coordinating work under Activities 11, 12, and 13 to leverage lines of credit from multi-lateral development banks; and
- to develop relationships with local institutions where training will be held, rather than utilizing Delhi or Mumbai based institutions for planning and organizing purposes.

**Financial Information**

During the second Quarter, no Milestones were achieved. These Milestones relate to the mobilization phase of the project. Reports for each Milestone were submitted to USAID. Financial summary information is shown below:

PROJECT TOTAL BUDGET:		\$9,396,458
CUMULATIVE PAYMENTS TO BEGINNING OF QUARTER:	\$101,920	<u>          </u>
BALANCE AT BEGINNING OF QUARTER:		\$9,294,538
MILESTONES PAID THIS QUARTER:		
None	\$0	
	<u>          </u>	
SUM OF MILESTONES PAID THIS QUARTER:	\$0	<u>          </u>
<b>BALANCE:</b>		<b>\$9,294,538</b>

## Performance Indicators

The ECO project Activities are shown on the Performance Indicator chart on the following pages. Each of the Activities has several Milestones, and within the Milestones are several deliverables. Some of the deliverables and Milestones involve the development of specific projects, which can be estimated for energy savings and consequently for emission reductions. However, many of the milestones involve more abstract topics, in that they influence policy but don't produce any direct energy savings in or of themselves. Most of these are the initial or preliminary tasks, leading up to major policy or institutional changes in later Milestones. Examples of this type of effort would be training programs, which by themselves do not produce energy savings. Other deliverables and Milestones produce direct results, which can be easily quantified.

Estimates of overall energy savings have been made for each Activity, based on the anticipated results at the end of the project. The energy savings have then been translated into emission reductions in CO<sub>2</sub>. Estimates have also been provided to illustrate the anticipated progress over the life of the ECO project to achieve these results.

As the work within each Activity and Milestone progress, the results of the work will be reviewed to determine what energy savings and consequently emission reductions occur. As these savings occur, the results will be tabulated in the Performance Indicators charts shown on the following pages.

**FIGURE 1: PERFORMANCE INDICATORS**

**MARKET COMPONENT**

ACTIVITY & INDICATORS	DESCRIPTION	ESTIMATED ENERGY SAVINGS, MILLION KWH	ANTICIPATED RESULTS (PERCENTAGE BY YEAR)				EXPECTED RESULTS- MILLION TONS CO <sub>2</sub>
			2000	2001	2002	2003	
1. Technical and Project Structuring Services for Sponsors Indicators: select 10 projects and facilitate financial closure for at least 4 projects	AVERAGED SAVINGS FROM INITIAL PROJECTS ~ 5,857 MILLION KWH SAVED/PROJECT	23.4	5	25	75	100	0.0234
2. Development of Financial Incentives for Credit Enhancement/Risk Mitigation Indicators: establish at least 5 financing mechanisms and obtain financial closure on at least 4 projects	BASED ON #1 ABOVE, BUT ASSUME 10 PROJECTS/YEAR	234	0	50	100	100	0.234
3. Support to Energy Efficiency Services Industry Indicators: development of a national ESCO association, with financial closure for 4 projects, using ECO loan funds	BASED ON #1 ABOVE, BUT ASSUME 10 PROJECTS/YEAR	234	0	25	50	100	0.234
4. Efficiency Technology Promotion Indicators: develop EE technology promotion program and establish energy information clearinghouse	ASSUME 100 KW/YR SAVINGS @ 4000 HOURS	0.4	0	20	50	100	0.0004
5. Market Conditioning and Promotion Indicators: assess market for 4 EE processes and facilitate a labeling program for at least 2 appliances	ASSUME 1000 KW/YR @ 2080 HOURS	2.08	5	20	60	100	0.00208
6. Non-Sugar Cogeneration Market Development Indicators: facilitate the design, development and implementation of at least one non-sugar cogeneration system	BASED ON 40 KW SYSTEM, OPERATING 8000 HOURS/YR.	0.32	0	25	50	100	0.00032
<b>COMPONENT TOTAL:</b>							<b>0.4942</b>

NOTES: DATA FOR THE 'EXPECTED RESULTS - MILLION TONS OF CO<sub>2</sub> HAS BEEN ESTIMATED BASED ON EXPECTED IMPACT OF EACH ACTIVITY AND KNOWING WHEN EACH ACTIVITY IS LIKELY TO BE COMPLETED. THIS INFORMATION WILL THEN BE UTILIZED TO TRACK THE PROJECT'S PERFORMANCE AGAINST THE REDUCTION IN EMISSIONS.

**FIGURE 1: PERFORMANCE INDICATORS (continued)**

**POLICY COMPONENT**

ACTIVITY & INDICATORS	DESCRIPTION	ESTIMATED ENERGY SAVINGS, MILLION KWH	ANTICIPATED RESULTS (PERCENTAGE BY YEAR)				EXPECTED RESULTS- MILLION TONS CO <sub>2</sub>
			2000	2001	2002	2003	
7. Energy Efficiency Policy and Institutional Support Indicators: develop a voluntary auditor certification program, curriculum, and a national EE promotion plan	ASSUME 1000 KW @ 2080 HRS	2.08	10	40	80	100	0.00208
8. Energy Efficiency Standards and Labeling for consumer Appliances Indicators: facilitate 2 appliance labels, develop criteria for a certified EE testing laboratory	ASSUME 100,000 APPLIANCES SAVING 1 KW/YR @ 2080 HRS	208	0	20	60	100	0.208
9. Energy Efficiency Improvement in Government Facilities and Private Buildings Indicators: facilitate local government EE procurement practices and a national building energy code	ASSUME 1,000,000 LAMPS, EACH SAVING 25 W/YR @ 2080 HRS	52	0	25	50	100	0.052
10. Energy Efficiency through Regulatory Reform and Restructuring Indicators: train regulatory staff on IRP and DSM	TARIFF CHANGES MAY INCREASE REVENUES, BUT NOT AFFECT EFFICIENCY. TOD CHANGES WILL ALSO NOT SAVE ENERGY	0	0	0	0	0	0
11. Electric Utility DSM / Energy Efficiency Capacity Building Indicators: select focus state, develop DSM cell, conduct load research, develop DSM programs, finance pilot program	ASSUME 1000 NEW AG PUMPS, BUT EACH SAVES ONLY 1 KW @ 2000 HRS/YR	2	10	35	70	100	0.002
12. Development of State Energy Efficiency Financing Schemes Indicators: select financing institution in focus state, assist in developing financing intermediation mechanisms	ASSUME 100 KW @ 2080 HRS/YR	0.2	0	25	60	100	0.0002
13. DSM / Energy Efficiency within Privatized Distribution Utilities Indicators: promote DSM in privatized DISCOs, design 2 pilots in distribution efficiency including financing	ASSUME 1000 NEW AG PUMPS, BUT EACH SAVES ONLY 1 KW @ 2000 HRS/YR	2	25	50	100	100	0.002

COMPONENT TOTAL: 0.26628

PROJECT TOTAL: 0.76048

NOTES: DATA FOR THE 'EXPECTED RESULTS - MILLION TONS OF CO2 HAS BEEN ESTIMATED BASED ON EXPECTED IMPACT OF EACH ACTIVITY AND KNOWING WHEN EACH ACTIVITY IS LIKELY TO BE COMPLETED. THIS INFORMATION WILL THEN BE UTILIZED TO TRACK THE PROJECT'S PERFORMANCE AGAINST THE REDUCTION IN EMISSIONS.