

PD-ABT-201

PRIVATE SECTOR HYDROPOWER DEVELOPMENT PROJECT

THIRD SEMI ANNUAL REPORT

August 1, 2000 through January 31, 2001

Prepared for:

United States Agency for International Development
Mission to Nepal

Contract No. 367-C-00-98-00071-00

Project No. 367-04A1 [367-0173]

Title: Increased Private Sector Participation and Investment in
Environmentally and Socially Sound Hydropower

International Resources Group, Ltd.

Department of Electricity Development

Ministry of Water Resources

Kathmandu, Nepal

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Private Sector Hydropower Development Project

**Ministry of Water Resources
Kathmandu, Nepal**

**Semi-Annual Report
(August 1, 2000-January 31, 2001)**

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SECTION 1 - Contractor's Report

1. Summary of Accomplishments

The contract scope and the work plan are designed to help bring about "Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower" in Nepal, with intermediate results as set forth in subsection 2 of section 1. The focus of activities is on improving the capabilities and procedures of the Department of Electricity Development (DoED) of the Ministry of Water Resources (MOWR) and to some extent of other units of HMG.

The major accomplishments of IRG on the PSHDP during the reporting period are summarized as follows:

- Participated or conducted three training workshops to build knowledge in Nepal in the field of hydropower development and licensing processes.
- Conducted three sessions for the Department of Electricity Development (DoED) staff on power and energy production and economic analysis of potential hydro projects.
- Established a team of Nepal engineering specialists for review of technical and safety standards for hydropower design, construction, and operation in Nepal.
- Reviewed DoED's computer models for use in estimating multi-purpose benefits and financial analysis of potential hydropower projects.
- HMG and the World Bank moved closer to agreement on establishment of the Power Development Fund (PDF). DoED received submittals of qualifications from six financial institutions for the PDF Administrator (PDFA). A World Bank delegation led by Mr. McKechnie visited Nepal, and met with DoED and IRG staff to discuss procedures and criteria for short-listing and selection of the PDFA.
- World Bank comments on the Evaluation Report for evaluation of qualifications of the six financial institutions and short-listing of institutions for receiving Request for Proposal (RFP) for the PDFA were received by DoED. Additional information relating to qualifications of these financial institutions was submitted to the World Bank.
- World Bank comments were received on draft of the RFP for PDFA including the Administration Agreement. A revised version of the RFP was prepared to incorporate the World Bank's comments, and the revised RFP was submitted to the World Bank for review.
- DoED received qualifications from a total of 10 firms/joint ventures for the two BOOT hydroelectric projects including the 30-MW Kabeli A and 27-MW Rahughat. An Evaluation Committee was formed to review these qualifications, short-list the firms/joint ventures for receiving the RFP, and prepare an Evaluation Report. The Evaluation Report was submitted to the World Bank for review and comment.
- The RFP for the two BOOT projects was prepared and reviewed by the MOWR of the HMG. The RFP is ready for issuing to the short-listed firms/joint-ventures.
- A series of meetings were held between the DoED and Nepal Electricity Authority (NEA) to review draft model Project Agreement (PA) and Power Purchase Agreement (PPA) for the two BOOT projects. Relevant issues, raised by NEA considering NEA's recent experience of signing PAs and PPAs for the Khmiti and Bhote Koshi Projects, were discussed in detail in these meetings. Additional discussions of the model PA and PPA between DoED and NEA will be conducted to complete these documents.

- Extensive discussions relating to procedures for private power solicitation and award process were conducted with DoED staff during preparation of RFPs and Evaluation Reports for the PDFA and two BOOT hydroelectric projects.
- A number of DoED, MOWR, and NEA staff attended seminars, training sessions, and international conferences during this report period. These include Hydrovision in U.S., Environmental Impact Assessment in Nepal, Procurement Procedures for World Bank Aided Projects in India, ICOLD Congress in China, and Infrastructure and Regulation and Reform in Sri Lanka.
- The social impact assessment team has been formed.
- The DoED/IRG EIA team participated in two training courses at the School for Environmental Management and Sustainable Development (SchEMS).
- Eight sets of draft guidelines for streamlining the EIA process have been produced.
- DoED has established a website.
- DoED and IRG have successfully moved to their new premises in Koteshwor

2. Expected Results (Outputs or Indicators)

The strategic objective of Special Objective 4 (SpO4) is Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower. The intermediate results are (IR4.1) Improved Enabling Environment for Private Sector Investment in Hydropower; and (IR4.2) Increased Environmental and Social Soundness in Hydropower Development.

The background and setting of the project and the need for it are set forth in detail in the First Annual Report.

The performance indicators and units of measure are summarized as follows:

Indicator 4.1 Private financial commitments for environmentally and socially sound Hydropower project development.
Unit of Measure: Cumulative total in dollars of financial commitments by private financing institutions for projects with satisfactory EIAs and SIA's.

Indicator 4.1.1 Private sector companies progressing toward hydropower investment.
Unit of Measure: Stages of progress from survey license issued, construction license requested, feasibility study completed, to financial closure.

Indicator 4.2. EIAs and SIAs for hydropower proposals.
Unit of Measure: Cumulative number of EIAs and SIAs reviewed by EDC (DoED).

Indicator 4.2.1 Public hearings for hydropower projects conducted with local stakeholders and NGOs.
Unit of Measure: Cumulative number of hearings, as specified, by private sector hydropower companies and by EDC (DoED).

These indicators are reasonable measures of progress toward the accomplishment of the strategic objective. They also depend substantially on decisions, to proceed with hydroelectric developments, by parties outside this project and EDC (DoED).

Current status in relation to the performance indicators is presented on the following four pages, which have been conformed to the slightly revised indicators or performance data tables used by the USAID Nepal mission in its annual R4 report for 1999.

Performance Data Table : IR - 4.1

Objective Name: Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower	
Objective ID: 367-004-01	
Approved: November, 1997	COUNTRY/ORGANIZATION: USAID/Nepal
RESULT NAME: Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower.	
INDICATOR: IR 4.1 Private financial commitments for hydropower project development.	
UNIT OF MEASURE: Millions of US Dollars	YEAR PLANNED ACTUAL
SOURCE: Department of Electricity Development (DoED)	1997 (B) NA 238
INDICATOR DESCRIPTION: Cumulative total of U.S. dollars (millions) in financial commitments by private financing institutions for development of hydropower projects.	1998 275 278
	1999 325 303
COMMENTS:	2000 400 331
	2001 (T) 475 NA

Performance Data Table : IR - 4.1.1

Objective Name: Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower			
Objective ID: 367-004-01			
Approved: November, 1997	COUNTRY/ORGANIZATION: USAID/Nepal		
RESULT NAME: IR 4.1 : Improved enabling environment for private sector investment in hydropower			
INDICATOR: IR 4.1.1: Private sector projects progressing towards hydropower investments			
UNIT OF MEASURE: Cumulative total number of projects which have passed important stages towards completion of a private hydropower project	YEAR	PLANNED	ACTUAL
	1997 (B)	NA	a) 2 b) 2 c) 2 d) 2
SOURCE: Department of Electricity Development (DoED)	1998	a) 3 b) 3 c) 2 d) 2	a) 5 b) 3 c) 3 d) 2
	1999	a) 4 b) 4 c) 3 d) 3	a) 15 b) 4 c) 7 d) 3
INDICATOR DESCRIPTION: a) Stage 1 - survey license issued b) Stage 2 - construction license requested c) Stage 3 - feasibility study completed d) Stage 4 - financial closure	2000	a) 5 b) 5 c) 4 d) 4	a) 29 b) 2 c) 2 d) 2
	2001 (T)	a) 6 b) 6 c) 5 d) 5	NA
COMMENTS: All numbers are cumulative and track the progress of private proposal from the initial granting of a survey license through financial closure which signals the beginning of construction. The target numbers are cumulative and include two projects recently commissioned.			

Performance Data Table : IR - 4.2

Objective Name: Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower	
Objective ID: 367-004-01	
Approved: November, 1997	COUNTRY/ORGANIZATION: USAID/Nepal
RESULT NAME: Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower	
INDICATOR: IR 4.2 Environmental/Social Impact Assessments for hydropower proposals	
UNIT OF MEASURE: Number of Environmental/Social Impact Assessments	YEAR PLANNED ACTUAL
SOURCE: Department of Electricity Development (DoED)	1997 (B) NA 2
INDICATOR DESCRIPTION: Cumulative number of Environmental/Social Impact Assessments approved by Ministry of Water Resources in accordance with HMGN regulations.	1998 3 3
	1999 4 3
COMMENTS: A major goal of this Special Objective is to ensure that hydropower investors adequately address environmental and social impacts of hydropower projects. Environmental and Social Impact Assessment will be carried out in accordance with the HMGN's Environment Protection Act of 1997 and the Environment Conservation Rules of 1997.	2000 5 4
	2001 (T) 6 NA

Performance Data Table : IR - 4.2.1

Objective Name: Increased Private Sector Participation and Investment in Environmentally and Socially Sound Hydropower	
Objective ID: 367-004-01	
Approved: November, 1997	COUNTRY/ORGANIZATION: USAID/Nepal
RESULT NAME: IR 4.2: Increased environmental and social soundness in hydropower investments.	
INDICATOR: IR 4.2.1 Public hearings for hydropower projects conducted with local stakeholders and NGOs	
UNIT OF MEASURE: Numbers of Hearings	YEAR PLANNED ACTUAL
SOURCE: Department of Electricity Development (DoED)	1997 (B) NA 4
INDICATOR DESCRIPTION: Cumulative number of public hearings held by private sector hydropower companies.	1998 5 5
	1999 7 9
COMMENTS: If the government and private sector companies hold more hearings in the local communities, the local stakeholders and Nepali NGOs will have more of an opportunity to voice their concerns.	2000 9 11
	2001 (T) 11 NA

3. Activities Leading to the Indicator Targets

Procurement and facilities

Most of the commodities items called for in the contract were purchased in Year One, along with additional furnishings for the project office and for EDC (DoED), as described in the First Annual Report. Certain of the commodities items specified in the contract, however, remained to be purchased.

The budget for the CLIN #7, Commodities, has been increased under the USAID approved budget re-alignment for purchase of additional computer equipment for DoED.

Subcontracts

Project work by subcontractor Duke Engineering & Services (DE&S) was initiated in the spring of 1999 and continued in Year Two. An adjustment to the original study approach for the subtask 2.4, Design, Safety, and Procedural Guidelines, was made. The adjusted approach calls for increased participation of Nepal engineering specialists in development of design, safety, and procedural guidelines for hydroelectric projects in Nepal.

Project personnel

Resident staff: Resident staff includes Mr. Lee L. Wang, chief of party; Stefan J. F. Gorzula, Ph.D., resident environmental advisor, and Mr. C. B. Lamichhane, project administrator, plus other local office staff. Mr. Wang started his resident assignment on August 9, 2000.

The principal activities of the chief of party included:

- Scheduling, related approvals, and clearances for short-term personnel.
- Participation in discussions and drafting of key documents for the Power Development Fund, and two BOOT hydroelectric projects.
- Providing support to short-term personnel.
- Participation in the activities mentioned in section 4 below.

The principal activities of the resident environmental advisor included:

- Coordinating the work of the environmental and social impact assessment team, comprised of Mr. Sudesh Malla, EDC (DoED), Prof. Govind Ghimere (METCON), Mr. Bharat Sharma (METCON), Dr. Ram B. Khadka (consultant and dean of SchEMS), and Dr. Don Messerschmidt (independent consultant).
- Coordinating the work of team personnel on Tasks 4 and 5.
- Providing support to short-term personnel.
- Participation in any activities as directed by the chief of party.

Short-term technical assistance: As shown on Table 1, six IRG home staff and consultants have conducted a total of ten short-term visits to Nepal. These, with their principal assignments were:

- Mr. Kenneth Lussier, consultant; Power Development Fund (PDF) documents, and financial analysis.
- Dr. John Bizer, consultant, World Bank EIA process, and water standards for hydropower development in Nepal.
- Mr. Paul Lavigne, IRG, Development of DoED Website.

- Mr. Shakeb Afsah, IRG, Computer modeling for EIA process.
- Mr. John Osborne, consultant, Project Agreement and Power Purchase Agreement.
- Mr. Daud Beg, IRG; PDF and BOOT project documents.

Events

- On August 3, 2000, Dr. Gorzula gave a presentation on "EIA is frequently a 2-sided coin" at SchEMS for the Third Training Workshop on Environmental Impact Assessment (EIA).
- On August 21, 2000, Mr. Wang and Dr. Gorzula attended the closing ceremony at SchEMS for the Third Training Workshop on Environmental Impact Assessment (EIA).
- On September 11, 2000, Dr. Gorzula and Dr. Bizer met with Mr. Rajib Upadhyaya of the World Bank for discussions of coordination of World Bank EIA and Nepal EIA process.
- On September 16, 19, and 20, 2000, Dr. Bizer met with Mr. Kumar Pandey (LEDCO) and Mr. Himalaya Pandey (SMEC) for discussions of private developer's perspective on Nepal and World Bank EIA process.
- On September 29, 2000, Dr. Gorzula presented an "Overview of the PSHDP" to Mr. G. William Anderson, Director, Office of East and South Asian Affairs, USAID.
- On September 29, Dr. Gorzula gave a seminar on anti-dam lobbyists and Dr. John Bizer gave a seminar on the World Bank EIA process at an interagency workshop held at the Blue Star Hotel.
- On October 2, 2000, Dr. Gorzula, Mr. Sudesh Malla, Dr. Ram B. Khadka, Mr. Bharat Sharma, Prof. Govind Ghimire, Mr. Lee Wang, and Mr. Shakeb Afsah gave a 1-day EIA training course for DoED staff.
- On October 24, 2000, Dr. Gorzula and Mr. Wang met with Mr. John Kip Whiteside, General Manager of the Bhote Koshi Power Company about project construction progress.
- On November 2, 2000, Mr. Wang and Dr. Gorzula attended an USAID reception for the signing of a partnership between NEA and two US utility companies.
- Dr. Bizer and Dr. Ghimire visited a number of water quality laboratory during the period of November 2-7, 2000, and these include:
 - Laboratory of the Office of Water Engineering and Training Centre.
 - Laboratory of Soil Test Ltd.
 - Laboratory of Nepal Environment and Scientific Services (NESS).
 - Laboratory of the Department of Hydrology and Meteorology, Ministry of Science and Technology.
 - Laboratory of the Environment and Public Health Organization (ENPHO).
- On November 10, 2000, Dr. Gorzula and Mr. Wang met with the South Asia Regional Initiative (SARI) team to discuss critical issues in the Nepal energy sector and potential solutions to these issues.
- On November 13, 2000, Dr. Gorzula and Dr. Bizer met with WWF-Nepal for discussions of WWF's conservation program.
- On November 19, 2000, Mr. Wang gave a presentation on "Multi-purpose Water Resources Development" at SchEMS for the Fourth Training Workshop on Environmental Impact Assessment (EIA) for Irrigation Sector.

- On November 19, 2000, Dr. Gorzula gave a presentation on "An Overview of the Environmental and Social Issues of Water Resources Projects" at SchEMS for the Fourth Training Workshop on Environmental Impact Assessment (EIA) for Irrigation Sector.
- On December 4, 2000, Mr. Kenneth Lussier and Mr. Wang met with the World Bank team of Mr. McKechnie and Mr. M. Imran at World Bank office in Kathmandu to discuss RFQ and RFP for the PDFA.
- On January 2, 2001, Mr. K. Lussier and Mr. Wang met with Mr. Whiteside and Dr. Sandip Shah at the Bhote Koshi office to discuss Bhote Koshi Project energy sales to NEA, and sale prices for use in foreign exchange study of HMGN.
- On January 10, 2001, Dr. Gorzula attended an interagency workshop to discuss the WCD report.
- On January 16, 2001, Dr. Gorzula and Ms. Deborah Seligsohn (US Embassy) took the USAID/EPIQ team to meetings with Hon. Sec. G. R. Bhatta (MOPE), Mr. Ratna Sansar Shrestha and Mr. Bikash Pandey (Winrock International), Mr. Ukesh Raj Bhuju (WWF Nepal), Mr. Mahesh Banskota, (IUCN Nepal), Dr. J. Gabriel Campbell (ICIMOD), and Mr. Suresh Raj Chalise, Mr. Bhesh Dhamala, Mr. Tek Gurung, and Mr. Kiran Man Singh (UNDP).
- On January 30, 2001, Dr. Gorzula and Mr. Sudesh Malla met with Mr. Nogendra Sapkota (Kaligandaki-A) for development of a physical model of the project.
- The EIA team met on almost every Friday throughout this period.

Field activities

- Raj Kumar Shrestha (DoED) attended a public hearing for the Lower Modi Hydropower Project (private sector) on 15 September 2000.
- Sudesh Malla, and other DoED officials, Ram Khadka, and officials from MOWR and MOPE attended a public hearing for the Upper Modi Hydropower Project (private sector) on 25 September 2000.
- Raj Kumar Shrestha (DoED) attended a public hearing for the Pathalaiya - Parwarripur 132 kV T/L (public sector) in September 2000.
- In November 2000, Stefan Gorzula, John Bizer, and Sudesh Malla made a site visit to the Marsyangdi Hydroelectric Project.
- Don Messerschmidt and Bharat Sharma made a 2-day field trip to the first Marsyangdi Hydroelectric Power Project impact area, in Tanahun and Gorkha Districts, central Nepal, in January 2001.

4. Activities and Progress by Task

TASK 1: Develop DoED Capabilities to Manage the Private Power Process

Power Development Fund

- On August 14, 2000, the opening of qualifications for the Power Development Fund Administrator (PDFA), submitted by six financial institutions, was conducted at the DoED office. These institutions include:
 - Nepal Bangladesh Bank
 - Bank of Kathmandu
 - Himalaya Bank

- Nepal Arab Bank (Nabil Bank)
- Nepal Industrial Development Corporation (NIDC)
- Lumbini Bank
- An Evaluation Panel for review of the qualifications of the six financial institutions, and short-listing of institutions for receiving Request for Proposal (RFP) for the PDFA was formed. The Evaluation Panel consisted of three officials from DoED, one from Ministry of Water Resources (MOWR), and Mr. K. Lussier of IRG.
- An Evaluation Report for the short-listing of the financial institutions was prepared. The Evaluation Report was approved by the MOWR, and submitted to the World Bank for comments and “no objection” on October 30, 2000.
- A preliminary financial analysis of the short-listed financial institutions for the three preceding fiscal years of 1997, 1998, and 1999 was conducted in December 2000 at the request of the World Bank.
- A draft of the RFP for the PDFA was prepared and submitted to the World Bank in September 2000. World Bank’s comments on the draft RFP were received by DoED on October 26, 2000. A revised version of the RFP was prepared to incorporate the World Bank’s comments, and submitted to the World Bank in January 2001.

BOOT Hydro Projects

- The opening of the Applications for Prequalifications for the two BOOT hydroelectric projects was held at DoED office on October 16, 2000. Ten Applications were received from Bidders, and these Bidders include:
 - ALSTOM Power Hydraulique, France
 - Ashok Leyland Limited, India
 - China Gezhouba Construction Group Corporation for Water Resources and Hydro Power, China
 - Dhaulagiri Hydro Power Company Pvt. Ltd., Nepal
 - Guangxi Electric Power Company Limited, China
 - Induj Enertech Limited, India
 - MDX Group of Companies, Thailand
 - Pacific Hydro Limited, Australia
 - Tiroler Wasserkraftwerke Aktiengesellschaft (TIWAG), Austria
 - Tractebel Engineering International, Belgium
- An Evaluation Committee was formed to review the Applications submitted by the Bidders, and short-list the Bidders for receiving the RFP for the two BOOT hydroelectric projects. An evaluation report was prepared for review of the MOWR and World Bank.

Building DoED’s Capacity to Improve Environment for Private Investment in Private Power

- Efforts continued to be made to bring together officials of the several electricity sector agencies in discussion seminars, meetings, and informal settings for EDC (DoED) to take the lead in facilitating communication within the sector.
- The most specific such efforts proposed by this project to facilitate these goals are in connection with the suggested approach to the one-window operation and related public information programs under the environmental tasks.

- An approach to improvement of the “one-window” operation of DoED, and of the climate for private investment generally, was discussed with DoED. The bases included the observations that, while there were all too many examples of poor cooperation on all sides, it also seemed clear that the level of understanding of the process and the clarity and efficiency of the government roles needed much improvement. This approach therefore would be centered on an information program aimed at greater cooperation from all levels in various ministries.
- This approach now needs to be carried forward into an actual program to be carried out primarily by DoED personnel.

Multi-purpose water-use models to more fully understand downstream benefits

- A review of DoED’s computer models for operation of a multi-purpose water resources project, estimate of multi-purpose benefits, and financial analysis of hydroelectric projects was conducted.

Training

Training activities are reported under Task 6 below.

DoED in an International Setting

- Senior EDC (DoED) staff has prepared and presented illustrated talks on hydropower development opportunities in Nepal in front of international audiences in Nepal and abroad.

TASK 2: Improve EDC Procedures to Manage the Private Power Solicitation and Award Process

One Window System

- The procedure now adapted is for international competitive bidding of two BOOT hydroelectric projects, Rahughat Khola and Kabeli A. Successful bidders would have the prospect of the assured power purchase agreements with NEA, based on the RFQ/RFP process, and partial subordinated funding from the World Bank Power Development Fund as discussed in Task 1. This will be a complex process, with much of the detail yet to be worked out; but it should be clearer and more attractive to developers. Completion of the bidding procedure under Task 1, with its inputs from other tasks, is under way and is a principal remaining item.
- Projects intended for power exports will continue to be the subject of unsolicited applications for licensing. The unsolicited application legislation, regulations, and procedures are in place for all projects, but the ICB process will take precedence at least for projects that are to have access to World Bank PDF financing. Continued review of these two avenues, and reconciliation if any is needed.

Re-Evaluations and Modifications of the Requirements for issuing licenses

- Among the identified issues is the licensing process for projects where the developer has been selected through the international competitive bidding process, as opposed to the unsolicited application process. Also potentially significant are the implications of the post-construction environmental auditing and monitoring process, and the limits of any mitigation requirements that may be imposed beyond the original EIA and Mitigation Planning process.

- Areas where the EIA requirements could be simplified have been identified and recommendations are being prepared. The licensing and EIA processes are substantially separate under the governing legislation, while an approved EIA is a requirement for licensing. This situation will remain, but every effort should be made to assist the developer through these processes. The draft of the applicants' licensing handbook provides a general treatment of the EIA process with cross-references to the more specific materials developed under tasks 4 and 5.
- The focus of efforts in the forthcoming period will be completion of the draft-licensing handbook for applicants, along with review and completion of the main report and recommendations on this topic which provide more complete analysis and serve as the source book on this topic.

Fees to fund hydropower

- The study conducted in the preceding years concluded that a fee system would not be feasible, therefore was not pursued.

Design, safety and procedural guidelines for hydroelectric projects in Nepal

- A study team of Nepal engineering specialists in the field of hydropower was formed to develop guidelines of the design, safety, and procedural guidelines for hydropower development in Nepal. These guidelines will be reviewed by IRG short-term consultants and compared with international guidelines. The IRG consultants will recommend what improvements need to be made to the existing Nepal guidelines. These work activities will be conducted in the forthcoming period.

TASK 3: Identify and Address Constraints

Training to DoED and NEA staff on calculating electricity tariffs

- No training sessions were conducted during this report period. Plans were made for training sessions in tariff calculations to begin in the forthcoming period.

Developing options for improving private sector involvement in power generation

- Model Project Agreement (PA) and Power Purchase Agreement (PPA) had been developed, and the DoED staff extensively reviewed these model Agreements. A number of meetings between DoED and NEA have been held to review these model Agreements, and revisions were made to these agreements considering NEA's recent experiences of signing of PAs and PPAs with private power producers for the Khimti and Bhote Koshi hydroelectric projects.

Foreign exchange coverage for purchase of power generated by the private sector

- With the commissioning of the Khimti and Bhote Koshi hydroelectric projects, the capability of HMGN to generate foreign exchange to meet IPP power purchase payments would need to be re-assessed. An update study of the HMGN's capability was initiated in late January 2001. The study will be completed in the forthcoming period.

TASK 4: Develop DoED Capability to Manage the Environmental and Social Impact Analysis Process

Scopes of work for Environmental Impact Assessments

- The scoping matrix developed in the first year was used by Lamjung Electricity Development for the Nyadi Hydroelectric Project.
- A draft computerized reporting format for scoping has been developed.
- The scoping and TOR guidelines will be submitted to DoED for gazetting in March 2001.

DoED's role in evaluating EIAs

- The review guidelines for IEE, Scoping, TOR and EIA report have been modified and improved to the stage where they can be presented at a workshop in April 2001.
- Draft Guidelines on Impact Prediction, Ranking, Rating and Determination of Significant Impacts for Hydropower Projects are under preparation.
- The DoED Environmental Team reviewed IEEs for:
 - a) Belkhu Khola Small Hydroelectric Project IEE report (private sector).
 - b) Mailun Khola Hydropower Project (TOR) (private sector).
 - c) Kavre 33 kV sub-T/L and 33/11 kV sub-station project (TOR) (NEA).
 - d) Sunkoshi Small Hydroelectric Project (TOR) (private sector).
 - e) Hewa Khola Hydropower Project, including 33 kV T/L (private sector).
- The DoED Environmental Team reviewed EIA scoping documents for:
 - a) Upper Modi "A" Hydroelectric Project (NEA).
 - b) Middle Marsyangdi - Lower Marsyangdi 132 kV T/L (NEA).
 - c) Lantang Khola Hydroelectric Project (private sector).
 - d) Jagatpur - Madi 33 kV sub-T/L Project (NEA)
 - e) Indrawati III Hydroelectric Project (private sector).
- The DoED Environmental Team reviewed EIA TORs for:
 - a) Upper Modi "A" Hydroelectric Project (NEA).
 - b) Middle Marsyangdi - Lower Marsyangdi 132 kV T/L (NEA).
 - c) Lantang Khola Hydroelectric Project (private sector).
 - d) Jagatpur - Madi 33 kV sub-T/L Project (NEA).
 - e) Indrawati III Hydroelectric Project (private sector).
- The DoED Environmental Team reviewed the EIA report for:
 - a) Upper Modi Khola Hydroelectric Project (private sector).

Public Involvement

- Dr. Don Messerschmidt, a social impact assessment specialist, joined the EIA/SIA team in December 2000.

- A draft "Public Involvement Strategy, Guidelines and Checklist for Environmental/Social Impact Assessment (EIA/SIA) under Hydropower Development in Nepal" has been prepared.
- Draft guidelines for non-technical summaries have been prepared.
- A draft website for DoED's public information center has been prepared.
- A community survey was carried out in the first Marsyangdi Hydroelectric Power Project impact area, in Tanahun and Gorkha Districts, central Nepal, on January 30 and 31, 2001.

Auditing and monitoring

- A list of parameters that require regular monitoring, including frequency for monitoring and reporting, has been included in the Draft Guidelines for Developing and Reviewing Water Quality Monitoring Plans and Results for Hydropower Developments.
- Draft Guidelines for Environmental Management Plan (EMP) for Hydropower Projects have been modified and improved to the stage where they can be presented at a workshop in April 2001.

Increasing the environmental and social soundness of hydropower investments.

- The proceedings of the SWOT workshop have been published and circulated to the relevant government agencies.
- The relationship between the Nepal EIA process and the World Bank EIA process was presented in a seminar for Government Officials, Financial Institutions, NGOs and Developers.

TASK 5: Improve HMG Procedures for Conducting and Reviewing Environmental and Social Impact Assessments

Guidelines and standards

- The Draft Guidelines for Developing and Reviewing Water Quality Monitoring Plans and Results for Hydropower Developments have been modified and improved to the stage where they can be presented at a workshop in April 2001.

Training

- IRG resident staff and consultants taught on the Third Training Workshop on Environmental Impact Assessment (EIA) at SchEMS in July/August 2000.
- An interagency workshop on "Basic Components of PDF/IDA EIA Process with Similar Delineation of Nepal's EIA Process" was held at the Blue Star Hotel in September 2000.
- In October 2000, a 1-day EIA training course on the EIA process was held for DoED staff.
- IRG resident staff and consultants taught on the Fourth Training Workshop on Environmental Impact Assessment (EIA) for Irrigation Sector at SchEMS in December 2000.

Water Quality

- The water quality expert, the head of DoED's environmental unit, and the resident environmental advisor made a field trip to the Marsyangdi hydroelectric project.

- Memoranda of meetings with the staff of water quality laboratories in Kathmandu, and other recommendations concerning water quality, were produced.
- The Guidelines for Developing and Reviewing Water Quality Monitoring Plans and Results for Hydropower Developments were refined to a stage where they can be presented at workshop in April 2001.

NGOs and Hydropower Development

- A dossier on anti-dam lobbyists has been prepared.
- The NGO data base has been expanded, and internet links to key organizations have been prepared for inclusion on the DoED web site.
- Dr. Gorzula participated in the workshop on WCD Guidelines (10 January 2001).

TASK 6: Training

The work plan emphasizes both on-the-job training and the sharing of pertinent experiences and viewpoints from time to time by resident and short-term staff as means to expand the base of experience and improve the capabilities of DoED staff.

Presentations and detailed discussions during the period included:

- Mr. Kenneth Lussier, financial consultant: sessions on financial closures of private hydropower projects and PDFA process, September 2000.
- Dr. John Bizer, workshop on World Bank EIA process for hydropower development, September 29, 2000.
- Mr. Shakeb Afsah, Computer modeling of EIA process on October 2, 2000.
- October 2, 2000, Mr. L. Wang, sessions on “Project and River Basin Planning”.
- November 2000, Mr. L. Wang, three sessions for the DoED staff. These sessions included:
 - Hydropower project and system operation, simulation and optimization
 - Power and energy study
 - Economic analysis
- November 19, 2000, Mr. L. Wang, session on “Multi-purpose Water Resources Development” at the SchEMS.
- Two members of DoED staff received training on environmental impact assessment during the period of July 16 – August 15, 2000 in Kathmandu.
- Two members of DoED staff and two Ministry of Water Resources (MOWR) officials attended Hydrovision in Charlotte, U.S.A. on August 8-11, 2000.
- Two officials of DoED and one official of MOWR received training on procurement procedure for World Bank aided projects on August 14-23, 2000 in India.
- Two of the DoED staff and one MOWR official attended the ICOLD Congress 2000 in China on September 13-22, 2000.
- Two DoED staff received training on infrastructure and regulation and reform in Sri Lanka on December 4-15, 2000.

Documents Produced

- Second Annual Report.
- Evaluation Report on review and short-listing of financial institutions for Power Development Fund Administrator (PDFA).
- Draft Request for Proposal for PDFA including Administration Agreement.
- Evaluation Report on review and short-listing of bidders for the two BOOT hydroelectric projects.
- Request for Proposal for the two BOOT hydroelectric projects.
- Draft model Project Agreement.
- Draft model Power Purchase Agreement.
- Environmental Impact Assessment Process for Hydropower Projects in Nepal - Results of One-day SWOT Analysis.

Principal Documents in Preparation

- Model Project Agreement and Power Purchase Agreement.
- Memorandum on availability of foreign exchange to meet convertibility commitments of IPP project agreements.
- Guidelines for Environmental Management Plan (EMP) for Hydropower Projects.
- Guidelines for Developing and Reviewing Water Quality Monitoring Plans and Results for Hydropower Developments.
- Initial Environmental Impacts Assessment Guidelines (IEE) for Hydropower Projects.
- Guidelines on Impact Prediction, Ranking, Rating and Determination of Significant Impacts for Hydropower Projects.
- Review Guidelines for Scoping, TOR and Environmental Impacts Assessment Reports for Hydropower Projects.
- Public Involvement Strategy and Guidelines for Environmental and Social Impact Assessment -EIA/SIA- under Hydropower Development in Nepal.

Previous Documents under DoED Review and Discussion

- Draft Terms of Reference (TOR) Guidelines for Environmental Impact Assessment (EIA) of Hydropower Projects, with Notes on EIA Report Preparation.
- Draft Scoping Guidelines for Environmental Impact Assessment (EIA) of Hydropower Projects.

5. Personnel, Cost, and Performance Tables

The schedule of short-term technical assistance, cost summary by Contract Line Item (CLIN), and estimated percent completion by CLIN and status by subtask at end of current report period are shown on Tables 1 through 4 following this section.

Table 1. Short-term expatriate technical assistance

Table 2. Cost summary by CLIN

Table 3. Estimated percent completion by CLIN

Table 4. Subtask status at end of January 2001

TABLE 1 – SHORT TERM EXPATRIATE TA

SHORT TERM EXPATRIATE TECHNICAL ASSISTANCE (August 1, 2000 – January 31, 2001)					
<u>Name</u>	<u>Arrival Date</u>	<u>Departure Date</u>	<u>Length of Stay (days)</u>	<u>Clins Number(s)</u>	<u>Assignment</u>
Mr. Kenneth Lussier	12-Aug-00	09-Sept-00	28	1	PPA Documents
Dr. John Bizer	31-Aug-00	02-Oct-00	32	4&5	World Bank EIA Process
Mr. Paul D. Lavigne	02-Sept-00	23-Sept-00	21	All CLINs	Website and Annual Report
Mr. Shakeb Afsah	20-Sept-00	04-Oct-00	14	4	Computer Modeling of EIA Process
Mr. John Osborne	12-Sept-00	12-Oct-00	22	1	PA and PPA
Dr. John Bizer	28-Oct-00	20-Nov-00	23	4	Water Quality Standards
Mr. Kenneth Lussier	18-Nov-00	08-Dec-00	20	1	RFP and AA for PDFA
Mr. Paul D. Lavigne	07-Dec-00	23-Dec-00	17	All CLINs	Website and Report Preparation
Mr. Daud Beg	15-Jan-01	01-Feb-01	17	All CLINs	Review of Project Progress and Reports
Mr. Kenneth Lussier	22-Jan-01	16-Feb-01	26	3	Foreign Exchange Capability of HMGN

TABLE 2 – COST SUMMARY

**Private Sector Hydropower Development Project
USAID Contract No. 367-C-00-98-00071-00
Cost Summary by CLIN (Contract Line Item)**

(Period Covered: August 1, 2000 – January 31, 2001)

Re-aligned Budget	CLINs	Amount Claimed Previously	Total Claimed to Date	Balance	Percent Budget Claimed
		Per invoice dated 31 Jul, 2000	Per invoice dated 31 Jan, 2001		
\$ 814,272	Clin 001	\$ 637,896	\$ 735,869	\$ 78,403	90.4%
597,940	Clin 002	323,913	413,540	184,400	69.2%
625,629	Clin 003	349,825	424,838	200,791	67.9%
501,279	Clin 004	236,336	374,275	127,004	74.7%
515,638	Clin 005	256,780	385,482	130,156	74.8%
376,391	Clin 006	208,189	270,098	106,293	71.8%
151,789	Clin 007	91,638	109,807	41,912	72.3%
\$ 3,582,867	Subtotal	\$ 2,104,577	\$ 2,713,908	\$ 868,959	75.7%
232,886	Clin 008 Fee	126,112	176,404	56,482	75.7%
\$ 3,815,753	Total	\$ 2,230,689	\$ 2,890,312	\$ 925,441	75.7%

TABLE 3 - PERCENT COMPLETION BY CLIN**(As of January 31, 2001)**

CLIN	Title	Estimated Percent Resources	Estimated Percent Complete
01	Develop DoED Capability to Manage the Private Power Process	90.4%	76.4%
02	Improve DoED Procedures to Manage the Private Power Solicitation and Award Process	69.2%	77.5%
03	Identify and Address Constraints	67.9%	88.8%
04	Develop DoED Capability to Manage the Environmental and Social Impact Analysis Process	74.7%	77.0%
05	Improve HMGN Procedures to Conduct and Review EIA/SIA	74.8%	86.3%
06	Training	71.8%	67.5%
	Total LOE Tasks	75.9%	79.4%
07	Commodity purchases	72.3%	72.3%

TABLE 4 – PERCENT COMPLETION BY SUBTASK
(As of January 31, 2001)

Subtask Number	Subtask Description	Percent Complete
CLIN 1 – Develop DoED Capability to Manage the Private Power Process		
T 1.1	Develop DoED capability to support Power Development Fund	80.0%
T 1.2	DoED capability to prepare & issue RFQ's & RFP's & review responses	85.0%
T 1.3	DoED as liaison between all involved w/approval of Private Power Agreements	80.0%
T 1.4	Develop a set of milestones to be met, and prepare training on evaluating contractor progress	80.0%
T 1.5	Multi-purpose water-use models & downstream benefits	50.0%
T 1.6	Training in legal, financial, regulatory, eng., environmental. & social.	80.0%
T 1.7	Capability to promote private hydro development & attract add'l investments	80.0%
CLIN 1		76.4%
CLIN 2 - Improve DoED Procedures to Manage the Private Power Solicitation and Award Process		
T 2.1	Identify constraints on process under "one window"	80.0%
T 2.2	Re-evaluate licensing requirements & recommend modifications	80.0%
T 2.3	Assess potential for DoED fee/revenue system	100.0%
T 2.4	Develop design, safety, and procedural guidelines for hydro projects.	50.0%
CLIN 2		77.5%
CLIN 3 – Identify and Address Constraints		
T 3.1	DoED capability w/r legal, regulatory, financial, & institutional issues	85.0%
T 3.2	Training in tariff calculations	100.0%
T 3.3	Continue to identify policy issues w/r pvt sector hydro involvement	85.0%
T 3.4	Assess GON capability to provide foreign exchange coverage	85.0%
CLIN 3		88.8%

Table Continued on Next Page

TABLE 4 – PERCENT COMPLETION BY SUBTASK**(Continued, as of January 31, 2001)**

Subtask Number	Subtask Description	Percent Complete
CLIN 4- Develop DoED Capability to Manage the Environmental and Social Impact Assessment Process		
T 4.1	Capacity to design scopes for EIA's and SIA's	90.0%
T 4.2	Capability to review & assess EIA's, SIA's, & mitigation measures	65.0%
T 4.3	Guidelines for involving stakeholder groups	80.0%
T 4.4	Auditing/monitoring standards.	60.0%
T 4.5	Improve environmental & social soundness of hydro investments	90.0%
CLIN 4		77.0%
CLIN 5 – Improve HMGN Procedures for Conducting and Reviewing Environmental and Social Impact Assessments		
T 5.1	Review hydro guidelines for EIA's and SIA's .	95.0%
T 5.2	Methods & training on review & evaluation of EIA's and SIA's,	90.0%
T 5.3	National water standards for hydro	95.0%
T 5.4	Work with NGO's on EIA and SIA process; increase participation	65.0%
CLIN 5		86.3%
CLIN 6 – Training		
T 6.1	Training needs assessment	100.0%
T 6.2	Develop annual training plans	100.0%
T 6.3	Final training needs assessment	50.0%
T 6.4	Communications workshop	20.0%
CLIN 6		67.5%
ESTIMATED OVERALL WEIGHTED PERCENT COMPLETE		79.4%

SECTION 2 - Contracting Officer's Technical Representative Report

AGENCY FOR INTERNATIONAL DEVELOPMENT MISSION TO NEPAL

IRG's third semi-annual performance report very well captures the activities and highlights for the reporting period. These efforts continued to be relevant, appropriate, productive and essentially on schedule.

The report gives an accurate sense of progress accomplished during the reporting period. The highlights, no doubt, are in the areas of the Power Development Fund (PDF) where the World Bank moved closer to agreements on key issues, such as, procedures and criteria for short-listing and selection of the PDF Administrator. Similarly, significant progress was made on the two BOOT projects, where prequalifications were received from ten (10) firms and a short-list was prepared and reviewed by MOWR. Significant progress was also made on model Power Purchase Agreements (PPAs) with Nepal Electricity Authority (NEA) through a series of meetings held between NEA and DOED, organized by IRG.

All this was accomplished despite the disruptions caused by the move of the DOED offices from a comfortable office building in downtown Kathmandu, to a very cramped premise near the airport. The move was necessary due to budgetary restraints imposed by the GON. I would like to commend IRG's performance despite those difficult times. Working as a team with the DOED, the transition and move from the old to the new offices took place with minimum disruption. The working relationship between DOED and IRG continues to be congenial and productive.

I look forward to continuing the good progress and completion of all tasks by the contract completion date which has now been extended to September 31, 2001.