NEPAL ELECTRICITY AUTHORITY

Fiscal Year 2006/07 - A Year in Review

Bhadra 2064 (August 2007), Durbar Marg, Kathmandu


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Nepal Electricity Authority

Head Office : Durbar Marg, Kathmandu, Nepal
Phone : +977-1-4227725
Fax : +977-1-4227035, 4266673
E-mail : neamd@mos.com.np
Webpage : www.nea.org.np

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Message from the Chairman

Gyanendra Bahadur Karki
Minister of State
Ministry of Water Resources

It is a historic moment that Nepal Electricity Authority, having served the country for twenty two years, is now entering into twenty third year of its operations. I feel privileged and honoured as Chairman of NEA at this important juncture when NEA has matured enough to bear immense responsibilities towards its customers and the nation. NEA deserves to be congratulated for its achievements.

On this auspicious occasion of the twenty second anniversary of Nepal Electricity Authority, I wish to share the jubilation with members of Board of Directors, employees, customers and business partners of NEA and thank all for their support. Taking a stock of its progress, I believe that NEA will not only institutionalize its achievements but will also excel its services and performance in future.

With an energy shortage situation last year, NEA implemented load shedding as last resort. A large shortfall cannot be covered overnight but necessary action has been initiated to curb this problem. To meet the continued growth in power and energy demand, NEA plans to take medium and large projects like Upper Tamakoshi, Upper Trishuli 3A and 3B and Upper Seti Hydroelectric Projects. Timely completion of these Projects would relieve the costumers from load shedding permanently. NEA's recent initiative of the issuance of Power Bond for funding some of the ongoing hydroelectric projects will create new avenues for local investors. It is timely to mention that Government is also committed to develop additional 5,000 MW in next 10 years with participation both from public and private sectors. NEA is at advanced stage of action in creating additional cross border links with India in cooperation with Indian company IL&FS which will facilitate to import power till the completion of these projects and export thereafter. This would spin off large economic growth in the country.

While NEA will sincerely put its efforts to contain the load shedding imposed on consumers, it should not forget the fact that about 60% population have no access to electricity yet. Bearing the responsibility to make electricity accessible to every household, Government has placed emphasis on continuity of rural electrification program in sustainable manner. NEA is expected to focus on improving the customer services by implementing transparent, time tagged and professional responses to its customers. I am hopeful that NEA will meet the expectations of urban consumers by employing modern technology in customer and billing services such as internet billing and bill payment through banks. Similarly, NEA is also expected to enhance service quality in rural areas.

Power Sector reforms will be enforced to accelerate the development by providing common criterion and level playing field for all. Shortly an independent regulatory mechanism will be in place and new Electricity Act will be enacted to translate the policy into reality. NEA will have to transform itself into a credible commercial organization in the emerging competitive environment.

Nepal has always foreseen its hydro potential as the basis of its economy and hence development of hydropower is connected with country's economic development. Since NEA is the biggest entity in the country in this sector, I always link future of power development with NEA.

Power sector is going through changes and innovations throughout the world. South Asia is no exception. India is planning to enter into a Power Exchange Market model by the end of year 2007. We need to be proactive in devising strategies and tuning our policies to maximize benefits out of the emerging opportunities.

At last, fiscal year 2006/07 though not outstanding but remained above average year for NEA. I wish NEA all the best in its quest for a brighter future.

(Gyanendra Bahadur Karki)
Minister of State
Ministry of Water Resources
Chairman, Nepal Electricity Authority

Board Of Directors

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Minister of State, Ministry of Water Resources

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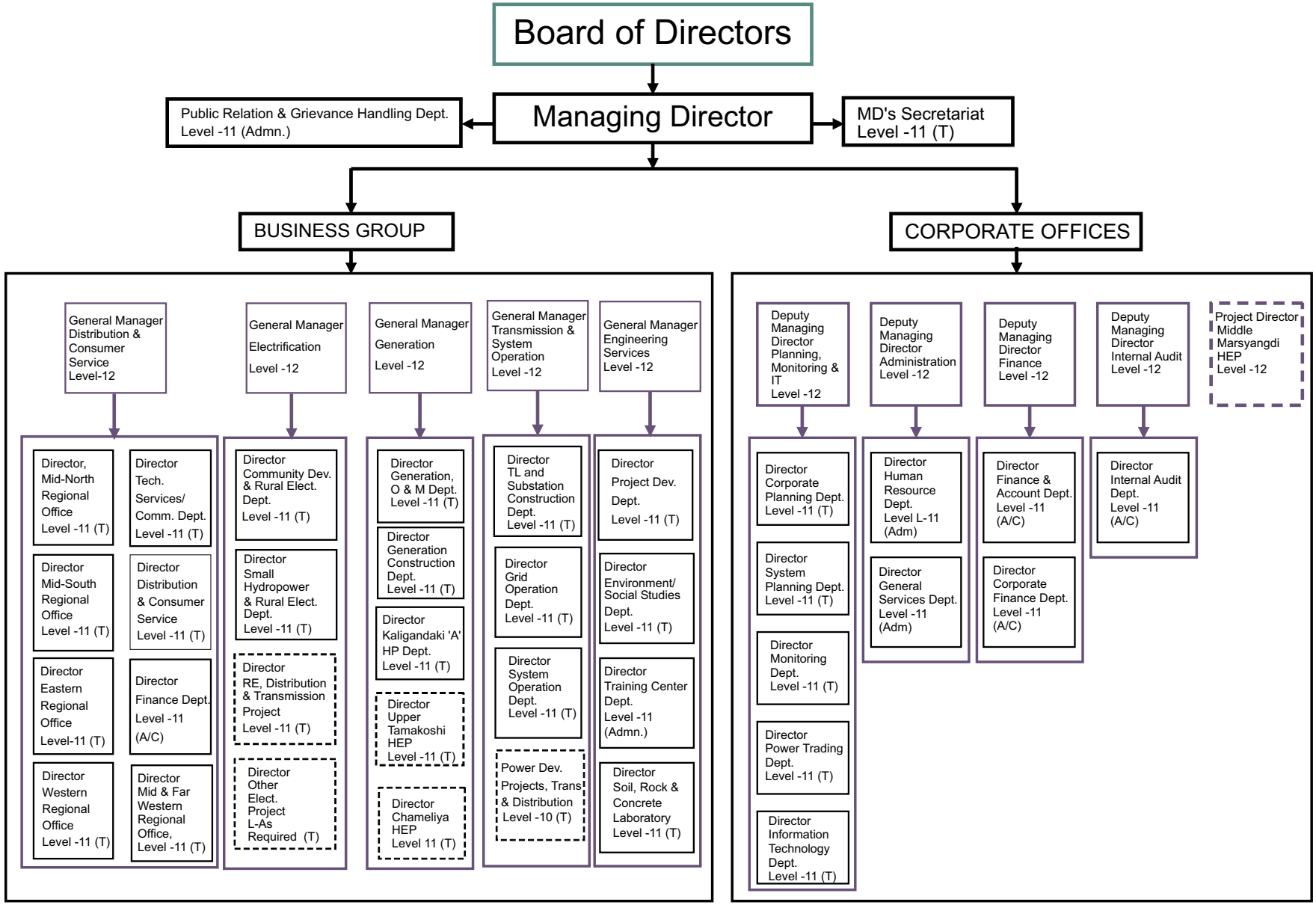
Member Secretary
Mr. Arjun Kumar Karki
Managing Director, NEA

Corporate Structure of NEA



NEA Chief Executives

Mr. Shyam Bahadur Shrestha
GM, Electrification

Mr. Uttar Kumar Shrestha
DMD, Finance

Mr. Dipak Prasad Upadhyaya
GM, DCS

Dr. Jivendra Jha
GM, Generation

Mr. Bhojraj Regmi
GM, Engineering Service

Mr. Yugal Kishor Shah
GM, Transmission & SystemOperation

Mr. Shiva Chandra Jha
DMD, Planning, Monitoring & IT

Mr. Madhav Pd. Khakurel
Project Director, MMHEP

Mr. Diwakar Poudel
Act. DMD, Internal Audit

Mr. Binod Kumar Dhakal
Act. DMD, Administration

Directors & Department Chiefs

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Director, Central Office

Mr. Chhatra Bdr. Bajracharya
Director, Monitoring

Mr. Upendra Dev Bhatta
Director, Information Technology

Mr. Tirtha Man Shakya
Director, RE, Distribution & Transmission Project

Mr. Harihar Man Palikhe
Director, TLSS Construction

Mr. Birendra Kumar Pathak
Director, Generation Construction

Mr. Rameshwar Yadav
Director, Corporate Planning

Mr. Mahendra Lal Shrestha
Dirctor, Mid-North Regional Office

Mr. Thakur Raj Pandey
Director, Training Centre

Mr. Ram Chandra Mandal
Director, Mid-South Regional Office

Mr. Ram Chandra Pandey
Director, Community Rural Electrification

Mr. Govinda Sharma Pokharel
Director, SHP and Rural Electrification

Directors & Department Chiefs

Mr. Tika Ram B.C.
Director, Fianance Dept. DCS

Mr. Sooryanath Neupane
Director, Human Resource

Mr. Lava Bahadur Ghimire
Director, Finance & Account

Mr. Sashi Sagar Rajbhandari
Director, Generation, Operation & Maintenance

Mr. Rajeshwar Man Sulpya
Director, Power Trade

Mr. Pradeep Lal Shrestha
Director, DCS

Mr. Jayaiswar Man Pradhan
Director, System Planning

Mr. Ganesh Prasad Raj
Director, Eastern Regional Office

Mr. Chiranjibi Sharma Poudel
Director, Technical Service/Commercial

Mr. Mohan Krishna Upreti
Director, Grid Operation

Mr. Vishnu Bahadur Singh
Act. Director, Project Development

Mr. Keshab Raj Bhatta
Act. Director, Chameliya HEP

Directors & Department Chiefs

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Act. Director, Mid & Far Western

Mr. Mrigendra Bahadur Shrestha
Act. Director, Upper Tamakoshi HEP

Mr. Radesh Man Pradhananga
Act. Director Soil. Rock & Concrete Laboratory

Mr. Subhash Dahal Chhetri
Act. Director, Western Regional Office

Mr. Rishikesh Sharma
Act. Director, Environment/ Social Studies

Mr. Dev Sharma Poudel
Act. Director, MD's Secretariat

Mr. Sher Singh Bhat
Act. Director, System Operation

Mr. Bimal Raj Joshi
Act. Director, Internal Audit

Mr. Danda Pani Bashyal
Act. Director, Public Relation & Grievance Handling

Mr. Juju Kaji Ranjit
Act. Director, Kaligandaki 'A' HP

Mr. Arjun Kumar Chauhan
Officiating Director, Corporate Finance

Managing Director's Report

Arjun Kumar Karki
Managing Director

It gives me immense pleasure to report on the performance and activities of Nepal Electricity Authority on this historic twenty second year of business i.e. fiscal year 2006/07 (Bikram Sambat 2063/64). This year was a record setting one for NEA with respect to the power and energy demand experienced, energy served, energy generated and net revenues. While these achievements were linked to regular growth in power and energy demand, I would like to acknowledge the efforts of our employees in maximizing the utilization of the available resources. Significant improvement in our financial performance comparing previous years may be taken as one single reflective indicator of our efforts during the year in spite of the challenges posed by the transitional phase of the nation. The achievement is, none the less, encouraging.

Success, of course, is not measured solely in terms of production figures or financial performance. Customer satisfaction through quality of service, an ethical business process, environment friendly operations and contribution to the community by helping them to better manage their energy usage and subsequently reduction of energy costs are other corners of the performance pyramid. Our efforts to achieve these dimensions of performance continued throughout the year. A 7.48% increase in peak power demand and 8.60% increase in energy demand over the previous year caused a serious unbalance in demand and supply during the dry months of the year. We made the best possible, efficient and planned use of the available resources, increased energy import and called on our consumers to make efficient use of electricity. Although a mere 4.43 MW of generation capacity was added through two Independent Power Producers, as a last resort, we were forced to opt for load shedding. As a process of reforms to attain operational efficiency and better customer services, we continued to strengthen the unbundled Business Groups and Distribution Centers for commercially oriented operation. We have noticed some visible positive impacts of this reform process but owing to the need of assimilating technical and financial procedures as well as legal frame work, the implementation process has been gradual and relatively slow.

With an objective to start a better practice of efficient use of scarce electric energy, NEA is foreseeing a demand side management program for its consumers. Since consumers are the main players of demand side management, we organized an interaction program and tried to create awareness through an educational campaign. These efforts will be intensified now. We accept that despite our efforts, we could not meet the expectations of our valued customers and stakeholders on some of these

fronts. Yet, I believe that our efforts during the year to enhance supply by taking up projects like the Upper Tamakoshi and Upper Trishuli, increasing import by strengthening the existing links and creating new cross border transmission links combined with an efficient use of the available power by the consumers shall definitely yield results in the years to come. NEA still faces capital constraint for its expansion program for which we are in the process of issuing power bonds to mobilize the liquidity of the domestic market as well as exploring bilateral financial assistance from Japan, South Korea, India and China as well as multilateral agencies. I would also like to mention with resentment that we could not reduce system losses to the level of our commitment due to abnormal situation in many parts of country. System losses this year are provisioned 24.94% against 25.12% actual (24.76% provisional) of last year. Thus, I would assess it as the year of hard work, positive direction and promising result amidst the incongruous conditions bestowed by legacy.

Operational Performance

Integrated Nepal Power System (INPS) experienced energy demand of 3,134 GWh in FY 2006/07 recording an increase of 8.60% compared to previous year. NEA managed to serve 3,051.82 GWh of this demand through various sources. With contribution of 1,747.42 GWh from hydropower and 13.31 GWh from thermal, NEA's own generation reached a record of 1,760.73 GWh in FY 2006/07 registering 11.12% increase compared to previous year. Power Purchase from private producers was 962.26 GWh and import from India amounted to 328.83 GWh. The import increased by nearly 24% in FY 2006/07. Similarly, peak power demand recorded in FY 2006/07 was 648.39 MW, which is an increase of 7.48% compared to that of the previous year. Generation capacity increased by 4.43 MW through 2 IPP projects in FY 2006/07. NEA was forced to opt for load shedding as a last resort to contain the demand that could not be met. NEA has been endeavoring by all the means at its disposal to increase the power supply in order to reduce the load shedding.

With 2,258.14 GWh of energy sales in FY 2006/07, 11.10% increase in sales was recorded over the previous year. Category-wise, Domestic customers with a share of 96% of total customers, accounted for 911.51 GWh, i.e., 40.37% of total sales. Similarly, customers belonging to Industrial and Commercial categories representing 2.19% of the total customers accounted for 1,021.14 GWh, i.e., 45.22% of total sales. The number of NEA's customers reached 1.39 million, which is an increase of 8.97% over the previous year. Though not significant, the system losses reduced to 24.94% in FY 2006/07 against actual losses of 25.12% in the previous year.

Charging of new Parwanipur Substation has relieved to some extent the overloading problem of the 66 kV transmission line and has helped increase the reliability and quality of electricity supply in the Hetauda-Birgunj corridor. Works related with the Khimti-Dhalkebar 220 kV transmission line, Thankot-Chapagaun-Bhaktapur 132 kV transmission line, Kawasoti Substation and Chandranigahapur Substation are being undertaken at a fast pace. The implementation of the NEA Grid Code has been helpful in enhancing the performance of the National Grid. Similarly, Preventive Maintenance Scheme has helped reduce the partial and complete system trippings. The refurbishment of the Grid has greatly reduced the system outages and helped reduce the restoration time. Several pairs of optical fibers have been leased to Nepal Telecom and other private companies thereby generating additional revenue for NEA. NEA has emerged as prominent stakeholder now in communication sector of the country owing to its optic fiber network.

Financial Performance

NEA's financial performance showed a significant improvement in FY 2006/07 as compared to the

last five years. Despite the various obstacles posed by the transitional phase of the country, total revenue increased by 12.20% to reach a figure of NRs 15,677.00 million. Total operating cost was NRs 13,766.90 million, which is an increase of 11.22%. Although the operating surplus was NRs 1,910.10 million in FY 2006/07, NEA incurred a net loss of NRs 329.60 million. The net loss decreased by nearly 74.00% compared to the figure of NRs.1,267.80 million of the previous year. The increase in revenue, control in operational expenditure, devaluation of Dollar were the factors that contributed to cost saving. GoN has reduced the interest rate from 10.25% to 8% on long term loan, which resulted in a savings in FY 2006/07. The fixed net assets increased by a marginal rate and reached NRs. 62,121.30 million. However, the investment in projects and regular capital work-in-progress stood at NRs. 28,651.80 million, out of which NRs.9,148.6 million was invested in FY 2006/07. NEA's total borrowing reached NRs. 51,672.70 million which is 62.11% of the total capital structure.

The cost of service decreased from NRs. 7.50 per kWh to NRs. 7.09 per kWh, registering a saving of NRs 0.41 per kWh over the previous year. NEA spent about 44% of the total revenue in purchasing power from Independent Power Producers (IPPs) and import, whereas almost 23% of the total revenue were spent in paying the interest on loan and royalties. NEA has requested the Government for financial restructuring regarding debt service, royalty, recovery of outstanding dues and in the treatment of bilateral and multilateral grants and subsidies in loss making rural electrification.

NEA has been undertaking different initiatives with a view to improve its financial health and to establish itself as a financially sound and credible commercial organization. NEA has been facing challenge in its financial management functions. In this context, NEA needs to be more prudent and efficient not only in arranging and managing the requirement of funds for capital investment but also in the management of debt service and the risk associated with power purchase obligations. Given the changed business environment, NEA needs to streamline its functional responsibilities and to reengineer the current practices/processes in financial management focusing on effective cost management and control, efficient revenue collection, appropriate fixed asset and inventory management and sound investment decisions. Considering this need, NEA has executed a study for institutional strengthening under the World Bank funded Power Development Project. The study report has recommended various action plans. Some of the recommendations will be implemented immediately by mobilizing in-house resources. At the same time, additional technical support will be requested from donor agencies for implementation of those recommended action plans which could not be executed with in-house resources, especially action regarding capacity building and procurement and implementation of new computerized financial accounting system.

Capacity Building

Distribution and Consumer Services business group has conducted interaction programs in all the five NEA regional offices participated by NEA staff and representatives from employee union, different political parties, the media and chamber of industry and commerce. The program has had encouraging results on the performance of the Distribution and Consumer Services (DCS) offices which was reflected in performance results such as positive change in differential surplus, reduction in the average collection period and marginal reduction in losses except in the eastern and central Terai where the law & order situation was far from normal. The overall losses have marginally decreased from 25.12% (actual) to 24.94% (provisional). Improved customer services in new connections, grievance

handling, improvement in no-light services and bill payment and Queue Management System are the highlights of DCS performance in FY 2006/07.

NEA has continued computerization in its business operation in order to enhance efficiency and facilitate quicker and quality decision making. New services like Interactive Voice Response System have been implemented in 6 DCS offices. Customized Accounting and Inventory System (CAIS) has been implemented in 111 budget centers which has helped improve the accounting and inventory management. The web based Computerized Billing System has been implemented in five revenue centers and will be gradually introduced in all remaining revenue centers.

In view of the prevailing power crisis, there is a urgent need for implementing generation projects at faster pace. In this context, NEA has already started construction of Chameliya (30 MW) and Kulekhani III (14 MW) Hydroelectric Projects, while preparations are underway for the implementation of the Rahughat (27 MW), Upper Trisuli-3A (60 MW) and Upper Tamakoshi (309 MW) Projects. An agreement has been signed with IL&FS Infrastructure Development Corporation Limited of India for construction of cross border transmission links which is vital for enhancing power trading and opening the future power market.

NEA is aware that proper employee training and development is crucial for maximizing performance from the staff, the living asset of any organization. During FY 2006/07, NEA Training Centre imparted on-the job training to 692 staff and, for the first time, five foreign participants from Afghanistan were trained as well. The training programs are continuously modified and upgraded to include emerging concepts and tools, and to fulfill changing requirements. Under the Employee Development Program, NEA executives, both technical and non-technical, have had the opportunity to interact and share views with professionals from various countries. This has helped NEA executives in broadening their knowledge and skills.

NEA personnel services regulations have been amended with a view to consolidate equitable working environment and promote the career development of deserving staff. Personnel Data Bank has been upgraded in order to facilitate the efficient management of the available human resources. Optimization of staff positions has been completed in the Generation and Transmission & System Operation business groups in the first phase. Such work is being carried out in the corporate office and remaining business groups. The implementation of the Enhanced Performance Reward (EPR) scheme has helped boost the motivation and morale of the staff. In FY 2006/07, regular staff promotion has been carried out for all levels in NEA. Recruitment tasks are underway for the vacant positions.

Private Sector Participation and Cross border Trading

In order to encourage private sector participation in the power sector, we will continue to facilitate the purchase of power from IPPs to meet the growing demand of electricity in the country. The IPP owned 3.45 MW Khudi Khola and 980 kW Baramchi Small Hydroelectric Projects have started commercial operation from this FY 2006/07. NEA has signed eight Power Purchase Agreements (PPAs) with a total capacity of 11.434 MW in the same period. In places where power evacuation was constrained by the limited transmission capacity, NEA is working out programs to build the required infrastructure. Due to the larger number of run-of-river projects being developed by IPPs and small number of peaking run-of-river projects by NEA, there will be surplus energy in the wet season. There is, therefore, a need for seasonal storage

projects in the INPS in order to meet the power/energy demand in an optimal manner.

Our relations with existing IPP as our business partners have remained cordial throughout the year. NEA and Chilime Hydro Power Company Limited (CHPCL) have agreed to freeze the tariff escalation for a period of five years keeping in view the greater interest of customers. Similarly, negotiations have been initiated with Bhote Kosi Power Company (BKPC) and Himal Power Limited (HPL) to resolve outstanding issues on good faith basis.

NEA has initiated the process to terminate the PPAs of IPP projects where the Required Commercial Operation Date has expired and project construction has not started even after a long delay. This step is expected to promote healthy environment for the development of power sector.

The 8th Indo-Nepal Power Exchange Committee (PEC) meeting was successfully held in Kathmandu on June 7-8, 2007. The meeting took important decisions and resolved various issues pending since the last meeting in 2003. One major achievement of the meeting was slashing of the annual escalation rate of 8.5% that was agreed in the 3rd PEC meeting in 1997 to 5% per annum effective from January 2004 to June 2008. It has now been decided that Nepal can sell the unutilised energy out of her entitlement from Tanakpur to India. It has also been agreed that the seasonal surplus up to 40 MW could be sold to India through Gandak-Ramnagar 132 kV line. India has also agreed to grant two percent rebate on timely monthly payment for import from July 2007 onwards. NEA is working closely with the Power Trading Corporation of India for the sale of Surplus energy available during the period of July to November.

The Way Ahead

NEA has identified several key measures that will improve the quality of our service in the short and medium term. Demand Side Management (DSM) and loss reduction activities will be given top priority in an effort to minimize the load shedding. The 70 MW Middle Marsyangdi Hydroelectric Project (MMHEP) financed under the grant assistance of KfW, Germany has most of the civil works nearing completion. Its works have been disturbed in the past due to labor strikes, difficult security situation, dispute with the contractor and changes in design. The construction of Middle Marsyangdi HEP is being undertaken at a faster pace in order to make up for the past delays. We are committed to complete this project at the earliest so as to help alleviate the power crisis.

There is an urgent need for augmentation in generation capacity along with an improvement of transmission lines not only to meet the domestic demand but also to capitalize on the emerging cross border trading opportunity. In this context, NEA, as a key institution in the power sector, is endeavoring to expand its generation capacity in the most economical manner. NEA is focusing on medium sized projects like the Upper Trishuli-3A, Trishuli-3B and Rahughat which can be implemented at the earliest to meet the growing demand in the short term. A detailed project report has been prepared for the 60 MW Upper Trishuli-3A in this FY 2006/07. The Project is being proposed to be financed through soft loan from China. Construction of the 30 MW Chameliya HEP has already been commenced. The detailed design of 14 MW Kulekhani III HEP has also been completed and the tendering for civil works is in progress.

Projects like the Upper Tamakoshi and Upper Seti Storage are being promoted for the medium-term generation expansion. Considering the financial limitations with the private sector for investment in large projects, NEA is adopting a policy to develop such hydroelectric projects under public-private partnership (PPP) modality. Upper Tamakosi HEP

is one Project which NEA plans to implement under such modality. The objective is to open a new avenue for investment which will lead to the productive use of the liquidity existing in the market. The recent policy announcement by Nepal Rastra Bank, in the context of investment in hydropower, could be instrumental in promoting investment in hydroelectric projects. Upper Tamakosi HEP with very attractive economic indicators is crucial for the sustainable growth of the country. We firmly believe that the Project can be built at the lowest cost to the customers using funds from domestic financial institutions and NEA as the leading executing agency. NEA is also committed to develop Upper Seti Storage Project to fulfill the need for peaking power and energy.

Our sister organization, Chilime Hydropower Company Limited (CHPCL) is promoting the medium sized Middle Bhote Koshi HEP and Upper Chilime HEP. The construction of these projects is expected to begin in near future. GoN is endeavoring to develop the West Seti Storage, Upper Karnali and Arun III Projects, all of which have been studied at various levels by NEA in the past.

In order to meet the growing energy demand, we will continue to encourage private developers to add generation capacity to the power system in a sustainable manner. PPAs are being concluded for project of various sizes. The tariff is declared for projects up to 5 MW whereas tariff is fixed by negotiation for projects of higher capacity. A study is being carried out to fix the price offer for 5 to 10 MW. NEA is also preparing programs to develop the transmission infrastructure to promote private sector participation in hydropower.

NEA has been implementing transmission line programs including 220 kV links. With an initiative to facilitate cross border trade between Nepal and India, a joint venture company is being incorporated in partnership with Indian leading players in the power sector. Two cross border transmission lines at 400 kV voltage level are being proposed for construction in the initial phase. A joint study by NEA and Power Grid Corporation of India is being completed in this regard.

The new computerized billing system will be implemented gradually in all revenue centers in the current fiscal year. Necessary measures will be taken to improve the reliability of the distribution network by implementing a Preventive Maintenance Scheme. Various capacity augmentation works at the 33/11 kV substations and other distribution network components will be undertaken during this fiscal year. The Queue Management System and computer assisted Customer Service Delivery System will be introduced in more Distribution Centers to improve the quality of customer services.

We are working on a noble approach to raise the necessary capital to meet part of investment requirement through issuance of Power Bond in the local market. The Power Bond initially will amount to three billion Rupees and will be issued in multiple series depending upon the cash flow requirement of NEA for investment in generation projects. NEA has already selected Nepal Merchant Banking and Finance Limited as the issue manager through a competitive bidding process. The necessary documentation is being completed and power bond will be offered in the market after obtaining the necessary approval from the concerned authorities. The Power Bond will be used in funding Chamelia, Kulekhani III and Middle Marsyangdi HEPs.

Since the rural communities are showing keen interest and actively participating in the electrification of their respective villages, NEA will continue to be involved in the community based rural electrification programs. Similarly, efforts will be made to complete the ongoing rural electrification schemes in various parts of the country.

NEA has been investing in rural electrification

programs with support from the government and donor agencies. Construction of 400 kW Gamgad and 500 kW Heldung Small Hydroelectric Projects at Mugu and Humla districts respectively are nearing completion. Extension of distribution lines and 33 kV sub-transmission line linking the remote districts with the National Grid will be continued.

Engineering Services will provide advanced technical input for project studies and provide ancillary services in the area of the environment and material testing. NEA Training Centre will be gradually developed into a Regional Center for research and advanced studies in hydropower development. The IT Department within NEA will be promoted to enable efficient data transfer and enhanced performance leading to better customer services.

Although, GoN has reduced re-lending rate, it is not up to NEA expectations considering the significant investment in rural electrification and high cost projects implemented under foreign grants. Hence, NEA will continue to put efforts for the rationalization and further reduction of re-lending rates. NEA will also continue dialogue with the GoN for redefining the capitalization policy for grant projects to reflect realistic cost. Similarly, NEA will continue to urge the government for adaptation of prudent policy in order to mobilize the liquidity available in the domestic financial market for the power sector development. NEA will continue its persuasive efforts for achieving the rationalization and readjustment of retail tariff.

NEA pledges to continue to strive for meeting the physical targets of the country's electrification goals. NEA also reaffirm the commitment to strive hard for loss reduction.

Acknowledgements

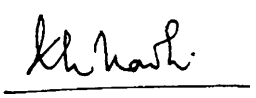
For the achievements and progress that we have been able to attain, I wish to thank all those associated with NEA's activities during the year. I wish to express my deep gratitude to the Chairman and members of the NEA Board of Directors for cautiously steering the course of NEA under such trying circumstances. I wish to thank the Government of Nepal for its continued support in our operations and contribution to our development efforts.

Thanks are also due to the bilateral donors such as Germany, Japan, Norway, Denmark, Sweden, India, China, South Korea and the USA and international development banks such as the World Bank, Asian Development Bank, Japan Bank for International Cooperation, and Kreditanstalt fur Wiederaufbau (kfW) for their contribution in our development and institutional strengthening activities. Their support has been instrumental for NEA to maintain its continuing development process to meet the growing energy needs of the nation.

My sincere thanks go to the entire staff of NEA at all levels for their continued hard work and determination. My appreciation also goes to all the Trade Unions of NEA for their critical but constructive support. I wish to express my special thanks to those who have stood by me in times of trial.

This acknowledgement would be grossly incomplete without thanking our valued customers for bearing with us and sharing some turbulent times together. We feel confident that with the conceived reforms in place, NEA will be able to provide our customers with a marked improvement in the quality and reliability of supply and services.

Thank you.



Arjun Kumar Karki
Managing Director

Generation Business Group

Management of construction, operation and maintenance activities of power generating stations of NEA is the key responsibility of the Generation business group headed by the General Manager. Currently, sixteen hydropower stations and two major thermal power plants with total installed capacity of 398.39 MW and 53.41 MW respectively are in operation under this business group. There are three departments, namely, Operation and Maintenance Department, Generation Construction Department and Kaligandaki-A Hydropower Department under this business group each of which is headed by a Director.

Performance-wise, a total of 1,749.859 GWh of energy was generated in FY 2006/07 which is an increase of 11.26% compared to the generation of previous FY. Annual Load Factor of 91%, annual Plant Factor of 44.21% and Productivity Ratio of 1,301.01 MWh per employee were registered in FY 2006/07.

Operation and Maintenance Department

All the activities related to the operation and maintenance of the power stations under the business group excluding Kaligandaki-A hydropower station are managed by this Department. Emphasis is placed on timely detection and rectification of problems so as to maximise the availability of power stations.

In Gandak hydropower station, the problem of Stator overheating in the Generator No. 1 was rectified under the supervision of this Department. During FY 2006/07, turbine runners of Trishuli, Modi, Marsyangdi, Gandak and Sunkoshi hydropower stations were overhauled. New circuit breakers were installed in Devighat, Sunkoshi and Chatara hydropower stations. Similarly, a 6.6/132 kV, 10 MVA power transformer was installed in Gandak hydropower station to enable the evacuation of available capacity to the Grid. Similarly, a 132/33 kV, 12/15 MVA power transformer was installed in Modi hydropower station. This measure has solved the overloading problem of transformer in the power station and also improved the quality of power supply to Parbat, Baglung and Myagdi districts. The damaged Unit No. 2 of Kulekhani-II Hydroelectric Station is being refurbished.

The historic Pharping hydropower station was again synchronized with national Grid on December 20, 2006 (2063/09/05 B.S.) after a gap of 24 years. The power station could not be put into full-fledged continuous operation owing to the reason that use of water resource for drinking is assigned higher priority than power generation according to the state policy and as such the discharge in the Sheshnarayan and Sat Mule rivulets is diverted for supplying drinking water to part of Laltipur district. At present, the power station is operated only for about an hour each day primarily to keep the station in working condition.

Kaligandaki-A Hydropower Department

During FY 2006/07, a total of 707.7 GWh of energy was generated from Kaligandaki-A hydropower station which is an increase of 13.90 % over the preceding year's generation from the power station. In this fiscal year, various repair and maintenance works in the spillway gates, intake, under-sluice gate, desander flushing radial gates and trash rack cleaner were carried out. Similarly, overhauling of Unit No. 1 turbine was successfully completed under the supervision of a technical advisor from TOSHIBA Corporation (Japan). Generator, power transformer and protective relays of the same Unit were also tested in the period. The damaged power transformer of Unit No. 3 was replaced on March 21, 2007 (2063/12/07 B.S.).

Generation Construction Department

In FY 2006/07, the Generation Construction Department started construction work of two medium sized Hydroelectric Projects (HEPs): 30 MW Chameliya HEP and 14 MW Kulekhani - III HEP.

Chameliya Hydroelectric Project

Construction of Chameliya HEP, a daily peaking run-off-river (PROR) scheme with an installed capacity of 30 MW, was started in FY 2006/07. The Project lies about 950 km west of Kathmandu on Chameliya river, a tributary of Mahakali river in Darchula district.

The Project will lead to balanced economic development in the Far Western Development Region. Main features of the Project are 54 m high concrete dam with two 13.5m high radial gates, underground desander with two basins, 4067 m long headrace tunnel, 49.8m high restricted orifice type surge tank, 461 m long penstock and semi-underground powerhouse with two units of each 15.3 MW vertical shaft Francis turbine. The generated power from the Project will be evacuated through 131 km long 132 kV transmission line connecting Attariya Substation at Kailali district.

Out of the 18 km long access road, earthwork and structural works of 17 km length have been completed. The construction of four of the seven bridges has been completed. The EIA study of the Project has been approved while that of the 132 kV transmission line is underway for approval by the Ministry of Environment, Science and Technology (MOEST). The estimated cost of the Project is US$ 78.9 million including the cost of the 132 kV transmission line. China Gezhouba Water and Power (Group) Co. Limited (CGGC) was awarded the Civil Contract and construction works started from 10th January 2007. Tenders for camp facility, 33 kV sub-station and 33 kV transmission line are under progress. Government of Nepal has requested the Government of Republic of Korea and OPEC for providing soft loans for electro-mechanical & transmission line components.

As per a recent decision of NEA, this Project is now headed by a Project Director who reports directly to the General Manager of the business group.

Birds Eye View of Chameliya HEP Camp Site

Kulekhani-III Hydroelectric Project

Kulekhani-III (KL-III) HEP is the tailrace scheme of KL-II HEP. As Kulekhani (I and II combined) is the only storage scheme now available in the Integrated Nepal Power System (INPS), KL-III HEP with a capacity of 14 MW will help to add the much needed peaking power to the system. Detailed design of this Project was completed in FY 2006/07. Good accessibility, short transmission line, minimal environmental and social impacts are favorable aspects of the Project. Estimated construction period is about 44 months and the average annual energy generation of the Project is estimated at 40.85 GWh.

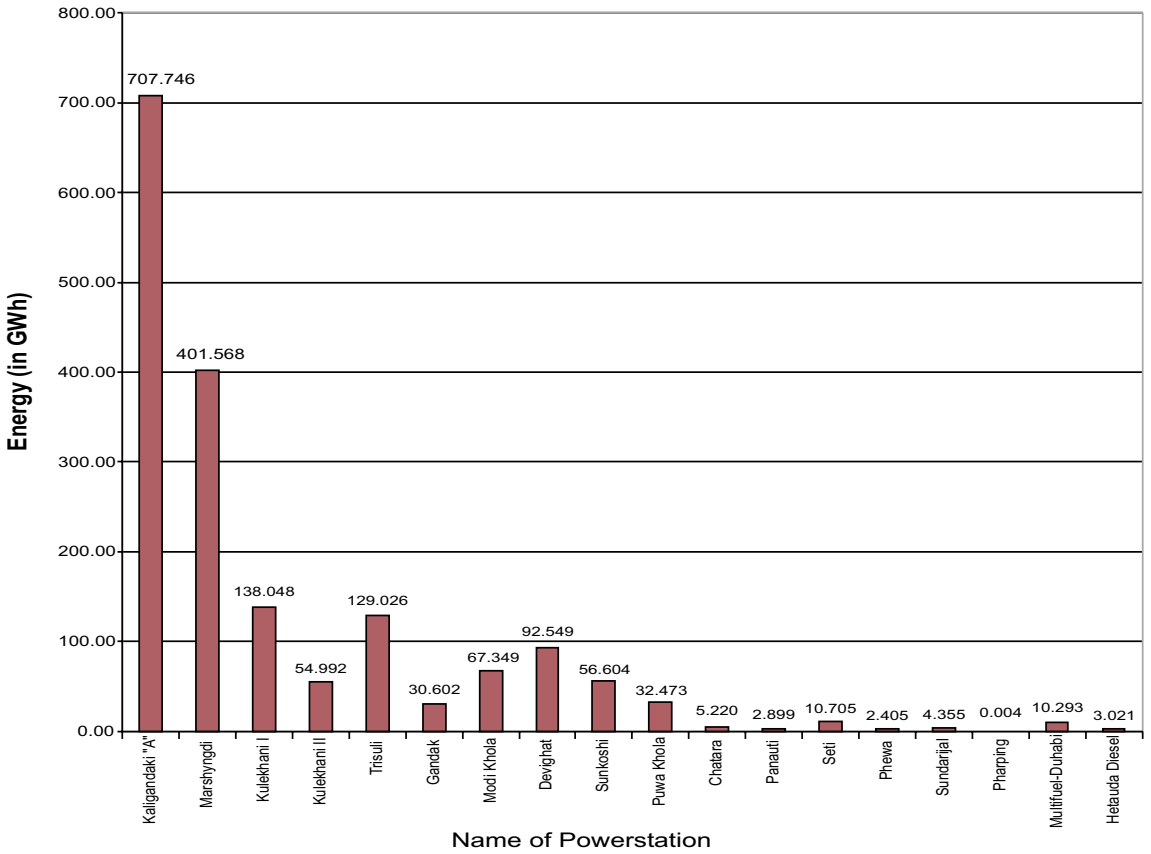
The EIA study of the Project has already been approved. The construction works of the access road and the access bridge over the Rapti River are in progress.

The Project has been found technically, financially and environmentally viable. NEA plans to use internal resources for the construction of the Project.

NEA has recently called for pre-qualification for construction of the main civil works. The total estimated cost of the Project is NRs. 2,216.00 million.

Bridge foundation work of Kulekhani - III HEP

Annual Energy Generation from different NEA Power Stations



Middle Marsyangdi Hydroelectric Project

Middle Marsyangdi Hydroelectric Project, with an installed capacity of 70 MW is a peaking run-of-river project and is located in Lumjung district. It is the major project being constructed by NEA at present. It will have an average annual generation of 398 GWh. The power generated from this Project will be evacuated through a 41 km single circuit 132 kV transmission line to existing Marsyangdi Power Station.

Upstream View of Diversion Weir -Middle Marsyangdi HEP

Project Cost

The Project is being jointly funded by the Government of Germany through Kreditanstalt für Wiederaufbau (KfW), the Government of Nepal (GoN) and NEA. The Consultant Fichtner JV (FJV) estimated the Project cost in year 2000 as US$ 181.27 million equivalent to Euro 212 million at the exchange rate of 1 US$ = Euro 1.17. After agreements with the Contractors of all the Lots, the base cost was Euro 149.90 million. But due to changes in the design, provision for claims and price escalations, the cost has been increased and accordingly updated in January 2007 to Euro 273.41 million.

Progress Status

Dywidag-Dragados-CWE JV (DDC JV), the Contractor for Civil Works (Lot-C), commenced the civil work from June 25, 2001. To date most of the underground works have been completed. The

tunnel excavation works have been completed and 89 % of concrete lining works has been accomplished. Currently, concreting works at intake, spillway piers, chutes and wing walls are under progress. Concreting of surge tank and penstock are being carried out. Most of the civil works of power house has been completed. About 95% of architectural finishing of powerhouse and 70% of service building have been completed. Installation of penstock steel lining has also been almost completed. Construction of switchyard and hydro-mechanical works are being carried out. Most of installation works involving the turbine-generator units and its alignment with shaft have been completed. The concrete works of 132 kV transmission line tower are in progress.

The resettlement works at various construction sites are going on. The Project carried out various trainings on income generating activities, as well as awareness program on public health and safety to the members of the project affected families and local people. The Neighborhood Support Program (NSP) is supporting the development activities of ten Village Development Committees (VDC) in the vicinity of the Project area.

The Project work was delayed due to security reasons, dispute with the contractor, strikes and changes in the design in the past. The work in drainage gallery was delayed due to the issues related with insurance coverage. Despite the numerous challenges faced, construction of the Project is being undertaken at faster pace in order to make up for the past delays. NEA is committed to complete the Project at the earliest so as to augment the generation capacity of the Integrated Nepal Power System (INPS) and give relief to its valuable customers from the prevailing shortage of power.

Middle Marsyangdi Power House nearing Completion

Chilime Hydropower Company Limited

Chilime Hydropower Company Limited (CHPCL) is a subsidiary company of NEA with 51% equity ownership. The Company was established in 1996 with the objective of promoting the utilization of resources within the country for the development of hydropower. Chilime Hydroelectric Project with installed capacity of 22.1 MW and located at Rasuwa district was built and commissioned by this Company on August 25, 2003 (2060/5/8 BS). This Project is now in fourth year of commercial operation. The Project has delivered 528.63 GWh of electrical energy to NEA since August 2003. In FY 2006/07, the Project was successful in delivering 104.5% of the Contract Energy to NEA. NEA has invested NRs. 489.6 million in the Project and has received the dividend of 10%, 20% and 35% of its equity shares in the FY 2003/04, 2004/05 and 2005/06 respectively. In FY 2006/07, 25% of the equity shares were distributed to NEA staff. The shareholders received 35% dividend in that year.

CHPCL is now executing three more hydroelectric projects which are at various stages of development. The feasibility study of two projects, Upper Sanjen Hydroelectric Project (11 MW) and Sanjen Hydroelectric Project (35 MW) have been completed and application has been submitted for the power purchase agreement with NEA. Both of these Projects are located upstream of the existing Chilime HEP. Local people in the project area are very eager to participate in the implementation of these Projects. A Letter of Intent for financing in Upper Sanjen HEP has already been received from Citizen Investment Trust. Construction of these two Projects will be started as soon as the construction license is issued by the Ministry of Water Resources.

CHPCL has also completed the feasibility study of Middle Bhotekoshi Hydroelectric Project (80 MW) located in Sindhupalchok district. Local people of Sindhupalchowk district and other organizations will be participating in the development of this Project. CHPCL is committed to develop more of medium and large scale hydroelectric projects in future with greater participation from various sector in the country.

Switchyard and Adit to Powerhouse

Transmission and System Operation Business Group

Transmission and System Operation (TSO) business group is headed by the General Manager and is responsible for design, construction, operation and maintenance of transmission system of voltage level of 66 kV and above. Under this business group, there are three departments, namely, Transmission Line/Substation Construction Department, Grid Operation Department and System Operation Department each headed by a Director.

In FY 2006/07, NEA and IL&FS Infrastructure Development Corporation Limited of India (IL&FS) have concluded a deal according to which two joint venture companies will be formed, one in Nepal and the other in India. In JVC-Nepal, NEA will invest 50% equity while IL&FS will invest 26% equity. The remaining shares will be offered to financial and other institutions. NEA will own equity in JVC-India as well. The joint venture companies will be responsible for project development, construction, operation and maintenance of the portion of cross-border transmission system in respective countries. Four projects, namely, Butwal–Gorakhpur, Duhabi–Purnea, Dhalkebar–Muzaffarpur and Anarmani–Siliguri Cross Border Transmission Line Projects will be undertaken for development over the time. Among these transmission lines, the first two will be developed in the first phase within two years. Once built, these cross-border lines will facilitate greater volume of power trading between Nepal and India.

Transmission Line / Substation Construction Department

Transmission Line/Substation Construction Department is responsible for the construction of new transmission lines and substations of 66 kV and higher voltage level. In this fiscal year, the Department has completed Birganj Corridor 132 kV Transmission Line Project, which consists of 17 km long Pathalaiya-Parwanipur double circuit transmission line and a 45 MVA, 132/11 kV substation at Parwanipur. Completion of this project has relieved the overloading of Hetauda-Birganj 66 kV transmission lines to some extent and has enabled NEA to lift off-peak hour load shedding in the area. This Department is also implementing two 220 kV transmission lines, three 132 kV transmission lines and three reinforcement projects. A brief description of these projects are given below.

Khimti-Dhalkebar 220 kV Transmission Line Project:

Khimti-Dhalkebar 220 kV Transmission Line will have the distinction of being the first ever 220 kV transmission line in Nepal. Once completed this transmission line will improve the reliability of power evacuation from Khimti-1 Hydroelectric Project (HEP), improve the voltage-drop problem in eastern Nepal and provide a direct route for export of available power to India via Dhalkebar Substation. This line will also serve the purpose of evacuation of power from planned Upper Tamakosi Hydroelectric Project.

The Project comprises of a 75 km long 220 kV transmission line on double circuit towers from Khimti-1 HEP to Dhalkebar Substation and 132 kV line bay extensions at each end of the line. Single circuit duplex "BISON" conductor will be strung and charged at 132 kV level till Upper Tamakoshi HEP is built.

Contracts have already been awarded for the 220 kV transmission line including the 132 kV bay extensions. Fabrication of towers has already begun. Land acquisition for transmission line will be initiated shortly. Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) have been completed. Power Grid Corporation of India Ltd. is providing the consulting services for the Project. The estimated cost of the Project is US$ 22 million

and is funded jointly by GoN, NEA and IDA. The project is expected to be completed by 2008.

Hetauda-Bardaghat 220 kV Transmission Line Project

INPS has major load centers at central and eastern Nepal, whereas, the generating stations are located mainly in western and central region. The present network shows that there is a weak link from Hetauda to Bardaghat. The connection of Hetauda to Bardaghat is at 132 kV single circuit transmission line with "PANTHER" conductor. A fault in either Marsyhayngdi-Siuchatar or in Bharatpur-Hetauda Transmission Line section will overload Hetauda-Bardaghat Transmission Line resulting into the collapse of the entire INPS system. The existing Hetauda-Bardaghat transmission line will be further overloaded if the generation capacity is increased to meet the unconstrained/normal system load. With the introduction of Middle Marsyangdi HEP into the system, the situation will be even more severe. Hence, upgradation of transmission capacity between Hetauda and Bardaghat has been a task of priority for NEA. Keeping in view of the above, NEA has decided to implement Hetauda-Bardaghat 220 kV Transmission Line Project. The Project comprises of approximately 143 km long double circuit 220 kV transmission line connecting the existing Hetauda and Bardaghat Substations using ACSR "BISON" duplex conductors. EIA study has been completed, the report of which is under review by the concerned governmental agency. The cost of this Project is estimated at US$ 39.2 million.

Tower Installation under Thankot-Chapagaon-Bhaktapur 132 kV Transmission Line

Thankot-Chapagaon-Bhaktapur 132 kV Transmission Line Project

Thankot-Chapagaon-Bhaktapur 132 kV Transmission Line Project comprises of nearly 28 km long 132 kV transmission line from Thankot (Matatirtha) to Bhaktapur via Harisiddhi. This Project will complete the 132 kV ring-main system in Kathmandu valley. The 132 kV ring main, on one hand, will greatly assist in catering the increasing demand in the valley and on the other hand, will help to bring down system loss, improve the quality and reliability of the power supply in the Valley. About 26 km of this line will be double-circuit while the rest will be four-circuit. The Project includes the construction of a new 132 kV switching station at Matatirtha, a new 132/11 kV, 22.5 MVA substation at Harisiddhi and upgrading of existing Bhaktapur and Balaju Substations. Estimated cost of the Project is US$ 20 million. The Project is being financed by GoN, NEA, ADB and OPEC. So far 40% of the line construction work has been completed. The design works of substations are underway. The Project is planned to be completed by 2008.

Middle Marsyangdi–Dumre-Damauli-Marsyangdi 132 Transmission Line Project:

Middle Marsyangdi–Dumre-Damauli-Marsyangdi 132 kV Transmission Line Project is envisaged to improve security and reliability of the network and to facilitate evacuation of power from the ongoing Middle Marsyangdi Hydroelectric Project (MMHEP). This Project will also open up the way for power evacuation for future hydroelectric projects in Marsyangdi basin. The Project component comprises of stringing of second circuit from MMHEP to Dumre, construction of double circuit

Constructing Chandranigahpur 132 kV Substation

transmission line from Dumre to Damauli and stringing of second circuit from Dumre to existing Marsyandi HEP. Route alignment survey for the Dumre-Damauli section of the transmission line has been completed and EIA study is under way. This project is estimated to cost US$ 6.8 million.

Kabeli Corridor 132 KV Transmission Line Project:

Kabeli Corridor 132 KV Transmission Line Project has been envisaged to evacuate power from proposed 30 MW Kabeli-A HEP in Mechi zone of the country. This line will also pave way for the development of other hydroelectric projects in Kosi basin. Survey works for the route alignment of the transmission line is currently in progress. EIA study will start from next fiscal year. This project is expected to cost about US$ 18.4 million. The Project comprises of construction of single circuit stringing in double circuit towers for the first stage. Discussions are underway with the World Bank for funding this Project.

Chandranigahpur System Reinforcement Project:

Chandranigahpur System Reinforcement Project comprises of construction of 132/33/11 kV substation at Chandranigahpur and 74 km long 33 kV sub-transmission lines to connect the new Chandranigahpur Substation and 33/11 kV distribution substations at Harsha, Haripur, Gaur and Nijgadh. These reinforcement will reduce the losses and improve the reliability and quality of supply in the area. The Project is estimated to cost US$ 6 million and is funded jointly by GoN, NEA and IDA. About 50% of works of Chandranigahpur Substation has already been completed. Equipment required for the substation are scheduled to reach site by the end of 2007. Contract for Supply and construction of 33 kV sub-transmission line will be awarded shortly. The Project is scheduled to be completed by 2008.

Grid Substations Reinforcement Project

Grid Substations Reinforcement Project envisages to reinforce the existing Grid substations with a view to maintain the reliability of the supply by matching the Grid substations' capacity with the growing demand. The Project comprises of the following components:

(a) Installation of one unit of 132/33 kV, 30 MVA, 3-phase power transformer along with associated control and protection panel in Anarmani Substation in Mechi zone.

(b) Installation of one unit of 132/11 kV, 30 MVA, 3-phase power transformer and associated bay extension in Pokhara Substation.

(c) Installation of 132/66 kV, 3x12.6 MVA power transformer (bank of three single-phase transformers) along with associated control and protection panel at Siuchatar Substation in Kathmandu.

Construction works in above three substations are under progress. The Project is estimated to cost US$ 3.24 million and is jointly funded by GoN, NEA, ADB and OPEC. The Project is scheduled to be completed by the end of 2007.

Kawasoti 132 kV Substation Project

Kawasoti 132 kV Substation Project is being undertaken to meet the growing electricity demand in the eastern part of Nawalparasi District. This Project will provide the infrastructure for the expansion of 33/11kV sub-transmission/distribution network to cover a large number of rural hilly area in the northern part of the district.

Under this Project, the existing Bardghat-Bharatpur 132 kV transmission line will be looped-in-out at Pragatinagar to form a new 132/33/11 kV substation. The existing Bharatpur–Kawasoti 33 kV line will be isolated from Bharatpur Substation and fed from the new substation. Major components of the Project consist of two 132 kV line bays, one 132 kV transformer bay with a 132/33 kV, 30 MVA power transformer, another 33 kV transformer bay with a 33/11 kV, 8 MVA power transformer and 11 kV cubicles.

The project is jointly funded by the GoN, NEA and the Government of Japan (GoJ). The Project is estimated to cost NRs.615 million part of which will be met by the Japanese grant of JP¥ 847 million. EIA study and land acquisition works have been completed. Consultant has been appointed and detail design work of control building and substation is under progress. The Project is scheduled for completion in FY 2008/09.

Grid Operation Department

Grid Operation Department is responsible for the operation and maintenance of transmission system of Integrated Nepal Power System (INPS). In addition to the operation and maintenance of transmission system, it has also the responsibility of upgrading, reinforcing and rehabilitation of transmission system. Major activities of this Department are described below.

Transformer Upgrading, Reinforcement and Voltage Improvement Works

The overloaded 10 MVA, 132/33kV Transformer at Lahan Substation was replaced with 20 MVA Transformer. A 6.3 MVA, 66/11kV Power Transformer has been added at Simara Substation. Reactive compensation measures was implemented at Anarmani Substation by installing a 2x7.5 MVAR, 33 kV capacitor bank to resolve the severe low voltage problem at eastern Nepal.

Other Reinforcement Works

Existing 16 sets of 11kV Minimum Oil Circuit Breakers (MOCB) were replaced with Vacuum Circuit Breakers (VCB) at Balaju Substation. The damaged 6 MVA, 66/11kV Power Transformer at Siuchatar Substation was repaired and put into operation.

Following major works are under progress:

- Installation and construction of 6.3 MVA, 66/11 kV transformer and bay at Sunkoshi Power Station and 15 MVA, 132/33 kV transformer and bay at Lamosanghu Substation for evacuating the power from IPPs projects in Sunkoshi corridor;
- Installation and construction of bay for 10 MVA, 132/33 kV power transformer and bay, 3 MVA, 33/11 kV transformer and bay at Damauli Substation;
- Shifting and installation of 8/10 MVA, 132/33 kV power transformer from Lahan Substation to Kohalpur Substation;
- Installation of 45 MVA, 132/66 kV power transformer and bay at Parwanipur Substation;
- Construction of 132 kV double busbar system at Butwal and Chanauta Substations;
- Upgradation of protection system at Lahan Substation;

- Replacement of 8 MVA, 33/11 kV transformer by new 16.6 MVA transformer and replacement of old circuit breakers with new VCB at Butwal Substation.

Testing and Maintenance works

Altogether 853 numbers of relays and 226 numbers of energy meters were tested in various Grid substations including energy meters of IPP and NEA owned Power Stations. Routine maintenance works were carried out as per schedule in different substations and transmission lines.

System Operation Department

Load Dispatch Centre (LDC) under System Operation Department provides the real time supervision and control of the Integrated Nepal Power System (INPS) using state of art Supervisory Control and Data Acquisition (SCADA) system. FY 2006/07 was a challenging year for system operation. The gap between the supply and demand both in terms of capacity and energy was so huge that NEA had no option but to enforce system wide Load shedding. However, diligent efforts were made to minimise load shedding to the extent possible.

Performance-wise, total number of system trippings was reduced to 19 from 21 in FY 2005/06, 24 in FY 2004/05 and 28 in FY 2003/04. The availability of real time data and better communication system have improved the overall availability of power stations and transmission lines and has helped to minimize the time required for restoration of the power system in case of black-outs. This has contributed in the reduction of financial losses of NEA.

For the efficient operation of INPS, it is necessary to obtain real time data from the power stations and substations. The trained manpower of LDC completed the computerization in the substations using in-house capability. Several fibers optic lines have been leased to Nepal Telecom and other private companies thereby generating additional revenue for NEA.

System Operation Department also launched the yearly system operation report "A Year in Retrospect 2062/063" in presence of Honorable Minister of State for Water Reassures and other dignitaries.

LDC Building at Siuchatar, Kathmandu

Distribution and Consumer Services Business Group

The Distribution and Consumer Services (DCS) business group is the largest among the nine business groups of NEA in terms of number of employees and business activities. About 60% of the total staff of NEA are employed in DCS catering to 97% of NEA customers.

This business group is entrusted with the key responsibility of overall management of electricity distribution network of NEA including operation, maintenance, rehabilitation and expansion of the network up to the 33 kV voltage level, together with customer service activities like new connection, meter reading, billing, revenue collection, customer grievance handling and so forth. Control of commercial and technical loss in the distribution network is another area of responsibility of this business group.

This business group is headed by the General Manager and organized into three departments at central level and five regional offices each headed by a Director. DCS is providing service to NEA customers through 34 Distribution Centers and 32 branch offices spread over 49 districts in the country.

In FY 2006/07, total number of customers under DCS reached 1,367,556, an increase of 10.18% over that of the last fiscal year. Similarly, a total of 2,233 GWh of energy was sold earning a gross revenue of Rs. 14,973 million in the fiscal year by this business group. Compared to the last fiscal year, energy sales and gross revenue of this business group increased by 10.86% and 10.58% respectively. Sales and revenue contribution of different customer groups under DCS for the period is depicted in the following table.

User Group	No. of consumer (% of total consumers)	Sales %	Revenue %
Domestic	95.92%	40.20%	40.30%
Non- Commercial	0.74%	4.50%	6.25%
Commercial	0.44%	6.13%	8.33%
Industrial	1.77%	39.23%	36.33%
Others	1.13%	9.94%	8.79%

Regional Interaction:

A two day interactive workshop was organized in all five development regions in November-December, 2007 with a view to improve the performance of DCS. The participating NEA executives were encouraged to put forth their views on different facets of state of affairs of DCS and moot action plans to deal with various challenges faced by the business group. The workshop was followed by an interaction program participated by the representatives of employee union, local political parties, the media and chamber of industry and commerce. The program was immensely successful in meeting its purpose as numerous invaluable ideas and suggestions came to the fore in course of the discussions. Hon. Minister of State for Water Resources Mr. Gyanendra Bahadur Karki also provided valuable input in the concluding session held at NEA Training Center, Kharipati.

DCS Mail Club

Communication plays a crucial role in enhancing the effectiveness of the management. Giving due consideration to this fact, a noble idea named 'DCS Mail Club' was launched to facilitate exchange of ideas and information on the pertinent issues and

assignments using the available IT facilities. This scheme has accelerated the speed of information sharing and reduced the usage of paper. All activity reports are now received at General Manager (GM) Secretariat through the email and responded by the GM immediately. This mechanism has greatly helped the club members in finding out what others are doing to solve the problems similar to what they face from time to time and also in curtailing communication barriers in the different hierarchy of management. At present, about seventy DCS offices and individuals are registered as club members. The scheme is already showing promising results. DCS is planning to further strengthen this scheme by developing the network facilities in coordination with the IT Department of NEA.

Electrification of Maoist Camps

After the historic comprehensive peace agreement between GoN and CPN Maoist, GoN assigned NEA to electrify 35 camps of the CPN Maoist cantonments. Despite several difficulties, all the camps were electrified in record time.

Customer Service Reforms

To provide better service to valuable customers, DCS has introduced Queue Management System (QMS) in its cash collection operations in Pardi, Malepatan, Baneswor, Chabel, Kuleswor, Ratnapark, Basundhara, Rajbiraj, Biratnagar, Bhairahawa and Tandi Revenue Centers. One window Service Delivery System has been introduced at Pokhara, Baneshwar and Lalitpur Distribution Centers. Computer assisted Interactive Voice Response Service has also been implemented in Lalitpur and Rajbiraj Distribution Centers. The customers in these areas can now know their payment dues over telephone without delay. Besides, computer assisted Office Management System developed by NEA IT Department has been implemented in Lagankhel on experimental basis. Computer assisted Grievance Management System has been implemented in some offices. As part of the commitment to provide better service to the customers, NEA is exploring newer ideas and a new collection solution is on the offing.

Distribution Centers

As a part of the drive to strengthen customer focus and commercial orientation in its operations, NEA had launched the Distribution Center concept in February, 2002, whereby the Distribution Centers were required to operate as distinct profit centers and the Center chief made accountable in achieving specified performance targets. Reduction of system losses and average collection period, improvement in stock utilization, enhancement of quality of customer services, improvement of overall efficiency, increase in sales and reduction of costs were defined as the major performance areas. The Distribution Centers are evaluated for each Performance Audit period (PAP) on a half-yearly basis. The evaluation is based on six performance indicators, i.e., loss reduction, average collection period, stock turnover ratio, capital works-in-progress, reporting and data management and connection period. The consultants employed under ADB Technical Assistance have submitted a set of recommendations regarding Distribution Centers management. Apart from this, NEA has also observed the need of some revision in the Distribution Center model and business by-laws. A committee is at present working to recommend the necessary amendments in the by-laws.

Major System Reinforcement Works

DCS has completed the reinforcement of 33/11 kV substations at Mahendranagar, Dhangadhi, Guleriya,

Nepalgunj, Kalaiya, Parsa, Harsha, Malangawa, Haripur, Jaleswar, Chandragadhi, Damak, Rajbiraj, Dhankuta, Syangja and Baglung. Altogether, power transformer capacities have been added by 80 MVA and most of the aged switchgears have been replaced in these substations. This measure has relieved the capacity constraints of the local distribution network enabling NEA to withdraw the load shedding prevalent at local level.

One 2x16 MVA, 33/11 kV new substation has been commissioned at Tankisinuwari, Morang. With this development, electricity supply could now be extended to more areas in the district and reliability of supply around Duhabi and Biratnagar area will be enhanced.

DCS has produced the revised version of 'NEA Distribution Construction Standard'. The standard is being reviewed by a committee. Once finalized, this standard would be applicable for all construction works for voltage level up to 33 kV. The business group also plans to review the 'Distribution Maintenance Standard' in the near future.

Work are in progress to reinforce and expand the distribution networks at various places. Under Tanahu Distribution Center, A 6/8 MVA, 33/11 kV Power Transformer is being installed at Dumre Substation. Switchgear panels (33 and 12 kV) are being installed at Dumre and Anbu Khaireni Substations. Installation and commissioning works in these substations are expected to be completed in the FY 2007/08.

Computerized Billing Project

Computerized Billing Project is under implementation with a view to facilitate better record keeping of customer accounts and to make the billing and revenue collection process uniform throughout NEA. The Project also aims at expediting reporting of non-technical losses and account receivables. Procurement of computer hardware for 20 branches has been completed. New Computerized Billing System has been installed and in operation in Kuleshwor, Ratnapark, and Luvu revenue centers in Kathmandu Valley. Similarly, new Computerised Billing System has been in operation in Bharatpur and Dharan Distribution Centers outside Kathmandu Valley. The new billing system is expected to be installed in additional 36 main revenue centers within July 2008.

Effect of Terai Turmoil

The turmoil in Terai that started from January/February 2007 have created numerous hurdles on the way of smooth functioning of distribution and customer services works in the area as the DCS offices in the central and eastern Terai were pad locked by the agitating groups for several days. The blockades and road blocks imposed from time to time by the agitators restricted the movement of men and materials thereby severely constraining the ability of local offices to continue functioning normally. The disturbances had cascading effects on the overall performance of DCS.

Other Initiatives

This business group took the initiative to complete rural electrification works which were held up because of budgetary problems. To support this initiative, GoN supported this initiative by releasing fund to the extent of NRs. 1 billion.

Apart from regular works, DCS has undertaken various measures to improve its performance. Some of these measures are listed below.

a) Implementation of Computerized Billing System and Customized Accounting and Inventory System (CAIS) in almost all Distribution Centers and branch offices.

b) Extensive use of ABC cables to reduce tripping and theft of electricity by direct tapping.

c) Mobilization of vigilant teams in regional offices, Distribution Centers and branch offices to check electricity theft.

d) Promotion of CFL lamps for energy conservation and Demand Side Management.

Interactive approach in office as well as public relation management: Interactions were organized at hundreds of rural locations to exchange views on improvement of services, payment of outstanding dues and loss control.

Regional Interaction

Electrification Business Group

Electrification Business Group is primarily responsible for rural electrification in the country. All the major rural electrification projects funded by GoN, NEA and other donor agencies are implemented by this business group. Construction, operation and maintenance of small hydropower plants are the other responsibilities of this business group. It is headed by the General Manager and is organized into two departments, namely, Small Hydropower and Rural Electrification Department and Community Rural Electrification Department, each headed by a Director. Furthermore, Rural Electrification, Distribution and Transmission Project, Distribution and Rural Electrification Project, Ilam Rural Electrification Project, Dhankuta Rural Electrification Project, Kailali-Kanchanpur Rural Electrification Project and Sindhu Dolkha Distribution Line Extension Project are being implemented under this business group. The activities of the Departments and Projects under the business group are highlighted below.

Small Hydropower and Rural Electrification Department

Small Hydropower and Rural Electrification Department is responsible for the construction, operation and maintenance of small hydropower plants and implementation of rural electrification programs in the remote hilly regions. Presently, this Department is overseeing the management of 26 small hydropower plants, 2 solar plants and 5 distribution branch offices spread over 27 districts in 12 zones of the country. Out of 26 small hydropower plants, 8 have been leased out to private firms and 3 have been leased out to the consumer communities. A number of 33 kV substation and transmission line projects are under construction. A 1.5 MVA, 33/11 kV substation at Jiri-Khimti VDC of Terhathum district has been commissioned recently.

A number of projects as listed below are being implemented under this Department.

(a) Heldung Small Hydroelectric Project (500 kW) in Humla district, scheduled to be completed in FY 2007/08;

(b) Gamgad Small Hydroelectric Project (400 kW) in Mugu district, scheduled to be completed in FY 2007/08;

(c) Buipa-Okhaldhunga 33 kV Transmission Line Project in Khotang and Okhaldhunga districts;

(d) Ilam-Phidim-Taplejung 33 kV Transmission Line Project in Panchthar and Taplejung districts;

(e) Sitalpati-Musikot 33 kV Transmission Line Project in Salyan and Rukum districts;

(f) Chhinchu-Rukum- Jajarkot 33 kV Transmission Line Project in SurkhetÊ and Jajarkot districts;

(g) Ghorahi-Holeri 33 kV Transmission Line Project in Dang and Rolpa districts;

(h) Udipur-Besisahar-Manang 33 kV Transmission Line Project in Lamjung and Manang districts;

(i) Dadeldhura-Baitadi 33 kV Transmission Line Project;

(j) Dhankuta-Hile-Leguwa-Bhojpur 33 kV Transmission Line Project;

(k) Tumlingtar-Dingla-Bhojpur 11 kV Transmission Line Project;

(l) Rasuwaghat-Khotang 33 kV Transmission Line Project; and

(m) Dipayal-Sanfebagar-Manma-Jumla 33 kV Transmission Line Project;

Community Rural Electrification Department

In order to increase the coverage of electricity supply in the rural areas and promote local participation for sustainable growth, GoN has adopted a policy in FY 2003/04, which call for sale of power to rural electricity consumer groups after setting up the requisite distribution infrastructure. Under this program,

consumer associations, typically in the form of cooperatives and user groups, take the responsibility of managing, maintaining, and expanding the rural distribution of electricity. Communities raise 20% of the investment cost for distribution system extension in their area and 80% of the fund is provided by the government. The primary objectives of the program is to reduce the cost of distribution, make distribution system effective, accelerate the pace of expansion of distribution lines in the rural areas and check the pilferage of electricity.

Initial response to this new initiative has been overwhelming. This is reflected in large number of agreements signed between NEA and local consumer groups. Altogether, 38 consumer groups have already started operating out of 165 communities which have signed the agreement. Further 190 rural electricity communities are expected to operate under this model. The following depicts the status of implementation status of the program till June 30, 2007:

	No. of Application			
	Registered	Approved	Signed	RE Implemented
CBRE	221	166	141	25
CBOM	197	44	38	13
Total	422	210	165	38

Note: CBRE-Community Based Rural Electrification Program; CBOM-Community based Operation and Maintenance

Rural Electrification, Distribution and Transmission Project (REDTP)

REDTP is being implemented with loan assistance from ADB and OFID (OPEC fund for International Development). GoN and NEA are funding the local component of the Project. The Project consists of the following components.

(a) Rural Electrification and Distribution System Reinforcement Project

(b) Transmission Development

  (i) Thankot-Chapagaon-Bhaktapur 132 kV Transmission Line Project

  (ii) Grid Substation Reinforcement Project

(c) Computerized Billing Project

(d) Institutional Strengthening:

  (i) Distribution District Profit Center Project

  (ii) Fixed Assets Revaluation Project

The Distribution Profit Center Project and Fixed Assets Revaluation Project have already been completed. Rural Electrification and Distribution System Reinforcement Project, Grid Substation Reinforcement Project and Computerized Billing Project will be completed in FY 2007/08. Thankot-Chapagaon-Bhaktapur 132 kV Transmission Line Project will be completed in FY 2008/09.

Rural Electrification and Distribution System Reinforcement Project

The main scope of Rural Electrification and Distribution System Reinforcement Project includes electrification in 277 VDC covering 22 districts of the eastern, central and western development regions. The Project comprises of Rural

Electrification (RE) and Distribution System Reinforcement (DSR) components.

Substation Construction works in progress in Mukundapur

Under the RE component, eight new 33/11 kV substations with total capacity of 34.5 MVA and 553 numbers of 11/0.4 kV distribution transformers with total capacity of 34.55 MVA will be installed. Similarly, 45 km of 33 kV lines, 807 km of 11 kV lines, 495 km of 11/0.4 kV lines and 1,425 km of 0.4 kV lines will be built under this Project.

Under DSR component, six new 33/11 kV substations construction and augmentation works in existing nine 33/11 kV substations will be carried out resulting in the capacity addition of 77 MVA. Similarly, 566 numbers of 11/0.4 kV distribution transformers with total capacity of 71.32 MVA will be installed. Moreover, 57 km of 33 kV lines, 867 km 11 kV lines and 583 km of 0.4 kV lines will be added to distribution system of NEA.

The Project is estimated to cost US$ 37.3 million and is jointly funded by ADB, GoN and NEA. Nearly 85% of works under the Project have been completed so far. The Project is expected to be completed by FY 2007/08.

Distribution and Rural Electrification Project

Distribution and Rural Electrification Project is being implemented in the five districts, namely, Dhading, Nuwakot, Lalitpur, Bhaktapur and Kavrepalanchok with funding from International Development Association (IDA) of the World Bank under Power Development Project. Power Development Project intends to help meet the government objectives of expanding electricity coverage in the rural areas to substitute the use of kerosene and fire-wood by electricity and spur economic activities. There are two components under this Project, namely, Rural Electrification Scheme and Distribution System Reinforcement Scheme. Rural Electrification Scheme focuses at construction and extension of distribution lines, whereas, the other scheme aims at reinforcing the existing distribution network and increase quality

of electricity supply to the consumers. The scope of works under these schemes are depicted in the following tables:

Scope of works under Rural Electrification Scheme:

S. N.	Description	Dhading	Nuwakot	Lalitpur	Bhaktapur	Total
1.	Construction of 33/11 kV substation / switching station	1	1	1		3
2.	Construction of 33 kV Line (km)	20	13			33
3.	Construction of 11 kV Line (km)	41	46	46	7	140
4.	Extension of LV Line (km)	51	32	35	20	138
5.	Installation of new 11/0.4 kV Transformer	30	23	19	5	77
6.	New consumers to be added	5,960	5,954	3,960	1,300	17,174

Scope of works under Distribution System Reinforcement Scheme:

S. N.	Description	Lalitpur	Bhaktapur	Kavre	Total
1.	11 kV Line (km)	9	24	18	51
2.	LV Line (km)	42	65	44	151
3.	11/0.4 kV transformer (set)	42	59	15	116
4.	Consumers to be benefited	4,100	7,200	5,620	16,920

Supply and delivery of distribution line materials for RE and DSR have been completed. Tender for construction works for RE and DSR has been evaluated and the evaluation report has been submitted to the World Bank for concurrence. The contract for the construction of substation has been awarded and detail design work is in progress. All the works under the Project will be completed by December 2008.

Ilam Rural Electrification Project

Ilam Rural Electrification Project is being implemented with Non-project Grant from the Government of Japan. The Project plans to provide electricity to 10,659 households in 17 VDC. The total cost of the project is NRs. 115 million. The Project works comprise of construction of 316 km of 11 kV lines, 284 km of 400/230 volts lines and installation of 60Êdistribution transformers. Most of the distribution line materials have been delivered and contract for construction has been awarded for the first stage of works. For the second stage of works, evaluation of tenders for the supply and delivery of distribution line materials and construction is in progress. All the works under the Project will be completed by FY 2007/08

Line erection in Ilam

Dhankuta Rural Electrification Project

Dhankuta Rural Electrification Project was started in FY 2005/06 and completed in FY 2006/07. The Project was completed at a cost of NRs. 600 million, funded by Government of Japan. Under the Project, 74 km. of 11 kV lines and 85 km of 400/230 V lines were constructed and 39 distribution transformers were installed in five VDC, namely, Aankhisalla, Khoku, Chhintang, Aahale and Mahabharat.

Line Erection in Dhankuta

Kailali-Kanchanpur Rural Elctrification Project

Kailali-Kanchanpur Rural Elctrification Project was started in 1999 (2056/057 B.S.) with a grant assistance of Danish Government of DKK 66.3 million and GoN/NEA funding of NRs. 668 miliion. The Project will be completed in FY 2007/08. The Project was revised and upgraded in May 2006 to include construction of additional four new substations (10.5 MVA) through extension of 75 km of 33 kV line, upgrading of distribution transformers and conversion of two phase distribution system to three phase in several load centers. This revision

in Project scope required additional funding of DKK 17.5 million, which Danida has committed to provide. About 70,000 consumers of 33 VDC and one municipality of Kailali and Kanchanpur districts will be benefited from this Project

33 kV double pole structure at Khutia River crossing (213 m span)

So far three numbers of 3 MVA, 33/11 kV substations have been constructed and commissioned at Lamki, Attariya and Lalpur. Similarly, construction of 24 km of 33 kV, 443 km of 11 kV and 1,448 km of 400/230 V lines have been completed. These works have contributed in improving the voltage profile of the network in the districts. Around 26,000 new consumers are already supplied with electricity from the newly built lines.

The ownership and responsibility of operation/ maintenance of the substations and high voltage lines will remain within NEA, while the low voltage distribution lines and distribution transformers will be handed over to electricity user's groups. The groups will own, operate and maintain the distribution system and promote and facilitate productive end-use. The cooperatives will get a subsidy of NRs 7,200 per household while the balance of investment in low voltage distribution lines, transformers and service connections will be provided as an index loan at 2% real rate of interest over 20 years to be collected along with payment for NEA's wholesale supply of electricity. Distribution lines have already been handed over to 31 user groups thereby supplying electricity to 6,100 consumers. About 80% of the total project works have been completed till date.

Sindhu Dolkha Distribution Line Extension Project

Sindhu Dolkha Distribution Line Extension Project was started in FY 1999/2000 and is being implemented in three phases. After completion of the Project, 50,000 households and small-scale industries in the project area of Dolkha and Ramechhap districts will be directly benefited. The major scope of the Project includes:Ê

- construction of 82 km of 33 kV, 200 km of 11kV and 460 km of low voltage line.
- installation of 278 distribution transformers.
- construction of 4 numbers of 1.5 MVA, 33/11kV sub-station (Makaibari, Jiri, Kirnetar & Singati)

Currently, the Project is in the second phase and construction of two numbers of 33/11 kV sub-station at Jiri and Makaibari have been completed and will be commissioned shortly. The construction of 52 km of 33 kV line, 172 km of 11 kV line, 356 km of low voltage lines have been completed and 156 nos. of transformers have been installed. The total cost of the Project is estimated at NRs. 450 million and is funded by GoN. The Project is expected to be completed by FY 2008/09.

Meter Test Bench installed by REDSRP at NEA Hetauda

Engineering Services Business Group

Engineering Services Business Group provides technical support on all aspects of hydropower development ranging from project identification studies to detailed design and construction supervision of hydroelectric projects. It has two decades of experience in design and construction supervision of hydroelectric projects with capacities up to 144 MW. The business group is headed by the General Manager. The four departments, under this business group are Project Development Department, Environment and Social Studies Department, NEA Training Center and Soil, Rock and Concrete Laboratory. The field of services offered by this business group also includes Electro-Mechanical design, operation and maintenance of two concrete pole plants and a central workshop. Activities carried out by the business group during FY 2006/07 are as follows:

Project Development Department

Upper Trishuli -3A Hydroelectric Project

NEA has recently completed Detailed Project Report of Upper Trishuli–3A Hydroelectric Project with installed capacity of 60 MW. The Project is located in Rasuwa and Nuwakot districts. The headworks lies nearly 15 km north of the existing Trishuli Hydropower Station diversion weir and the powerhouse is at Simle which is about 5 km south of the proposed headworks.

Only 2 km of new road will have to be built along with the upgrading of 14 km of road between Betrawati and headworks site. NEA has carried out detailed hydrological studies at the site. The river is characterized by high firm flow as much of the discharge is fed from snow. NEA has also carried out 353 m of drilling and 3 km of seismic survey as part of the geological investigation.

The headworks comprises of a 10 m high diversion weir with 4 radial gates. It will also have a fish passage cum downstream release channel. The waterways comprises of intake channel, twin desander, 4.1 km long headrace tunnel with a diameter of 5.4 m, inclined shaft, pressure tunnel and ancillary structures. The headrace tunnel passes through quartzite and phyllite.

The underground powerhouse will have two units of Turbine generators. Power evacuation will be made through a 54 km long 220 kV transmission line connecting the Project to Matatirtha substation in Kathmandu. Annual energy generation is estimated to be 488 GWh.

Estimated cost of the Project is US$ 109 million and the Project economics study shows an EIRR of 20%. The Project is to be commissioned by 2011 if preparatory works are carried out accordingly. NEA is currently undertaking Environmental Impact Study of the Project. This Project is to be built by GoN and NEA through soft loan from Government of China.

Upstream View of Upper Trishuli - 3A Headworks Site

Upper Trishuli-3B Hydroelectric Project

Upper Trishuli -3B Hydroelectric Project is the tailrace scheme of Upper Trishuli-3A. This Project will have an installed capacity of 44 MW. NEA is currently

conducting feasibility study with the aim of completing the Project by FY 2011/12. This Project comprises of a 3.1 km long headrace tunnel, inclined shaft, surface powerhouse with two units and ancillary structures. Power evacuation will be made through the proposed 220 KV line of Upper Trishuli -3A. Topograhic survey and geological investigation have been carried out and layout of the structure have been accomplished. This study will be completed in the FY 2007/08. Since separate headwork and transmission line is not required, this Project can be built in a much economical manner.

Upper Seti (Damauli) Storage Project

NEA has completed Upgrading Feasibility Study of Upper Seti (Damauli) Storage Project under the technical assistance from Japanese Government through JICA. It has an installed capacity of 128 MW and will be able to generate 476 GWh of annual energy. This scheme, upon completion, will be able to provide six hours of daily peaking capacity in winter which is much valuable to the present power system. The Project will comprise of a 140 m high concrete dam, 195m long penstock, underground powerhouse and ancillary structures. Power evacuation will be made through 40 km long 220 kV line connecting the Project to the new Bharatpur substation. Estimated cost of the Project is US$ 328 million. The Project has a construction period of six years and can be commissioned by FY 2014/15.

Upper Seti Storage Project Stakeholder's Meeting

Project Identification Study

In FY 2006/07, project identification studies of two projects namely Tamakoshi-V and Tila-3 were carried out.

Tamakoshi –V Hydroelectric Project with a capacity of 28 MW is located in Dolakha District approximately 170 km north-east of Kathmandu. The road connecting Singati Bazaar and Lamabagar which is being built for Upper Tamakoshi Hydropower Project (UTKHEP) passes through both powerhouse and headworks sites of Tamakoshi-V Project. This Project is conceptualized as a cascade project with UTKHEP. The headrace tunnel has a length of 2.5 km. Estimated annual generation is 158.80 GWh per year. Power evacuation from this scheme will be made through 6.0 km long 220 kV Transmission Line connected with the nearest substation at Gongar. Total project cost is estimated at US$ 45 million.

Tila-3 Hydroelectric Project is located in Kalikot District, Karnali Zone approximately 190 km North of Surkhet. It is a high head run of river project with a capacity of 116 MW. Karnali highway passes along the powerhouse and the headwork area of this Project. The headrace tunnel will be about 7.25 km long. Annual generation is estimated to be 680.20 GWh. A 144 Km long 132 kV double circuit transmission line is required to evacuate power to Kohalpur substation. Total project cost is estimated at US$ 204 million.

Other Activities

Engineering Services Business Group is also involved in providing technical support to various projects. The commercial activities carried out by Engineering Services include construction design and supervision of Chamelia HEP and detailed design of Kulekhani III HEP etc. This business group has also carried out detailed survey of Duhabi –Jogbani and Butwal-Sunauli 400 kV Transmission Line. It has also completed detail survey of Kabeli

Corridor 132 kV Transmission Line in FY 2006/07.

In FY 2006/07, study on Kulekhani reservoir sedimentation and study on slope stabilization work of Puwa Khola HEP were also carried out. Project Development Department also operates two concrete pole plants at Kotre and Amlekhgunj. These pole manufacturing plants have greatly helped in supplying the materials required for various rural electrification projects. It also runs central workshop at Hetauda where transformer repair works are carried out.

Upper Tamakoshi Hydroelectric Project (UTKHEP)

The detailed design of Upper Tamakoshi HEP with an installed capacity of 309 MW is being carried out in FY 2006/07. This is a peaking run-of-river type project with an annual average energy of 1,737.7 GWh. The gross head and design discharge of this Project are 820 m and 44 m3/s respectively.

Major structures of this Project comprise of a concrete dam of height 22.5 m, intake, twin desanding basins, headrace tunnel of length 7.2 km, 2.5 km long pressure shaft, underground powerhouse, 2.5 km long tailrace tunnel and 47 km long 220 kV Transmission Line.

Based on the present generating capacity and peak demand, it is estimated that in 2013 the power deficit will be 483 MW. Therefore, NEA has placed high priority to start the construction of the project by the end of 2008 so as to complete it by FY 2012/13. The Project cost is estimated at US$ 340 millions (excluding IDC and other financial costs). Its levelised unit cost is US Cent 2.6/kWh and benefit-cost ratio is 2.2. The Project will have a construction period of 4.5 years.

Upper Tama Koshi Project Site

Detailed engineering design and preparation of tender documents has been commenced from February 2007 by Norconsult-Lahmeyer International J/V. The detailed design works is scheduled to be complete by November 2008. Out of 61.5 km access road, 33 km fair-weathered road from Dolakha to Singati is in operation whereas the remaining 28.5 km up to Lamabagar is under construction. Construction of three steel truss bridges along the access road will be commenced soon. Environmental Impact Assessment (EIA) report for generation has been approved by Ministry of Environment, Science and Technology (MoEST) while EIA Report for Transmission Line is under final stage of the approval. Construction of a test adit of 500 m length has been started under the Detailed Design Program. Land acquisition for 28.5 km access road is nearly completed. Two office buildings have been constructed, one each in headworks and powerhouse sites. Communication facilities have also been established in both places. In order to implement the Project by mobilizing funding from within the country, NEA is negotiating with Karmachari Sanchaya Kosh and other domestic financial institutions.

Soil, Rock and Concrete Laboratory

Soil, Rock and Concrete Laboratory has been providing quality services relating to material testing, geological and geotechnical engineering fields for hydroelectric project study.

Geological mapping, geophysical survey and core drilling are the major activities carried out by this Department. It also provides services like construction material investigation, both in-site and laboratory testing. The state of art laboratory provides services on a regular basis to NEA and other clients. The Department also carries out geotechnical design including rock support pattern for underground and surface structures.

The followings works were undertaken by the laboratory in FY 2006/07.

- Surface geological mapping, core drilling, geophysical survey and construction materials investigation carried out for Upper Trishuli-3B Hydrelectric Project.
- Additional core drilling at downstream weir option of Upper Trishuli – 3A HEP.
- Core drilling at option-3B powerhouse of Upper Seti (Damauli) Storage HEP.
- Core drilling at Middle Bhote Koshi HEP.
- Drilling was carried out in Sunkoshi River at three alternative dam sites of Sun Koshi Storage-Cum-Diversion Scheme in Okhaldhunga District.
- Topographical survey work at Upper Tamakoshi HEP.
- Sediment Analysis of Upper Seti (Damauli) Storage HEP
- Concrete quality test at Bhiman Sub-station of Sindhuli.

Drilling at Proposed Sunkoshi Diversion Headwork Site

- Concrete Mix Design and various tests on rock, soil and concrete for different private party.

Environmental And Social Studies Department

Environmental and Social Studies Department provide services related to all aspects of environmental studies of projects in the planning, construction and operational phase. NEA has been carrying out Environmental studies since 1987. The Environmental Unit of those days has evolved into ESSD with a wealth of experience in conducting Environmental Impact Assessment (EIA), Initial Environmental Examination (IEE), Strategic Impact Assessment (SIA) and Acquisition Compensation Rehabilitation Program (ACRP). This Department also conducts environmental monitoring and auditing of hydroelectric, transmission line and distribution line projects.

The Department accomplished the following assignments during the fiscal year 2006/07:

(a) The EIA report of Upper Tamakoshi Hydroelectric Project has been approved.

(b) The EIA report of Kawasati 132/33 kV Substation Project has already been approved.

(c) The IEE of Chandranighapur 33 kV Transmission Line Network has been approved.

(d) The updated EIA of Hetauda-Bardaghat 220 kV Transmission Line is in the final stage of approval.

(e) The Department is conducting quarterly monitoring of air, noise and water quality of Middle Marsyandhi Hydroelectric Project under construction.

(f) The EIA of Upper Trishuli-3A Hydroelectric Project (UT-3A) is being carried out.

(g) The Scoping Document and Terms of Reference of Upper Trishuli-3B Hydroelectric Project (UT-3B) is in the process of approval.

(h) The Department is in the process of awarding the EIA study of Cross-Border Butwal-Sunauli and Duhabi-Jogbani 400 kV Transmission Line to the local consultant under its supervision.

(i) The Scoping Document and Terms of Reference of Damauli-Bharatpur 220 kV Transmission Line is in the process of approval.

(j) The IEE of Dolakha-Nayapul 33 kV Transmission Line and EIA report of Gongor Khimti 220 kV Transmission Line is in the process of approval.

NEA Training Center

NEA Training Center (NEA-TC) has been providing need-based short term trainings to NEA employees with an aim to upgrade their professional knowledge and skills at operational and managerial levels. The training programs are designed as per training needs assessment (TNA) at organization and personnel level after discussion with the corporate executives and general managers level. Since the last two years, NEA-TC has expanded its services to include the clients outside of NEA. It has conducted various training programs to clients on their request which include Department of Electricity Development, Chilime Hydropower Co., Butwal Power Co. Ltd. and consumer community. For the first time, NEA-TC has conducted training program for foreign participants. In FY 2006/07, five persons from Afganistan took part in powerhouse operation and maintenance training at Panauti Powerhouse. On the request of Small Hydropower Promotion Project of GTZ, training was imparted to the consumer community of Goplingtar lift irrigation scheme. A total of 692 staff were trained in FY 2006/07 which included 270 officers and 422 non officers. A total of 61 training programs were conducted in this period.

Central Activities

NEA Board Matters

Mr. Gyanendra Bahadur Karki, Honorable Minister of State for Water Resources (MoWR) has been the Chairman of NEA Board since Jestha 29, 2063 following the historic peoples uprising which heralded unprecedented political change in Nepal.

After the retirement of Mr. Tikadutta Niraula, the Secretary of Ministry of Water Resources (MoWR), Mr. Jitendra Ghimire, officiating secretary of MoWR has been representing from Ministry of Water Resources as an ex-officio member in the NEA Board.

This is the second year as Managing Director and Member Secretary of the Board for Mr. Arjun Kumar Karki, who was appointed to the post in July 17, 2006 (2063/04/01 BS) by the Government of Nepal.

Mr. Lekh Man Singh Bhandari, Mr. Guru Prasad Neupane and Mr. Ananda Raj Batas have been appointed as Board Members by the decision of Government of Nepal in August 8, 2006 (2063/4/23 BS). Similarly, Mr. Rameshwor Prasad Khanal, Acting Secretary, Ministry of Finance (Revenue) is representing Ministry of Finance as an ex-officio member in NEA Board since August 28, 2006 (2063/5/12 BS). With the appointment of Mr. Mukesh Raj Kafle as a Board Member in August 28, 2006 (2063/5/14 BS), NEA Board took the complete shape.

In a policy decision, NEA Board has decided to include an invitee from the Employee Union in Board meetings so that employees' stakes could be represented in the Board deliberations. Accordingly, Mr. Kumar Prasad Ojha, has been participating as an invitee in the Board meetings since August 21, 2006 (2063/5/5 BS). From the same day, Mr. Anup Kumar Upadhaya, Joint Secretary, Ministry of Water of Resources and Mr. Rajendra Kishor Kshatri, Joint Secretary (legal), Water and Energy Commission Secretariat have also been inducted into NEA Board as invitees.

During FY 2006/07, a total of twenty-eight Board meetings were convened. The Board made various far-reaching decisions with a view to move forward in fulfilling aspirations of stakeholders. The Board decisions paved way for the launching of Upper Tamakoshi, Kulekhani III, Upper Trishuli 3 A and Chameliya Hydroelectric Projects. In this year, the inking of a deal between NEA and IL&FS (India) to construct cross border transmission lines is an another landmark development, which hold immense prospects in boosting up the power trading between Nepal and India. Various by-laws relating to personnel and financial management were amended to impart a greater degree of efficiency and effectiveness in the functioning of NEA. With a view to mobilize capital resources from within the country for the development of hydropower, NEA is in the process of issuing Power Bonds to institutional and individual investors.

Public Relation and Grievance Management Department

The main responsibility of this Department is to handle all promotional and publicity related matters on behalf of NEA including issuing of press releases on periodic basis. The Department is also responsible for collecting public grievances and forwarding them to concerned business groups for necessary action.

In FY 2006/07, the Department has conducted several press conferences. It has published "Vidyut", a half yearly journal, in the same period. It has appointed advertising agency to carry out the publication of advertisements and notices of NEA

with 46.6 % discount rate in publication and 15.6% discount in transmission. The Department has also arranged various press meet to appraise the media and concerned people about NEA's plans and programs.

Administration

Administration headed by the Deputy General Manager, is responsible for formulation and implementation of administrative rules and regulations of NEA and overall management of human resources. There are two departments, under Administration, namely, Human Resource Department and General Services Department, each headed by a Director.

Human Resources Department

Human Resource Department is entrusted with all the functions of human resource in NEA. During FY 2006/07, 164 staffs were retired, 23 staffs took voluntary retirement, 24 resigned and 41 staffs passed away. The total approved positions at the end of FY 2006/07 is 10,314, of which a total of 9,272 positions are filled. The recruitment process for appointing new staffs in vacant positions is under process. Written examinations for close competition for level 4 and 5 technical and non-technical positions have been completed. Interview for all technical and non-technical 1, 2 and 3 levels is under process.

Promotion of employees is being carried out on a regular basis. In FY2006/07, 4 officers and 15 assistants were automatically promoted based on time bound promotion scheme, 88 officers and 156 assistants were promoted to different levels under the performance evaluation criteria. Promotion through internal competition criteria is also in due process. Written examinations have been completed for officer level promotion.

A new Personnel Management Software has been developed for efficient record keeping of employees and enhancing the existing Personnel Data Bank (PDB). Personnel Services Regulation-2062 has been amended and implemented from April 14, 2007 (2064/1/1 BS).

Under disciplinary actions, 16 staff has been cautioned, promotion of 1 staff withheld, 17 staff have been suspended and 10 staff have been dismissed of which four dismissals were for duplicate certificates. With the view to support the corporate goal of making NEA a commercially oriented efficient organization, various measures such as formulation of performance standards for improvement of quality of service, implementation of performance based incentive system and revision of approved positions are being carried. Based on the prevailing organization structure, Job Descriptions for the levels up to 8 have been revised.

During the fiscal year, total of 221 staff participated in training, seminar, workshop, conference, higher studies and inspections abroad. 280 staff participated in training, seminar, workshop and higher studies within Nepal and 260 officer level and 417 assistant level staff received training from NEA Training Center.

Financial supports have been provided to 16 employees under Staff Welfare Program for the treatment of serious illness like Cancer, Kidney Transplant and Cardiac Surgery.

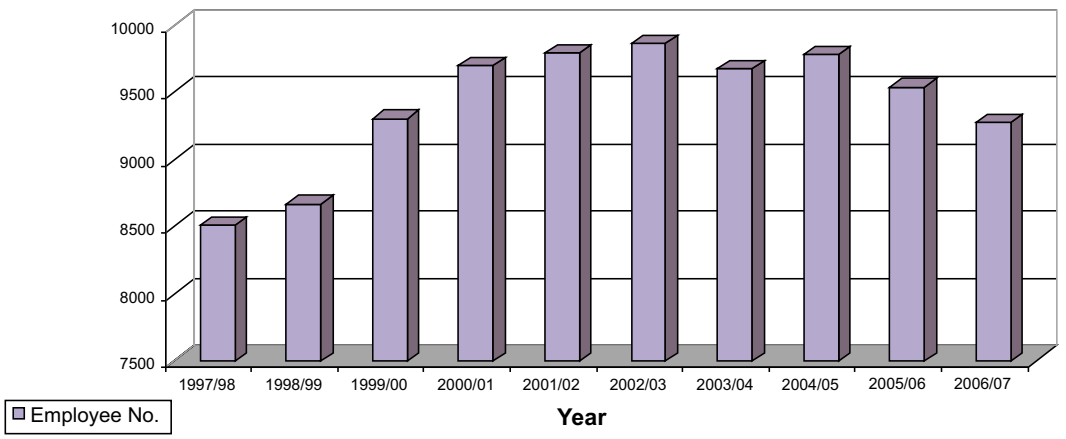
Similarly, house/land purchase and construction loan, house maintenance loan, social activities loan, 3 months loan natural disaster loan have been granted to 496,108,184,172 and 2 staff respectively.

During the FY, 23 staff were injured and 6 staff passed away in different accidents. NEA pays its highest respect to the deceased staff for their dedicated work.

Staffing Status - FY 2006/07

Level	Service	Approved Position			Existing Situation			
		Regular	Pool	Total	Permanent	Monthly Wages	Daily Wages	Total
Managing Director		1	0	1	1	0	0	1
GM/DMD (Level -12)		10	0	10	6	0	0	6
Officer Level (Level 6 - 11)	Technical	1046	2	1048	835	10	1	846
	Non Tech.	496	1	497	418	1	0	419
	Total	**1553**	**3**	**1556**	**1260**	**11**	**1**	**1272**
Assistant Level (Level 1-5)	Technical	5210	173	5383	3932	415	621	4968
	Non Tech.	3084	291	3375	2374	272	386	3032
	Total	**8294**	**464**	**8758**	**6306**	**687**	**1007**	**8000**
	Grand Total	**9847**	**467**	**10314**	**7566**	**698**	**1008**	**9272**

EMPLOYEE SITUATION (FISCAL YEAR 2053/054-2063/064)



General Services Department

General Services Department conducts general repair and maintenance works of NEA buildings and other civil, electrical, communication and other structures. At present the Department is working for the replacement of old communication network by a new one in coordination with IT department.

NEA procured 21 pickups to replace the vehicles that were burned or damaged during the insurgency. Property Management Section under the Department conducts the proper recording of land owned and used by NEA. It has completed the recording of the land owned by NEA in Kathmandu valley.

Law and Arbitration Division

Law and Arbitration Division is under the General Services Department and handles the legal matters of NEA. It has defended for 87 litigation cases in FY 2006/07. NEA has defended 24 cases relating to electricity pilferage which amounted to NRs. 54 million. Different courts have given verdict on 30 cases till date, of which NEA has won in 18 cases. The cases handled by this Division include employee service and civil cases, other than electricity pilferage.

Planning, Monitoring and Information Technology

Planning, Monitoring and Information Technology, headed by the Deputy Managing Director is responsible for the formulation of Generation, Transmission and Distribution expansion plans of NEA. It periodically evaluates and monitors the development projects executed by NEA and provides feedback needed for successful completion. It also plays coordinating role in cross-border power exchange and power trading activities. Concluding Power Purchase Agreements (PPA) with the Independent Power Producers (IPP) and facilitating PPA administration is another area of its responsibility. It has five departments, namely, Corporate Planning Department, System Planning Department, Monitoring Department, Power Trade Department and Information Technology Department, each headed by a Director.

Monitoring Department

Monitoring Department organizes internal quarterly and annual progress review meetings of different projects and programs and submits the progress reports to the Ministry of Water Resources (MOWR). The Department furnishes required data and reports to MOWR, National Planning Commission (NPC), Peace Secretariat and NEA itself for its internal use.

During FY 2006/07, the Department compiled and furnished data on the damage of equipments and structures during insurgency to the Office of the Prime Minister and the Peace Secretariat. The Department has also been providing technical support to Petition Committee of NEA for Loss Control and formulation of Electricity Distribution by-laws.

Corporate Planning Department

Corporate Planning Department undertook various tasks involving plans and programs at corporate level. It also provided data input for studies and various other organizations. NEA also obtained 14 new licenses from GoN for development works of Generation and Transmission. Two of them were survey licenses of hydropower projects and ten were survey licenses for transmission line projects including three for cross border transmission lines. Similarly Generation License for Chameliya Hydroelectric Project and Construction License for Khimti-Dhalkebar 220 kV Transmission Line were also obtained.

System Planning Department

System Planning Department is responsible for formulating NEA's generation and transmission expansion plans. During the year under review, the Department accomplished various studies and brought forth reports on Load Forecast, Generation Expansion Plan and Transmission Expansion Plan.

Load Forecast Study projects Nepal's long-term electricity needs. Based on this, the Generation Expansion Plan devises a sequence of probable projects to meet this demand. Based on both the Load Forecast and the Generation Expansion Plan, the Transmission Expansion Plan is devised to determine augmentation and expansion requirement in the NEA's transmission network.

The Transmission Line Infrastructure Development Report was also brought out by the Department to highlight the reinforcement required to accommodate the development of various hydroelectric projects under the private sector.

The Department also undertook the Grid Impact Studies for the integration of Upper Marsyangdi 'A' and Mai Khola Hydro Power Projects to the national Grid. These projects are being promoted under the private sector.

In collaboration with the Power Grid Corporation of India, the Department also carried out the system studies for developing cross border transmission links to facilitate power trading between Nepal and India.

Power Trade Department

Power Trade Department has been entrusted with the responsibility of processing applications for PPA, technical review of the proposals, negotiation and conclusion of PPA with the IPP, and also of coordinating the activities related to the cross border power exchange and trade with India.

During FY 2006/07, the Department has concluded 8 PPA with a total capacity of 11.434 MW which are as follows:

S. N.	IPP Projects	kW
1	Phawa Khola (Taplejung)	2,079
2	Ridi Khola (Gulmi)	2,400
3	Narayani Shankar Biomass (Rupandehi)	500
4	Mai Khola (Ilam)	2,400
5	Belkhu Khola (Dhading)	320
6	Seti-II (Kaski)	979
7	Lower Chaku (Sindhupalchok)	1,765
8	Upper Hadi Khola (Sindhupalchok)	991
	Total Capacity	**11,434**

Total number of PPA concluded IPP Projects have now reached 35 amounting to a total of 228.94 MW. In FY 2006/07, two IPP Projects, namely, Khudi Khola Small Hydropower Project (3,450 kW) located in Lumjung district, and Baramchi Khola Small Hydropower Project (980 kW) located in Sindhupalchok district were successfully commissioned. With this, 13 IPP Projects with a total capacity of 152.713 MW are now in operation. Four projects (Thoppal Khola- 1650 kW, Sisne Khola- 750 kW, Pheme Khola- 995 kW and Sali Nadi-232 kW) are under the process of commissioning.

The Department has concluded technical evaluation of two medium sized projects:Upper Marsyangdi-A Hydropower Project (50 MW) and Mai Hydropower Project (14.5 MW) in FY 2006/07. A Memorandum of Understanding has been signed with Upper Marsyangdi-A Hydropower Project for PPA, while price negotiation is being carried out with Mai Hydropower Project. Six IPP Projects for which Connection Agreements have been concluded between the IPP and concerned departments of NEA are being processed for PPA.

This Department is also involved in monitoring and helping in the administration of IPP Projects in operation. It provides necessary support to NEA's Corporate Finance Department in processing the power purchase invoices of the IPP and facilitates the meetings of the coordinating committees constituted for operating the IPP projects in integration with INPS and as per the provisions of the PPA.

The Department has been coordinating the power exchange and trading activities with India. The 8th Indo-Nepal Power Exchange Committee (PEC) meeting, long overdue since 2003, was held in Kathmandu on June 7-8, 2007. The PEC meeting took important decisions to resolve different issues and to move forward for mutual benefit of both countries. One major outcome of this event was the revision of the annual escalation rate of 8.5% that was agreed to in 3rd PEC meeting in 1997 to 5% per annum from January 2004 to June 2008 and 5.5% from July 2008 to June 2009.

Statement of Tariff for Power exchange between Nepal and India

Year	Tariff for System Voltage			
	33 kV	132 kV	11 kV	Koshi Supply
2004	3.10	2.87	3.34	2.22
2005	3.25	3.01	3.49	2.33
2006	3.41	3.15	3.67	2.44
2007	3.59	3.32	3.86	2.57
2008 Jan. - June	3.77	3.49	4.05	2.70
2008 July - Dec.	3.86	3.57	4.15	2.75
2009 Jan. - June	3.96	3.66	4.26	2.83

Note :
1. Rate fixed for 33 kV System excluding Koshi Supply
2. For 132 kV System a Rebate of 7.5% on 33 kV rate
3. For 11 kV System a Surcharge of 7.5% on 33 kV rate
4. For Koshi Supply Tariff is fixed on 14:10 Ratio

A model PPA document has been drafted during FY 2006/07 and is conducting a power purchase price study and policy for power purchase from IPP Projects up to 10 MW.

Information Technology Department

Information Technology Department has developed and implemented a number of new application softwares in FY 2006/07. It has also conducted training on Customized Accounting and Inventory System (CAIS) to the concerned staffs from various NEA offices.

The Department has expanded its network nodes and implemented CAIS in various budget centers. Now 111 centers are equipped with the CAIS. Payroll system was updated with additional facilities and was implemented at fifteen centers.

The new application that was developed in 2006/07 includes Interactive Voice Response System (IVR), Office Management System, Power Station Maintenance System with Enhanced Performance Reward Calculations (PMSEPR) and No-light Management System. IVR System is implemented at six of the DCS Centers and PMSEPR has been tested and ready to be delivered to all the power stations. Most of the information about NEA activities can be downloaded from the NEA website: www.nea.org.

Group Photograph of Delegates for Power Exchange Committee Meeting

Internal Audit

During FY 2006/07, the office of Deputy Managing Director (DMD), Internal Audit carried out 281 audits of accounts and various activities in all core business units and corporate offices in NEA. This is nearly 25 percent more than 225 audits carried in FY 2005/06. These audits include financial audit, management audit, technical audit and energy audit.

In FY 2006/07, a total of 253 financial audits were carried out all over the country to ensure compliance, effectiveness of internal control system, integrity, reliability and efficiency. In previous year, the no. of financial audits was only 225. This can be seen as improvement over the past despite limited mobility due to security problems in Terai.

Technical audit division conducted 13 technical audits in FY 2006/07 which cover especially distribution, transmission and generation, that primarily include performance evaluation, compliance with norms and standards and cost effectiveness.

During the review period, energy audits in 11 Distribution Centers were carried out. Field inspections were conducted during audit process in order to ensure application of adequate control measures by the Distribution Centers. Similarly, on sample basis, management audit in 4 units were conducted during the fiscal year. Necessary corrective actions are being taken by respective units on audit observations.

In FY 2006/07, various need-based trainings were provided to internal audit staff within and outside of the country. A group of internal audit staff were sent to India for training in coordination with Institute of Cost and Works Accountants of India (ICWAI). Likewise various trainings that include computerized auditing were also organized by NEA Training Center. These trainings are highly valuable as these provide the management tools essential for increasing competency and efficiency in the changing business environment.

The office of DMD, Internal Audit prepared and submitted annual internal audit report for FY 2005/06. An energy audit manual was prepared and finalized by the consultant SNV Lavalin, Canada, in coordination with the Institutional Strengthening Project of NEA. Also, Internal Audit Manual was revised and Risk Based Audit Guideline and Information System Audit Guidelines were prepared with the assistance of local consultants.

An Interaction Programme

Finance

The corporate level Finance of NEA is responsible for overall corporate financial activities. It is headed by the Deputy Managing Director and is organized into two Departments, namely, Corporate Finance Department and Finance & Accounts Department, each headed by a Director.

Corporate Finance Department

In FY 2006/07, NEA registered a growth of 11.10% in total sales despite transitional situation in the country. This growth in sales is less than the projected target by 4.41%. Internal sales were increased by 12.59% to reach 2179.89 GWh whereas exports (sales to India) were decreased by 18.95% compared to FY 2005/06. Export to India stood at 78.25 GWh. Net revenue from Internal sales amounted to NRs. 14,309.21 million for FY 2006/07 as against NRs. 12,789.55 million in the previous year, thereby, registering an increase of 11.89%. Export sales revenue was NRs. 489.04 million compared to NRs. 579.33 million in the previous fiscal year registering a decrease of 15.58%. Total rebate given to the customers amounted to NRs. 322.40 million, an increase of 6.11% over that of the previous fiscal year.

In the year under review, NEA's income from other services such as surcharge, interest, lease rent, service charge, dividend etc. was NRs 878.70 million which is higher by 37.32% as compared to the previous year's figures. The contribution of income from other services to the total income is 5.61%. Total income after rebate stood at NRs. 15,677.00 million showing an increase of 12.20% over the total income of FY 2005/06.

NEA's total operation and maintenance expenditure amounted to NRs. 13,766.90 million, an increase of 11.22% over the previous year's expenditure of NRs 12,378.20 million. Power purchase increased by 10.72% to reach a total amount of NRs. 7,077.70 million. This is 44.22% of the total expenditure.

Interest expenditure, the second largest component of the total expenditure was decreased by 14.79% over previous year's figure to register a total amount of NRs. 2,599.70 million. NEA's cost of debt has been reduced due to the reduction of interest rate of government loan from 10.25% to 8% from FY 2006/07.

Staff cost amounted to NRs. 1,810.30 million in FY 2006/07 which is an increase of 4.00% over previous year's cost. This increase was due to the increment in dearness allowance by 10% and regular increment of grade by 2%. Staff cost amounted to about 11.31% of the total cost. Likewise, Operation & Maintenance expenses increased by 12.90% to reach a figure of NRs. 1,694.04 million. Major civil repair and maintenance of Trishuli Hydroelectric Project dam, vehicles maintenance, cost increase due to natural calamities like snowfall, storm and flood at various places and rise in price of various construction materials contributed to this increase in costs.

Depreciation, royalty, prior years' adjustments and other expenditure which included deferred revenue expenditure, loss of other assets and provisions amounted to NRs. 1,880 million, NRs. 969.38 million, NRs. 500 million and NRs. 455.40 million respectively.

NEA's total cost of sales has been decreased compared to FY 2005/06 but direct operating cost has increased mainly because of inflation and expansion of service in rural areas. However, there is no mechanism to recover/adjust those costs at present. Hence NEA has applied for automatic tariff

adjustment which is yet to be approved by the Tariff Fixation Commission. NEA considers tariff increase as the measure of last resort. FY 2006/07 was the sixth in the sequence of years for which NEA has to operate its business without bonafide tariff adjustment, which resulted a loss of NRs 0.54 for each KWh sold to the customers. This figure is less by 43% in comparison to FY 2005/06.

Despite more than 94.20% collection rate of internal sales, NEA's cash situation was still not satisfactory in the year. Public sector and street light dues still remains a serious problem. The outstanding receivable balances from municipalities and government offices and public institutions stood at approximately NRs. 2 billion at the end of the fiscal year. Additional fund requirement for various projects including Middle Marsyangdi HEP further exacerbated the cash crunch. In FY 2006/07, NEA spent over NRs.1 billion as additional disbursement to Middle Marsyangdi HEP. In order to overcome the problem of cash shortage, NEA has already initiated the process for issuance of Power Bonds, which is the first of its kind in Nepalese capital market.

Institutional strengthening process has been introduced through Institutional Strengthening Project, a subcomponent of Power Development Project under the financial assistance of the World Bank. The consultant has submitted the final report which stressed the need for enhancement of the present capabilities in finance, accounts, and internal audit through training and process mapping by NEA and introduction of new computerised financial accounting system. NEA has requested donor agencies for funding the institutional strengthening of NEA.

Finance and Accounts Department

NEA´s revalued fixed asset at the end of the FY 2006/07 reached NRs. 62,121.30 million as compared to NRs. 61,573.00 million at the end of previous fiscal year. Total revenue in FY 2006/07 was NRs. 15,677.00 million in comparison to NRs. 13,971.80 million in FY 2005/06, which was an increase of 12.20% over the figures of previous year.

Total operating expenses under generation, transmission, distribution and administration in the FY 2006/07 stood at NRs. 8,958.50, NRs. 276.10, NRs. 1,938.20 and NRs. 564.10 million respectively. As compared to previous fiscal year's figures, the expenses under the above headings increased by 10.59%, 18.96%, 13.76% and 34.47 % respectively, whereas the total expenses increased by 11.22%. Although the operating surplus was registered from NRs 1593.60 million to NRs 1,910.10 million in FY 2006/07, NEA suffered a net loss of NRs. 329.60 million which is 74.00% lower than that of previous year's loss figure of NRs. 1,267.80 million. The main reason for this improvement was the substantial savings in power purchase cost due to the devaluation of US Dollar exchange rate and profit in the account of interest and loan repayable in Japanese Yen. Furthermore, the government has reduced interest rate from 10.25% to 8.0% on long term loan. These developments have helped in improving financial performance of NEA as compared to earlier years. However, NEA continued to suffer loss for the seventh year in a row due to various reasons.

In FY 2006/07, NEA invested NRs. 9,148.60 million in capital works and projects of which NRs. 4,461.50.1 million comprised of government equity, NRs. 2,106.68 million came as government loan and NRs.2,580.42 million was borne from NEA´s internal source.

NEA has invested NRs 883.49 million in subsidiary and others till FY 2006/07 of which NRs 489.60 million

has been invested in equity of Chilime Hydro Power Co. Ltd. (CHPCL), a subsidiary of NEA. In FY 2006/07, NEA collected 35% (NRs 171.36 million) dividend from CHPCL. It is expected that CHPCL's financial performance will be even better in future, which will influence the share price. NEA also benefited from the growth of assets because of large increase in CHPCL investment values in the market. Other investments of NEA include equity investment in Nepal Engineering Consultancy (NRs 2.28 million), Khumbu Bijuli Co (NRs 20.65 million), Salleri Chaylsa Hydro Electric Co (NRs 11.63million) and Butwal Power Co (NRs 8.86 million) .NEA has not realized any gain from the above companies except Butwal power Co. In FY 2006/07, NEA received NRs 2.57 million as dividend (30%) from BPC. NRs 350.47 million have been invested till the end of FY 2006/07 in Citizen Investment Trust (CIT) for equalization of gratuity and pension liability.

NEA´s total borrowing stood at NRs. 51,672.70 million as of end of FY 2006/07..In FY 2006/07, NEA paid NRs. 733.20 million for interest, NRs. 940.40 million for royalty and NRs. 600.80 million for repayment of loan to government. Likewise, NRs.1,697.50 million was provided for Middle Marsyangdi HEP funding.

The financial audit for FY 2005/06 was completed and approved. In the past fiscal year the financial statements together with auditor's report were filed with the concerned authorities. Similarly, tax Audit for the above period was finalized and tax return (loss return) was also submitted to Inland Revenue Department by claiming previous year's forwarded losses as per the provision of Income Tax Act 2058.

In order to achieve better financial discipline, accountability and control in executing the Business Group's financial transaction and activities, interaction programs have been conducted in regional and central level focusing on accounting, financial and major audit issues. As a result of this program, positive symptoms have been noticed in the area of inter unit reconciliation, identification and verification of assets and compliance with financial delegations and disciplines.

NEA has initiated conversion of its manual accounting system by replacing computerized system in a phased manner. Oracle based Customized Accounting and Inventory System (CAIS) was introduced and to date 100 budget centers are using financial accounting module. Out of 111 budget centers, inventory module is used only in 75 budget centers. NEA is planning to go into full automation covering Small Hydro and projects .This will facilitate to consolidate the accounts and complete the financial and tax audit at stipulated time. This will help to improve the financial reporting system of NEA and will also help to comply with the loan covenants of donor agencies.

During the FY 2006/07, pending audit qualification out of the total outstanding NRs 767.97 million of the period FY 1973/74 to FY 1993/94, NRs 622.00 million has been settled down and rest is in process. This achievement is remarkable.

NEA is required to achieve a number of covenants in respect of borrowing from the donor agencies. Major covenants related to finance are Rate of Return (ROR) (6%), Self Financing Ratio (SFR) (23%), Debt Service Coverage Ratio (DSCR) (1.2 times) and Average Collection Period (ACP) (3 months). In FY 2006/07, NEA achieved 4.41% ,25.26 %, 1.07 times and 3.96 months in respect of ROR, SFR, DSCR, and ACP respectively.

Nepal Electricity Authority

Highlights of FY 2006/07

DESCRIPTION	2006/07*	2005/06	Increase (Decrease)	
			Difference	Percent
Revenue:				
Net Sale of Electricity (million.NRs.)	14,798.30	13,331.90	1,466.40	11.00
Income from other Services (million.NRs.)	878.70	639.90	238.80	37.32
Total Revenue (million.NRs.)	**15,677.00**	**13,971.80**	**1,705.20**	**12.20**
Operating Expenses:				
Generation Exps. (incl. Power Purchase) (million.NRs.)	8,958.50	8,100.60	857.90	10.59
Transmission Expenses (million.NRs.)	276.10	232.10	44.00	18.96
Distribution Expenses (million.NRs.)	1,938.20	1,703.70	234.50	13.76
Administration Expenses (million.NRs.)	564.10	419.50	144.60	34.47
Depreciation Expenses (million.NRs.)++	1,880.00	1,816.90	63.10	3.47
Deferred Revenue Expenditure (million.NRs.)	150.00	105.40	44.60	42.31
Total Operating Expenses (million.NRs.)	**13,766.90**	**12,378.20**	**1,388.70**	**11.22**
Operating Surplus (million.NRs.)	**1,910.10**	**1,593.60**	**316.50**	**19.86**
Interest on Long-Term Loans (million.NRs.)	(2,599.70)	(3,050.90)	451.20	(14.79)
Other Exp/Income including prior year's adj. (million.NRs.)	360.00	189.50	170.50	89.97
Net Income/(Loss) (million.NRs.)	**(329.60)**	**(1,267.80)**	**938.20**	**(74.00)**
Longterm Loans (million.NRs.)	51,672.70	50,636.80	1,035.90	2.05
Net Revalued Fixed assets (million.NRs.)	62,121.30	61,573.00	548.30	0.89
Number of Consumers	1,392,055.00	1,277,447.00	114,608.00	8.97
Total Sales of Electricity (GWh)	2,258.14	2,032.62	225.52	11.10
Internal Sale (GWh)	2,179.89	1,936.07	243.82	12.59
Annual Average Consumer's Consumption (kWh)+	1,565.95	1,515.58	50.37	3.32
Average price (NRs./kWh)+	6.55	6.56	(0.01)	(0.09)
Peak Load Interconnected System (MW)	648.39	603.28	45.11	7.48
Total Available Electric Energy (GWh)	3,051.82	2,780.92	270.90	9.74
Hydro Generation (GWh)	1,747.42	1,568.55	178.87	11.40
Purchased Energy (GWh)-India	328.83	266.23	62.60	23.51
-Nepal(Internal -GWh)	962.26	930.04	32.22	3.46
Average Power Purchase Rate(NRs./KWh)+++	5.48	5.34	0.14	2.62
Exported Energy (GWh)	78.25	96.55	(18.30)	(18.95)
Thermal Generation (GWh)	13.31	16.10	(2.79)	(17.33)
Self Consumption (GWh)	32.50	30.00	2.50	8.33
Net System Losses (Percentage)	**24.94**	**25.12**	**(0.18)**	**(1.00)**

Note:
* Provisional figures; Subject to final audit.
+ on total sales
++ On Historical Assets.
+++ Internal & Import

Nepal Electricity Authority

Balance Sheet as at July 16, 2007

(Fig. in million)

Particular	*2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Capital and Liabilities										
Capital and Reserve										
Share Capital	27574.6	23113.1	20161.8	18215.9	16976.9	16601.3	15360.3	14634.0	13365.8	12324.3
Reserve and Accumulated Profit	3954.7	4284.3	4826.1	4550.6	5584.3	8153.8	10492.7	11689.6	12040.3	13464.5
Secured Long Term Loan	51672.7	50636.8	48686.4	45252.0	43786.0	41474.5	36707.5	30155.7	23824.3	20848.4
Grand Total	**83202.0**	**78034.2**	**73674.3**	**68018.5**	**66347.2**	**66229.6**	**62560.5**	**56479.3**	**49230.4**	**46637.2**
Asset										
Fixed Assets (Net)	62121.3	61573.0	61286.8	58963.4	56949.0	58538.2	37104.0	35196.0	31223.0	29891.3
Capital Work in Progess	28651.8	21991.5	16060.4	10619.6	8655.5	4837.8	23640.0	18947.0	16542.7	14179.0
Investment	883.4	819.9	777.0	713.0	613.0	553.0	517.1	521.1	326.1	247.7
Sub Total	**91656.5**	**84384.4**	**78124.2**	**70296.0**	**66217.4**	**63929.0**	**61261.1**	**54664.1**	**48091.8**	**44318.0**
Current Asset										
Inventories	1130.3	1354.8	1372.7	1048.0	1017.2	1058.1	960.9	982.3	740.0	914.9
Sundry Debtors and Other Receivable	4765.7	4088.0	3697.7	3735.7	3380.2	2284.9	1678.5	1525.5	1530.9	1435.4
Cash and Bank Balance	1006.7	1258.6	1322.6	1036.4	1076.2	664.6	1039.3	1321.3	1148.1	1632.3
Prepaid,Advance, Loan and Deposits	2489.1	2293.9	2098.6	2063.3	2216.9	3314.4	2634.9	1932.0	1634.2	1709.6
Total Currents Asset	**9391.8**	**8995.3**	**8491.6**	**7883.4**	**7690.5**	**7322.0**	**6313.6**	**5761.1**	**5053.2**	**5692.2**
Less: Current Liabilities and Provision										
Sundry Creditors and Payables	17211.9	14995.5	12619.8	9707.7	7444.8	4703.9	5070.80	4488.5	4349.7	3555.7
Provision	1015.2	709.8	697.7	681.5	753.3	1244.2	1042.90	988.9	436.8	449.3
Total Currrent Liabilities and Provision	**18227.1**	**15705.3**	**13317.5**	**10389.2**	**8198.1**	**5948.1**	**6113.7**	**5477.4**	**4786.5**	**4005.0**
Net Currents Assets	**-8835.3**	**-6710.0**	**-4825.9**	**-2505.8**	**-507.6**	**1373.9**	**199.9**	**283.7**	**266.7**	**1687.2**
Deferred Expenditures (To be Written Off)	35.2	32.4	126.7	250.0	506.8	916.5	978.6	1302.8	615.0	443.3
Inter Unit Balance(Net)	345.6	327.4	249.3	-21.7	130.6	10.2	120.9	228.7	256.9	188.7
Total Def. Exp.& Inter.	**380.8**	**359.8**	**376.0**	**228.3**	**637.4**	**926.7**	**1099.5**	**1531.5**	**871.9**	**632.0**
	83202.0	**78034.2**	**73674.3**	**68018.5**	**66347.2**	**66229.6**	**62560.5**	**56479.3**	**49230.4**	**46637.2**

* Provisional

Nepal Electricity Authority

Income Statement for the FY July 16, 2007

(Fig. in million)

Particulars	**2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Sales	14798.3	13331.9	12,605.2	11,874.7	11,012.6	9,476.2	8,160.80	6,856.00	5,396.70	5,082.50
Cost of sales	**9234.6**	**8,332.7**	**7,462.4**	**6,765.4**	**5,348.0**	**5,886.7**	**4,480.70**	**2,190.30**	**1,950.50**	**1,743.60**
Generation	8958.5	8100.6	7,246.5	6,565.9	5,169.4	5,728.7	4,343.40	2,068.53	1,849.32	1,642.82
Transmission	276.1	232.1	215.9	199.5	178.6	158.0	137.30	121.73	101.18	100.78
Gross profit	**5563.7**	**4,999.2**	**5,142.8**	**5,109.3**	**5,664.6**	**3,589.5**	**3,680.10**	**4,665.70**	**3,446.20**	**3,338.90**
Other income	878.7	639.9	617.5	671.4	512.5	459.6	593.10	356.40	384.70	350.20
Distribution Expenses	1938.2	1703.7	1,484.2	1,376.1	1308.6	1,174.4	982.22	711.53	600.26	546.69
Administrative Expenses	564.1	419.5	622.4	489.1	536.10	447.4	850.08	703.47	629.24	564.21
Profit from operation	**3940.1**	**3,515.9**	**3,653.7**	**3,915.5**	**4,332.4**	**2,427.3**	**2,440.90**	**3,607.10**	**2,601.40**	**2,578.20**
Interest	2599.7	3050.9	3,079.8	2,991.5	2,973.4	1,395.5	1,188.20	1,244.30	1,141.20	1,317.20
Depreciation	1880.0	1816.9	1,733.5	1,686.0	1,656.7	1,420.1	1,119.30	948.80	976.40	696.70
(Profit) loss on foreign Exchange	-470.0	42.7	-230.0	59.1	0.0	271.6	0.00	0.00	0.00	0.00
Loss on fixed assets	60.0	65	40.0	0.0	191.5	37.0	0.00	0.00	0.00	0.00
Deferred revenue expenditure writen off	150.0	105.4	123.3	320.1	411.1	512.5	426.90	440.80	236.80	270.10
Sub total	**4219.7**	**5,080.9**	**4,746.6**	**5,056.7**	**5,232.7**	**3,636.7**	**2,734.40**	**2,633.90**	**2,354.40**	**2,284.00**
Profit/ loss from operation including interest+Dep.	***-279.6***	***-1,565.0***	***-1,092.9***	***-1,141.2***	***-900.3***	***-1,209.4***	***-293.50***	***973.20***	***247.00***	***294.20***
Prior years adjustment (net)	50.0	-297.2	219.9	344.9	444.4	492.0	291.60	-216.70	-79.40	-91.70
Net profit/ loss before tax	**-329.6**	**-1,267.8**	**-1,312.8**	**-1,486.1**	**-455.9**	**-717.4**	**-1.90**	**756.50**	**167.6**	**202.50**
Provision for Tax	0.0	0	0	-274.2	1,497.8	143.3	49.10	571.40	263.60	28.80
Net profit/ loss after tax	**-329.6**	**-1,267.8**	**-1,312.8**	**-1,760.3**	**-1,953.7**	**-860.7**	**-51.00**	**185.10**	**-96.0**	**173.70**
Balance of profit asper last account	-6095.8	-4,808.0	-3,475.2	-1,694.9	278.9	1,159.6	1,230.60	1,065.30	1,181.50	1,027.80
Total profit Available for appropriation	-6425.4	-6,075.8	-4,788.0	-3,455.2	-1,674.9	298.9	1,179.60	1,250.60	1,085.50	1,201.80
Insurance fund	20.0	20.0	20.0	20.0	20.0	20.0	20.00	20.00	20.20	20.00
Profit /loss transferred to balance sheet	**-6445.4**	**-6,095.8**	**-4,808.0**	**-3,475.2**	**-1,694.9**	**278.9**	**1,159.60**	**1,230.60**	**1,065.30**	**1,181.50**

* Provisional

Accounting Policies

Basis of Accounting

The financial statements have been prepared on the basis of historical cost convention, modified to include the effect of revaluation of fixed assets as per the generally accepted accounting principles which are compatible with certain International Accounting Standards, to the extent applicable. The financial statements are prepared as per Nepal Accounting Standards except where stated otherwise and presentational requirement of the Company Act- 2063

Revenue from Sale of Electricity

(a) Revenue from sale of electricity is recognized at the time of rising of bills on the customers, as per the billing cycle. Revenue from the billing cycle date up to 16 July has been accrued taking average rates. Revenue from sale of electricity is shown net of rebate.

(b) Accounting of rebate, surcharge for delayed payments and liquidated damages, obligations have been done on cash basis.

Income from Other Services

(a) Revenue from other services is recognized on cash basis.

(b) Interest on investments in call and time deposits is recognized on accrual basis.

(c) (iii)Dividend on investment in shares is recognized at the time of receipts.

(d) Revenue from services provided by Engineering Services is accounted for on cash basis on the completion of the relevant job.

Fixed Asset

(a) Fixed assets (other than those identified in paragraph (ii) below, which continue to be stated at their historical cost) are stated at their revalued figures less accumulated depreciation. However, transmission lines below 33 kV have been considered for annual revaluation only from FY1991/92 by applying the multiplying factor as applied to other revalued assets.

(b) The following assets are stated at their historical cost less accumulated depreciation

(i) Solar Power Plant

(ii) Meter and Metering Equipment

(iii) Consumer Service

(iv) Public Lighting

(v) Tools and Instruments

(vi) Vehicle and Mobile Plant

(vii) Furniture and Fixtures

(viii) Office Equipment

(ix) Miscellaneous Properties

(c) The cost of acquisition, construction/erection includes interest on loans related to the period of construction/erection up to the date of completion of the project, along with other

incidental costs and charges attributable to bringing the asset to its working condition for its intended use. The incidental costs include proportionate overheads relating to the following offices at the rates given below:

(a)	Planning	50%
(b)	Distribution and Consumer	10%
(c)	Development	50%
(d)	Finance and Administration	10%

(d) Liabilities on foreign currency loans which remained unpaid at the year end are converted at the year end exchange rates. The profit/loss arising there from is charged to the Income Statement. During the year, NRs. 470.0 million of gain on foreign exchange is credited to Income Statement.

Revaluation of Fixed Assets

(a) A major portion of fixed assets was revalued during the FY 1988/89 and FY1989/90, using the 'net replacement cost approach' on the basis of reports of independent valuers. The assets revalued, together with subsequent additions made thereon, are subject to an annual revaluation by adopting a single multiplying factor computed by using the average index numbers of inflation provided by the World Bank for FY 2005/06 for foreign and local component in the ratio 80:20. Independent valuers are not used for annual revaluation of fixed assets.

(b) The multiplying factor computed for the FY 2005/06 and applied to the assets for annual revaluation was 3.17%.As the multiplying factor is under process of determination for FY 2006/07, fixed assets are presented at previous revalued costs plus addition made in FY2006/07.

(c) Revaluation factor is not applied in the case of fixed assets whose value has already been reduced to NRs. 1 under the historical cost convention to the extent identified. However, assets under distribution lines have been revalued irrespective of the net book value.

Contributions from Customer/Local Authorities

Contributions received from the customers/local authorities against fixed assets installed/commissioned by NEA, were treated as capital reserve and these were not deducted from the cost of respective fixed assets up to FY1996/97. With effect from FY1997/98 such contributions are netted off from the respective fixed assets. An amount aggregating to NRs. 196.05 million on account of consumer contribution pertaining to earlier years has not been adjusted but disclosed in the financial statements as Capital Reserve.

Depreciation

(a) Depreciation is provided on straight-line method on all fixed assets, at the following rates:

(b) The applicable depreciation rate on building on revaluation basis is applied on 90% of the value of the building.

(c) On assets sold/scrapped etc. during the year, depreciation is not provided up to the date of sale/discard/disposal.

(d) Depreciation on changes in value of fixed assets due to impact of revaluation is provided retrospectively.

S. N.	Assets	Revalued Cost Basis	Historical Cost Basis
1	Land	-	-
2	Buildings	1.00%-2.00%	2.00%
3	Hydro Electric Structures	2.00%-2.90%	2.00%-3.00%
4	Hydro Electric Plant & Machinery	3.35%-5.00%	3.00%
5	Internal Combustion on plant & machinery	4.00%	2.50%
6	Transmission lines (66 kV, 132 kV and above)	3.35%	3.00%
7	Transmission lines (33 kV)	5.00%	3.00%
8	Transmission Substations	4.00%	3.00%
9	Distribution system (including below 11 kV Transmission lines)	4.00%-5.00%	3.00%-4.00%
10	Solar Power	-	3.00%
11	Meter & mobile plant metering equipment	-	10.00%
12	Consumer Services	-	7.00%
13	Public lighting	-	3.00%
14	Vehicles, tools and instruments, furniture and fixtures.	-	20.00%
15	Office Equipment	-	15.00%
16	Miscellaneous properties	-	50.00%
17	Additions during the year	At applicable rates for full year	At applicable rates for half year

Investments

Investments are valued at cost.

Inventories

Inventories are valued at cost, using the weighted average method.

Accounts Receivable

Accounts receivable are stated at book values, less provision as may be considered appropriate by the management.

Deferred Revenue Expenditure

Certain expenditure incurred on training, investigation, survey, feasibility studies of infrastructure projects and major overhauling etc., which are expected to generate benefits over a period of time, are treated as deferred revenue expenditure and written off over a period of five years, including the year in which the said expenditure are incurred.

Employees Benefits

Provision for Pension and Gratuity is made on an ad hoc basis. Such expenses are accounted for on cash basis and provisions made in earlier years against the above expenses heads are being retained in the accounts. The additional provision of gratuity and pension is made at 15% of the total salary less actual amount paid during the year .If any short fall appears then additional provision will be made.

Liability on account of accumulated home and sick leave has been provided for on an estimated basis to cover the liability as at July 16, 2007.

Insurance Fund

Insurance fund is created by setting aside a sum of NRs. 20 million every year irrespective of profit/loss for the year to cover the any loss of fixed assets, in case of any eventuality. However, interest accruing on the above Fund is credited to Income Statement, as per consistent practice. NRs. 320 million (previous year NRs.300 million) earmarked in lieu of insurance fund has been utilized by NEA during the year and the amount set aside every year is not funded on the balance sheet date.

Prior year's figures/ Regrouping

Previous year's figures have been reclassified/regrouped, where necessary, to make them comparable with current year's figures.

Tariff Rates

(Billing Effective since Septermber 17, 2001)

1:	DOMESTIC CONSUMERS				
	A	Minimum Monthly Charge: METER CAPACITY		Minimum Charge (NRs.)	Exempt (kWh)
		Up to 5 Ampere		80.00	20
		15 Ampere		299.00	50
		30 Ampere		664.00	100
		60 Ampere		1394.00	200
		Three phase supply		3244.00	400
	B	Energy Charge:			
		Up to 20 units		Rs. 4.00 per unit	
		21 - 250 units		Rs. 7.30 per unit	
		Over 250 units		Rs. 9.90 per unit	
2:	TEMPLES				
	Energy Charge			Rs. 5.10 per unit	
3:	STREET LIGHTS				
	A	With Energy Meter		Rs. 5.10 per unit	
	B	Without Energy Meter		Rs. 1860.00 per kVA	
4:	TEMPORARY SUPPLY				
	Energy Charge			Rs. 13.50 per unit	
5:	COMMUNITY WHOLESALE CONSUMER				
	Energy Charge			Rs. 3.50 per unit	
6:	INDUSTRIAL			Monthly Demand Charge	Energy Charge
				(Rs./kVA)	(Rs./unit)
	A	Low Voltage (400/230 Volt)			
		(a) Rural and Cottage		45.00	5.45
		(b) Small Industry		90.00	6.60
	B	Medium Voltage (11 kV)		190.00	5.90
	C	Medium Voltage (33 kV)		190.00	5.80
	D	High Voltage (66 kV and above)		175.00	4.60
7:	COMMERCIAL				
	A	Low Voltage (400/230 Volt)		225.00	7.70
	B	Medium Voltage (11 kV)		216.00	7.60
	C	Medium Voltage (33 kV)		216.00	7.40
8:	NON-COMMERCIAL				
	A	Low Voltage (400/230 Volt)		160.00	8.25
	B	Medium Voltage (11 kV)		180.00	7.90
	C	Medium Voltage (33 kV)		180.00	7.80

9:	IRRIGATION				
	A	Low Voltage (400/230 Volt)		-	3.60
	B	Medium Voltage (11 kV)		47.00	3.50
	C	Medium Voltage (33 kV)		47.00	3.45
10:	WATER SUPPLY				
	A	Low Voltage (400/230 Volt)		140.00	4.30
	B	Medium Voltage (11 kV)		150.00	4.15
	C	Medium Voltage (33 kV)		150.00	4.00
11:	TRANSPORTATION				
	A	Medium Voltage (11 kV)		180.00	4.30
	B	Medium Voltage (33 kV)		180.00	4.25

TIME OF DAY (TOD) TARIFF RATES

		Consumer Category &	Monthly Demand	Energy Charge (Rs./unit)		
		Supply Level	Charge (Rs./kVA)	Peak Time	Off-Peak	Normal
				18:00-23:00	23:00-6:00	6:00 - 18:00
A:	High Voltage (66 kV and Above)					
	1	Industrial	175.00	5.20	3.15	4.55
B:	Medium Voltage (33 kV)					
	1	Industiral	190.00	6.55	4.00	5.75
	2	Commecial	216.00	8.50	5.15	7.35
	3	Non-Commercial	180.00	8.85	5.35	7.70
	4	Irrigation	47.00	3.85	2.35	3.40
	5	Water Supply	150.00	4.55	2.75	3.95
	6	Transportation	180.00	4.70	2.95	4.15
	7	Street Light	52.00	5.70	1.90	2.85
C:	Medium Voltage (11 kV)					
	1	Industiral	190.00	6.70	4.10	5.85
	2	Commecial	216.00	8.65	5.25	7.55
	3	Non-Commercial	180.00	9.00	5.45	7.85
	4	Irrigation	47.00	3.95	2.40	3.45
	5	Water Supply	150.00	4.60	2.80	4.10
	6	Transportation	180.00	4.80	3.00	4.25
	7	Street Light	52.00	6.00	2.00	3.00

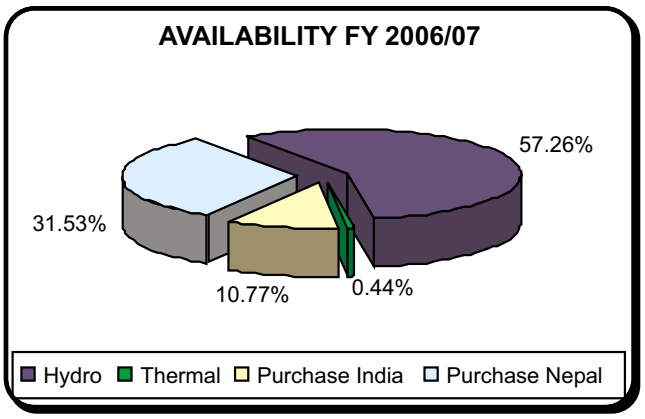
Note:

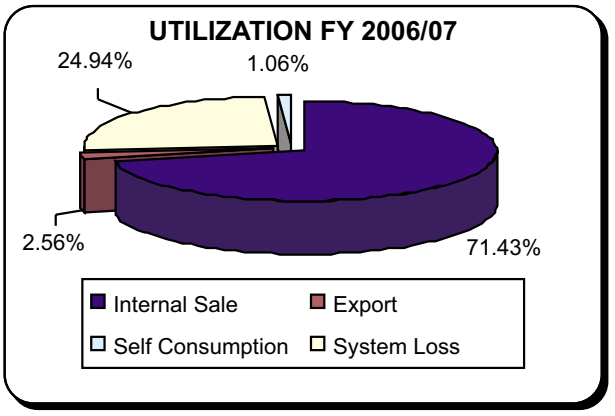
a) If demand meter reads kilowatts (kW) then kVA = kW/0.8

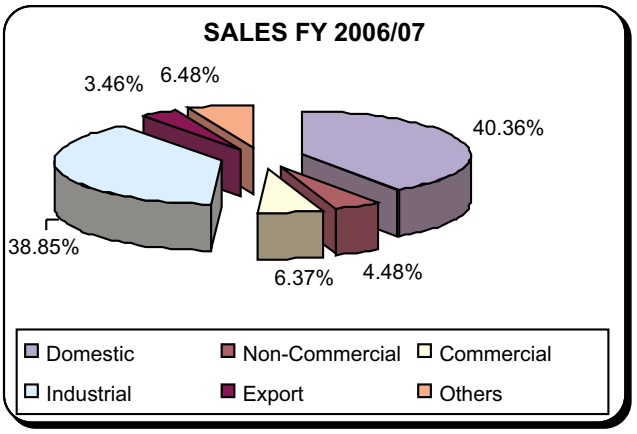
b) 10% discount in the total bill amount will be given to the Government of Nepal approved Industrial District

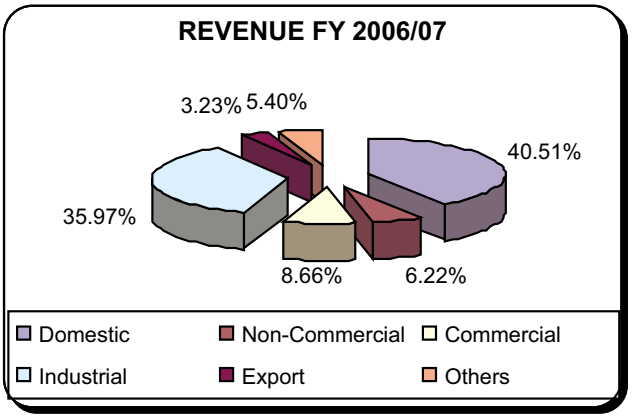
c) 25% discount in the total bill amount will be given to the Nepal Government Hospital and Health Centers (except residential complex)

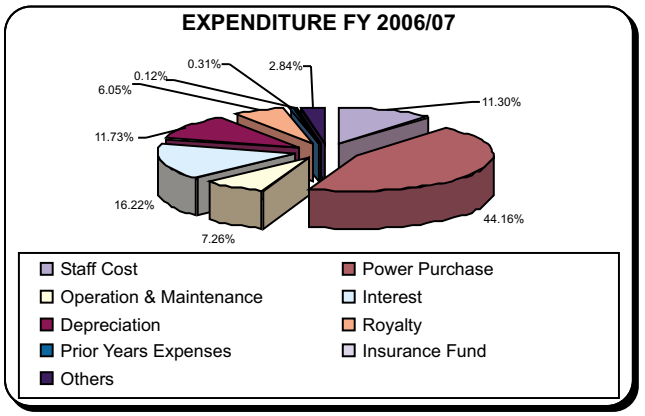
Statistics, Schematics and Maps

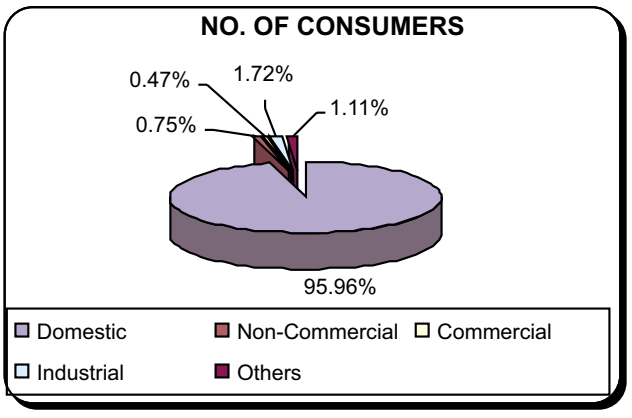




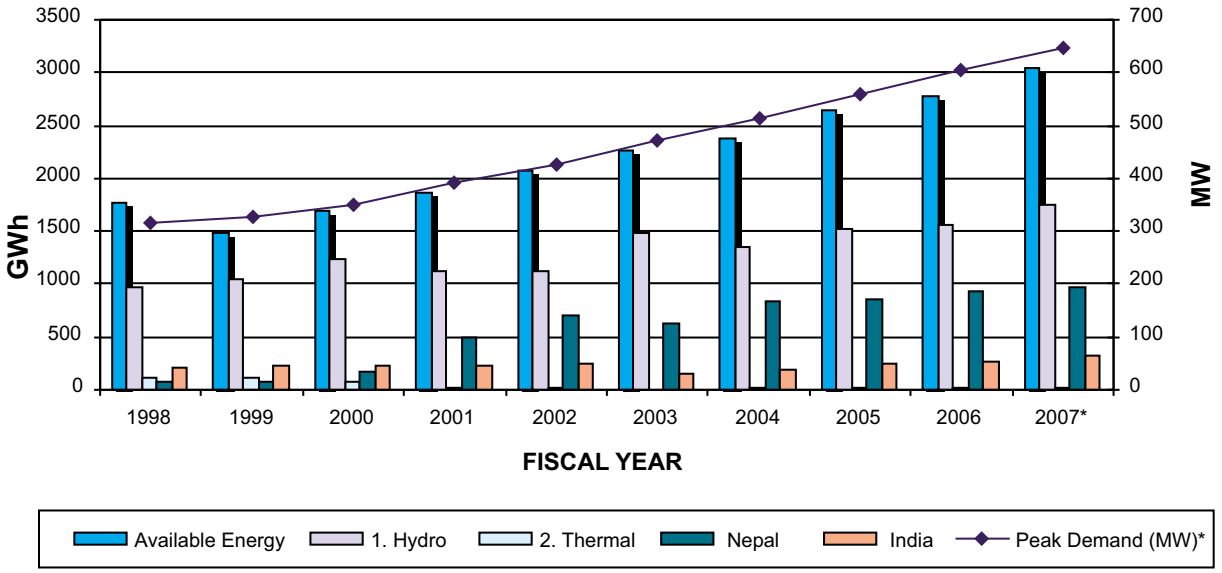








Total Energy Available & Peak Demand



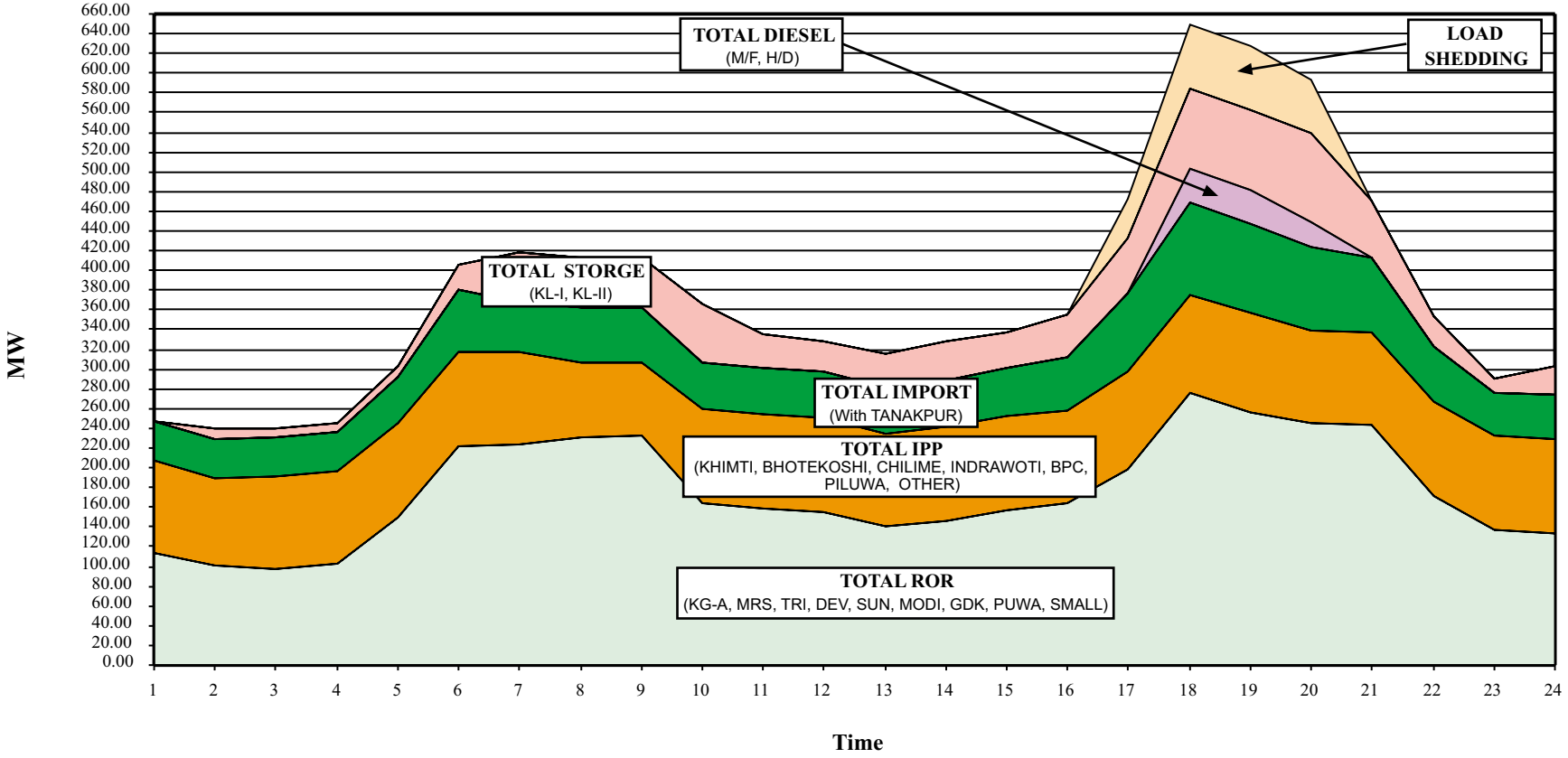
Particulars	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007*
Peak Demand (MW)*	317	326.4	351.9	391	426	470.33	515.24	557.53	603.28	648.39
Available Energy	1773.17	1475	1701.45	1868.42	2066.45	2261.13	2380.89	2642.75	2780.92	3051.82
1. Hydro	971.96	1046.51	1233.22	1113.36	1113.13	1478.04	1345.46	1522.9	1568.55	1747.42
2. Thermal	107.45	118.82	66.73	27.14	17.01	4.4	9.92	13.669	16.1	13.31
3. Purchase from	293.76	309.67	401.5	727.93	936.31	778.69	1025.519	1106.184	1196.27	1291.09
India	210.29	232.39	232.2	226.54	238.29	149.88	186.675	241.389	266.23	328.83
Nepal	83.47	77.28	169.3	501.38	698.02	628.81	838.844	864.795	930.04	962.26

Note :- Peak demand is for all areas covered by integrated system including supply to India
* Provisional figures; Subject to final audit

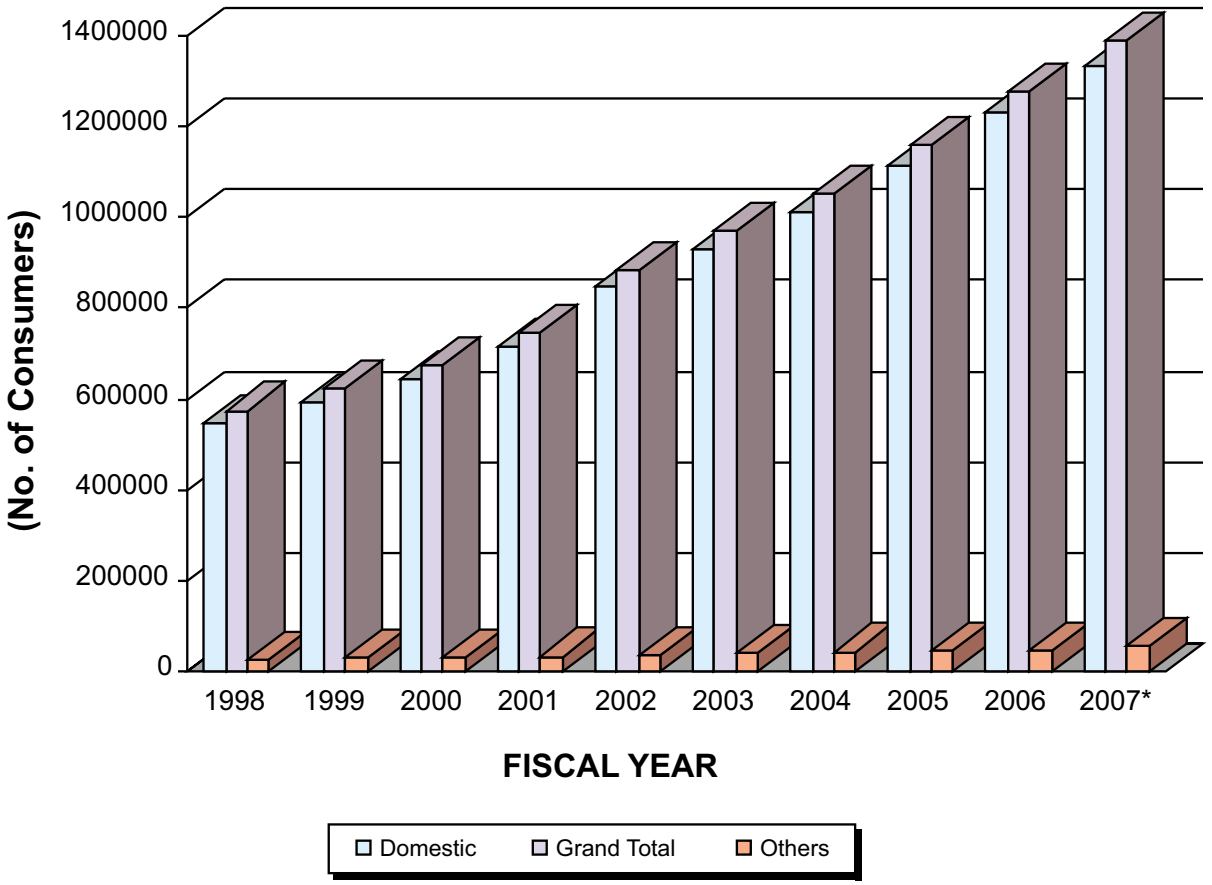
Load Dispatch Center

System Load Curve of Peak Day of the Year
Poush 6, 2063 (December 21, 2006) Thursday

Peak load 648.39 MW at 18.20 hr



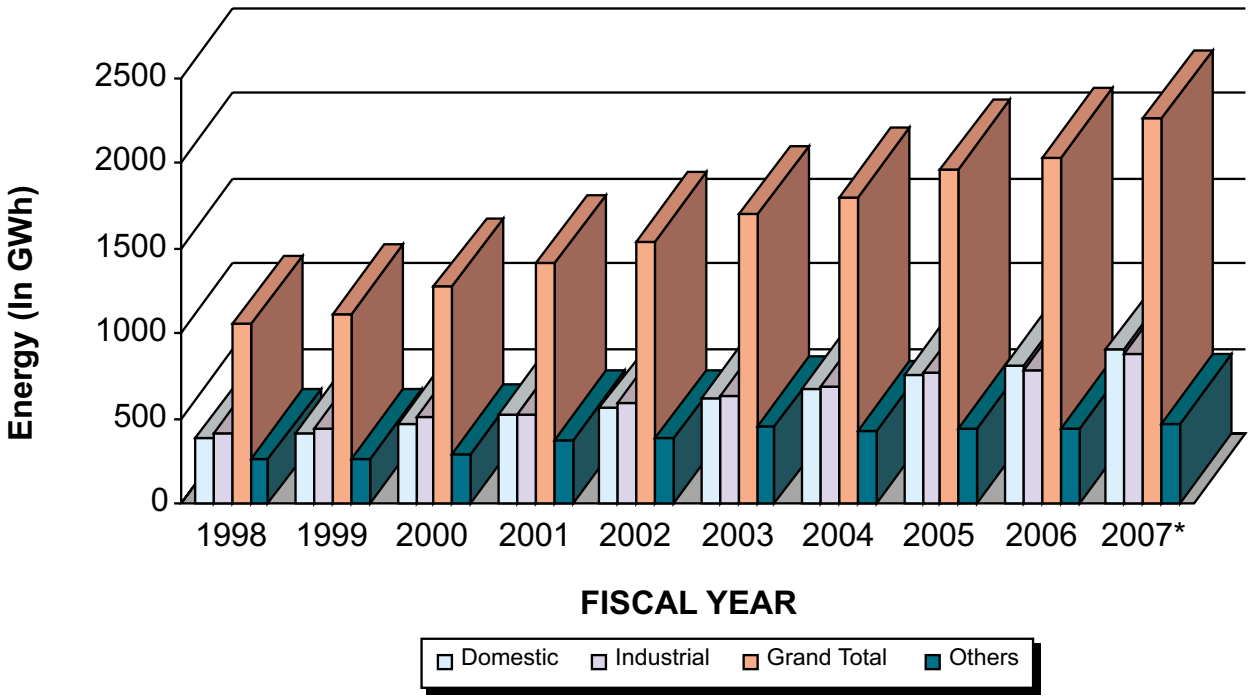
Growth Of Consumers



Particulars	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007*
Domestic	548110	593468	643314	713307	848540	930554	1010719	1113740	1229750	1335748
Non-Commercial	7192	7654	7815	7643	8629	9722	9865	9950	10010	10385
Commercial	2637	2948	3096	3386	3898	5317	5454	6000	6170	6520
Industrial	14062	14996	16179	17701	18789	19833	21374	22500	23020	23963
Water Supply	205	215	232	236	251	305	352	370	380	403
Irrigation	776	876	967	1083	1353	1721	2557	3400	6450	13248
Street Light	683	842	932	1012	1048	1229	1437	1500	1550	1622
Transport	12	21	47	37	49	48	48	50	54	54
Community Sales	-	-	-	-	1	1	15	35	58	107
Total (Internal Sales)	574844	622358	673974	745987	884530	970606	1053930	1159850	1277442	1392050
Bulk Supply (India)	5	5	5	5	5	5	5	5	5	5
Grand Total	574849	622363	673979	745992	884535	970611	1053935	1159855	1277447	1392055

Note : * Provisional figures; subject to final audit.

Electricity Sales

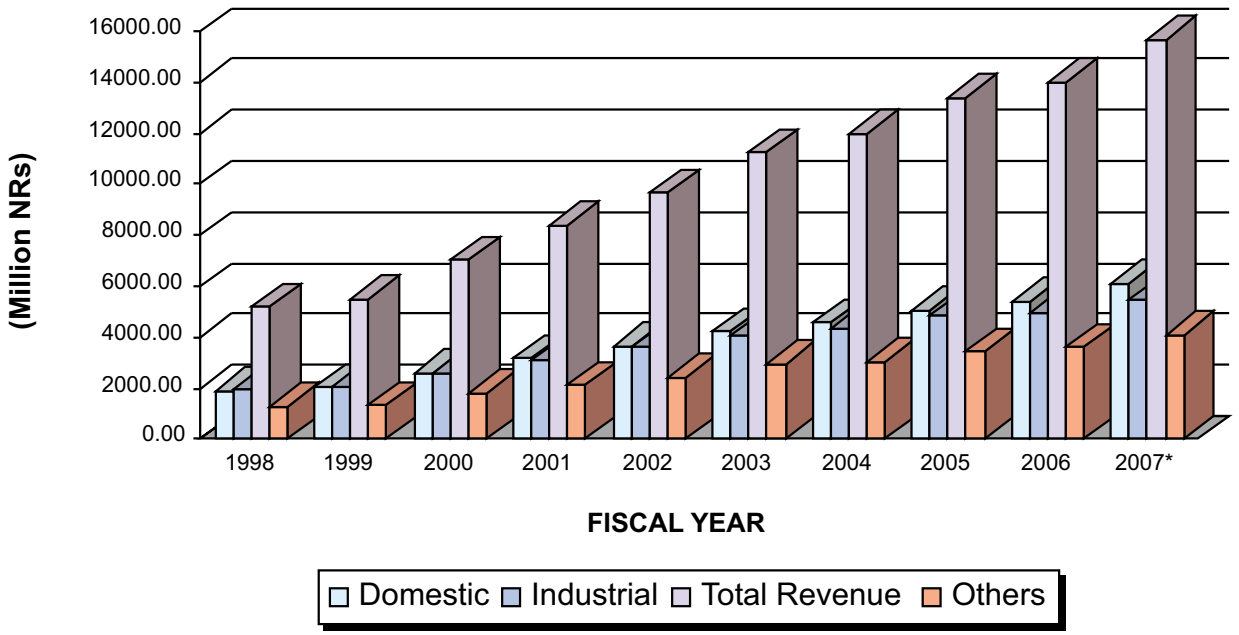


(in GWh)

Category	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007*
Domestic	378.778	410.566	467.049	518.36	557.94	617.11	676.365	758.189	805.72	911.51
Non-Commercial	60.227	62.931	63.592	73.157	78.22	80.736	83.012	100.543	95.29	101.15
Commercial	71.471	77.343	81.822	94.166	90.426	92.741	108.122	109.308	120.3	143.88
Industrial	413.738	440.996	508.357	520.634	596.677	629.505	689.799	764	785.55	877.26
Water Supply & Irrigation	29.045	22.831	15.742	28.6	29.283	29.983	31.671	49.98	45.5	49.43
Street Light	26.585	29.405	31.741	36.981	39.517	45.803	55.196	54.861	63.24	69.48
Temporary Supply	0.711	0.766	0.927	0.826	0.282	0.348	0.251	0.393	0.87	1.28
Transport	1.663	2.598	2.678	5.892	5.635	5.53	5.471	5.803	5.65	6.56
Temple	1.801	1.982	2.366	2.511	2.476	2.811	4.111	4.58	4.77	4.77
Community Sales	-	-	-	-	5.717	4.74	5.581	6.034	9.18	14.57
Total (Internal Sales)	984.019	1049.418	1174.274	1281.127	1400.456	1504.567	1653.998	1853.691	1936.07	2179.89
Bulk Supply (India)	67.41	64.158	95	126	133.857	192.249	141.235	110.702	96.55	78.25
Grand Total	**1051.429**	**1113.576**	**1269.274**	**1407.127**	**1534.313**	**1696.816**	**1795.233**	**1964.393**	**2032.62**	**2258.14**

Note : * Provisional figures; subject to final audit.

Revenue

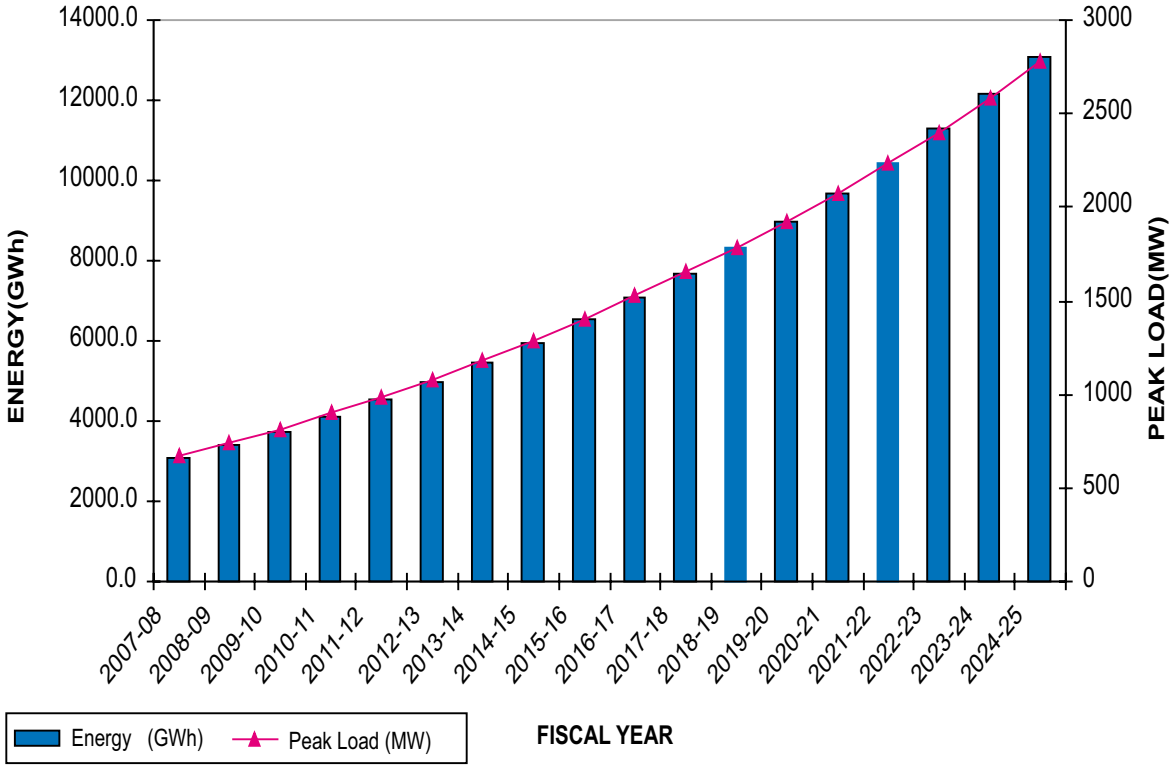


(in million NRs)

Category	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007*
Domestic	1895.85	2056.05	2622.03	3161.38	3641.43	4249.81	4578.99	5079.87	5405.12	6125.33
Non-Commercial	405.14	419.58	527.40	835.78	722.12	783.99	816.01	947.12	881.73	940.73
Commercial	477.04	515.72	661.58	555.62	818.75	894.91	986.07	1015.47	1118.21	1309.29
Industrial	1973.37	2093.88	2599.34	3086.10	3608.13	4039.65	4380.22	4851.40	4978.69	5439.02
Water Supply & Irrigation	100.28	78.14	95.65	120.90	138.68	148.53	154.80	239.97	197.96	224.46
Street Light	101.98	111.37	149.95	176.05	200.74	246.79	329.52	315.45	422.35	466.19
Temporary Supply	7.17	7.06	13.39	6.77	3.63	4.74	3.46	5.50	11.18	17.32
Transport	6.51	9.46	18.31	27.73	27.90	29.29	28.94	30.47	29.78	32.61
Temple	6.71	7.42	9.70	11.45	12.16	14.24	20.80	23.08	24.42	24.67
Community Sales	-	-	-	-	-	16.59	20.09	21.42	23.94	52
Total (Internal Sales)	4974.05	5298.67	6697.35	7981.78	9173.53	10428.53	11318.92	12529.75	13093.38	14631.62
Bulk Supply (India)	199.92	198.15	327.80	396.06	514.12	808.96	673.69	573.44	579.33	489.04
Gross Revenue	**5173.96**	**5496.82**	**7025.16**	**8377.83**	**9687.65**	**11237.49**	**11992.61**	**13103.18**	**13672.71**	**15120.66**
Net Income from Other Services	-	-	-	-	-	-	-	285.86	336.09	556.30
Total Revenue	**5173.96**	**5496.82**	**7025.16**	**8377.83**	**9687.65**	**11237.49**	**11992.61**	**13389.04**	**14008.80**	**15676.96**

Note : * Provisional figures; subject to final audit.

Load Forecast



Year	Energy (GWh)	Peak Load (MW)
2007-08	3081.5	675.2
2008-09	3386.4	740.6
2009-10	3731.0	814.4
2010-11	4129.4	899.6
2011-12	4550.6	989.5
2012-13	4979.3	1080.6
2013-14	5436.1	1177.5
2014-15	5959.1	1288.4
2015-16	6521.2	1407.2
2016-17	7085.9	1526.2
2017-18	7688.1	1652.8
2018-19	8332.5	1788
2019-20	8990.2	1925.5
2020-21	9697.1	2073
2021-22	10457.1	2231.3
2022-23	11274.3	2401.2
2023-24	12153.3	2583.5
2024-25	13099.1	2779.4

Power Development Of Nepal

MAJOR HYDRO POWER

Existing:

1. Trisuli	24,000	kW
2. Sunkosi	10,050	kW
3. Gandak	15,000	kW
4. Kulekhani No. 1	60,000	kW
5. Devighat	14,100	kW
6. Kulekhani No. 2	32,000	kW
7. Marsyangdi	69,000	kW
8. Puwa Khola	6,200	kW
9. Modi Khola	14,800	kW
10. Kali Gandaki "A"	144,000	kW
Total	**389,150**	**kW**

Under Construction:

1. Middle Marsyangdi	70,000	kW
2. Chamelia	30,000	kW
3. Kulekhani III	14,000	kW

Planned and Proposed:

1. Seti (West)	750,000	kW
2. Arun 3	402,000	kW
3. Budhi Gandaki	600,000	kW
4 Kali Gandaki No. 2	660,000	kW
5. Lower Arun	308,000	kW
6. Upper Arun	335,000	kW
7. Karnali (Chisapani)	10,80,000	kW
8. Upper Karnali	300,000	kW
9. Pancheswor	6,480,000	kW
10. Thulo Dhunga	25,000	kW
11. Tamur/Mewa	101,000	kW
12.Upper Trisuli	61,000	kW
13. Dudh Kosi (Storage)	300,000	kW
14. Budhi Ganga	20,000	kW
15. Rahughat Khola	27,000	kW
16. Likhu-4	40,000	kW
17. Kabeli "A"	30,000	kW
18. Upper Marsyangdi "A"	121,000	kW
19. Kulekhani No. 3	14,000	kW
20. Andhi Khola (Storage)	180,000	kW
21. Khimti II	27,000	kW
22. Upper Modi	14,000	kW
23. Langtang Khola (Storage)	218,000	kW
24. Madi Ishaneswor (Storage)	86,000	kW
25. Upper Seti (Storage)	122,000	kW
26. Kankai (Storage)	60,000	kW
27. Upper Tama Kosi	309,000	kW
28. Upper Modi 'A'	42,000	kW
29. Hewa Khola	10,000	kW
30. Upper Trisuli 3 B	44,000	kW
Total:	**12,76,6000**	**kW**

THERMAL POWER STATIONS

Existing:

1. Biratnagar***	1,028	kW
2. Hetauda	12,750	kW
3. Marsyangdi	2,250	kW
4. Duhabi Multifuel-1	26,000	kW
5. Duhabi Multifuel-2	13,000	kW
Total	**55,028**	**kW**

SMALL HYDRO POWER

Existing (Grid Connected)

1. Pharping	500	kW
2. Panauti	2400	kW
3. Sundarijal	640	kW
4. Phewa (Pokhara)	1,088	kW
5. Seti (Pokhara)	1,500	kW
6. Tinau (Butwal)	1,024	kW
7. Baglung	200	kW
8. Tatopani/Myagdi (i+ii)	2,000	kW
9. Jomsom**	240	kW
10. Chatara	3,200	kW
Total	**12,792**	**kW**

Existing (Isolated):

1. Dhankuta	240	kW
2. JHhupra (Surkhet)	345	kW
3. Doti	200	kW
4. Phidim**	240	kW
5. Gorkhe (Ilam)***	64	kW
6. Jumla**	200	kW
7. Dhading	32	kW
8. Syangja***	80	kW
9. Helambu	50	kW
10. Salleri* (Sceco)	400	kW
11. Darchula (i) & (ii) **	300	kW
12. Chame	45	kW
13. Taplejung**	125	kW
14. Manang	80	kW
15. Chaurjhari** (Rukum)	150	kW
16. Syarpudaha** (Rukum)	200	kW
17. Khandbari**	250	kW
18. Terhathum**	100	kW
19. Bhojpur**	250	kW
20. Ramechhap	150	kW
21. Bajura	200	kW
22. Bajhang**	200	kW
23. Arughat Gorkha	150	kW
24. Okhaldhunga**	125	kW
25. Rupalgad (Dadeldhura)	100	kW
26. Surnaiyagad (Baitadi)	200	kW
27. Namche	600	kW
28. Achham	400	kW
29. Dolpa	200	kW
30. Kalikot	500	kW
Total	**6,176**	**kW**

Under Construction:

1. Gamgad	400	kW
2. Heldung	500	kW
Total	**900**	**kW**

PRIVATE SECTOR PLANTS

Existing:

1. Andhi Khola (BPC)	5,100	kW
2. Jhimruk (BPC)	12,000	kW
3. Khimtikhola (HPL)	60,000	kW
4. Bhotekosi (BKPC)	36,000	kW
5. Sange Khola (SHP)	183	kW
6. Indrawati (NHPC)	7,500	kW
7. Chilime (CPC)	20,000	kW
8. Piluwa Khola (AVHP)	3,000	kW
9. Chakukhola (APCo)	1,500	kW
10. Sunkosi Small (SHP)	2,500	kW
11. Rairang (RHPD)	500	kW
12.Khudi Khola (KHP)	3450	kW
13.Baramchi (UHC)	980	kW
Total	**152,713**	**kW**

ONLY POWER PURCFHAGE AGREEMENT(PPA)CONCLUDED

1. Mailung Khola (MKHP)	5,000	kW
2. Daram Khola (GHP)	5,000	kW
3. Tadi Khola (ASHP)	970	kW
4. Upper Mai Khola (ENDE)	3,100	kW
5. Lower Indrawati (SHP)	4,500	kW
6. Lower Nyadi (BHP)	4,500	kW
7. Madi-1 (AGP)	10,000	kW
8. Upper Modi Khola (GITEC)	14,000	kW
9. Seti-2 (THP)	979	kW
10. Lower Chaku (LBPN)	1,765	kW
11. Phawa Khola (SHC)	2,079	kW
12. Mai Khola(HDHC)	2,400	kW
13. Belkhu Khola (MFIC)	320	kW
14. Upper Handi Khola (CPDS)	991	kW
15. Siuri Khola (NGPL)	990	kW
16. Narayani Sankar Biomass (TMB)	500	kW
Total	**57,094**	**kW**

Under Construction:

1. Sisne Khola (GBHP)	750	kW
2. Pheme Khola (KHP)	995	kW
3. Sali Nadi (KSHPS)	232	kW
4. Thoppal Khola (THP)	1,650	kW
5. Mardi Khola (GHP)	3,100	kW
6. Pati Khola (UHP)	996	kW
7. Ridi Khola (RHPD)	2,400	kW
Total	**10,123**	**kW**

SOLAR POWER

1. Simikot	50	kW
2. Gamgadhi	50	kW
Total	**100**	**kW**

☐ TRANSMISSION LINE LENGTH

1. 132 kV Transmission Line	2076 ckt km
2. 66 kV Transmission Line	586 ckt km
3. 66 kV Underground Cable	7.0 ckt km
4. 33 kV Single Circuit	2485.0 km

☐☐ SUBSTATION CAPACITY

132/11	kV	71 MVA
132/33	kV	358 MVA
132/66	kV	211 MVA
66/11	kV	424 MVA
66/33	kV	25 MVA
Total		**1089 MVA**

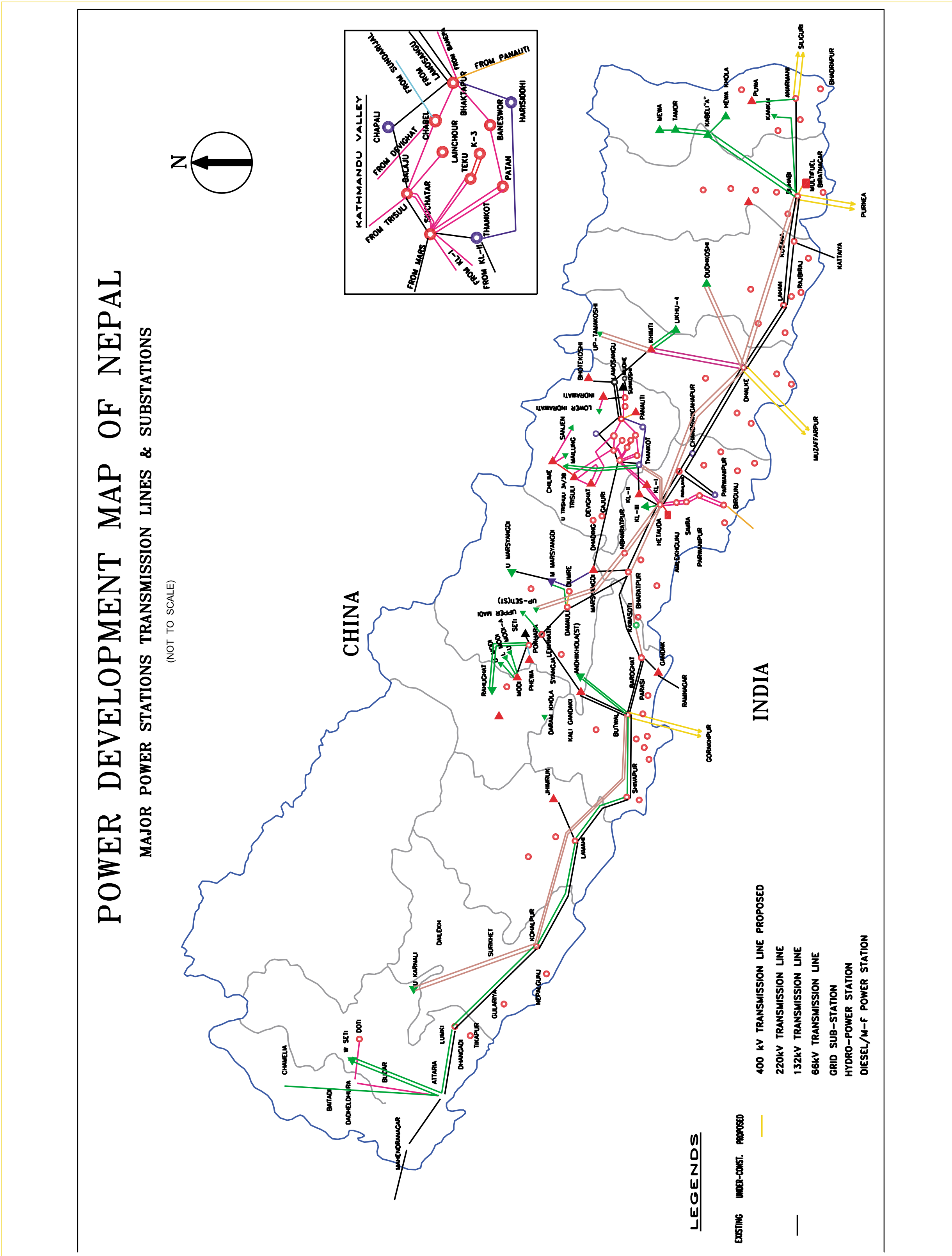
NOTE

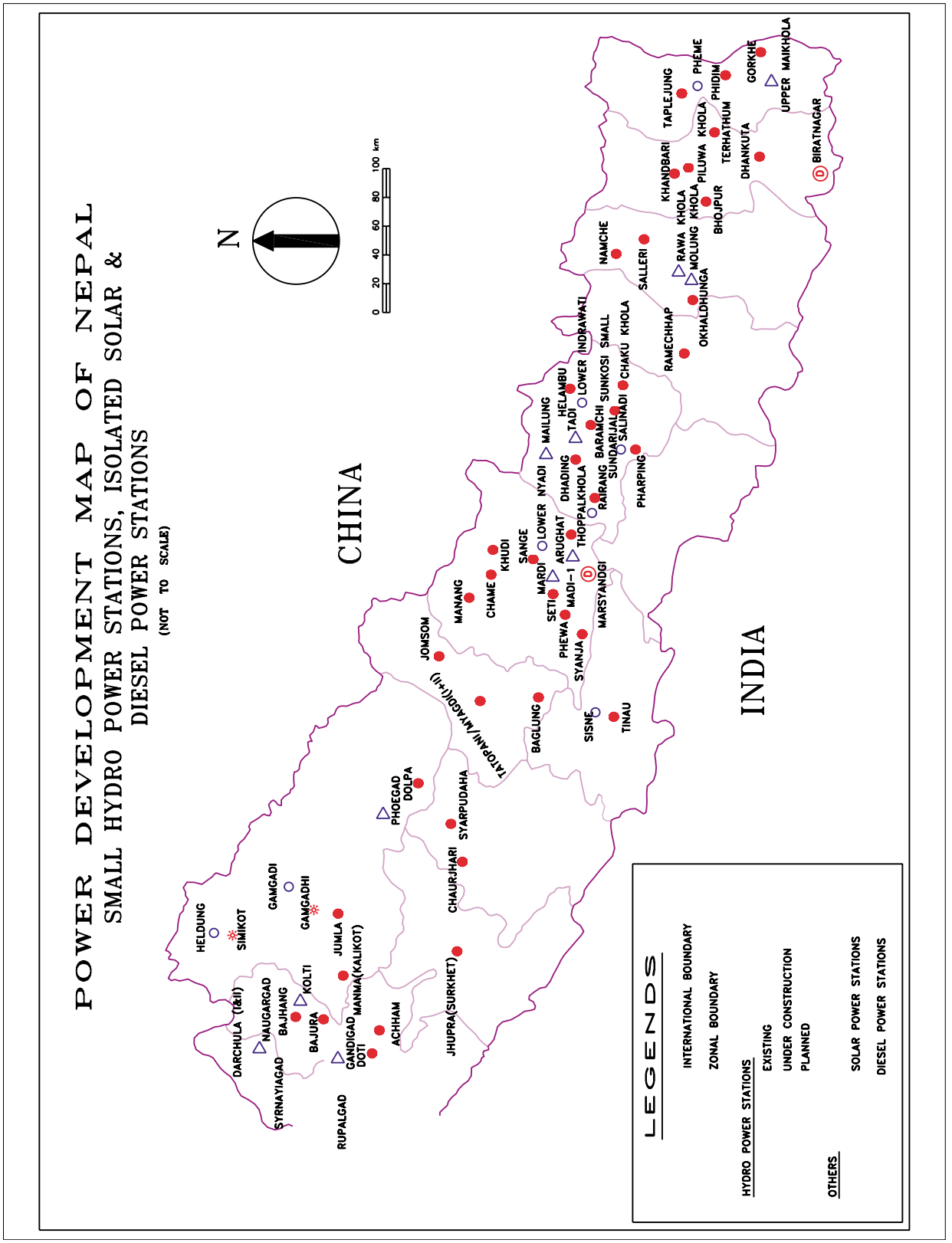
* Private & Others
** Leased to the Private Sector
*** Not in normal Operation

☐ IPPs lines not included

☐☐ These capacities are within the Grid Substations only. Transformers within Distribution Substation, Powerhouses and Local Distributions are not included.

Installed Capacity in Nepal Electricity Authority (including Private and Others): 617.478 MW


POWER DEVELOPMENT MAP OF NEPAL
MAJOR POWER STATIONS TRANSMISSION LINES & SUBSTATIONS
(NOT TO SCALE)
CHINA
INDIA
N
KATHMANDU VALLEY
LEGENDS
EXISTING
UNDER-CONST.
PROPOSED
400 kV TRANSMISSION LINE PROPOSED
220kV TRANSMISSION LINE
132kV TRANSMISSION LINE
66kV TRANSMISSION LINE
GRID SUB-STATION
HYDRO-POWER STATION
DIESEL/M-F POWER STATION


POWER DEVELOPMENT MAP OF NEPAL
SMALL HYDRO POWER STATIONS, ISOLATED SOLAR &
DIESEL POWER STATIONS
(NOT TO SCALE)
N
0 20 40 60 80 100 km
CHINA
INDIA
HELDUNG
SIMIKOT
GAMGADI
GAMGADHI
DARCHULA (T&II)
NAUGARGAD
BAJHANG
KOLTI
JUMLA
SYRNAYIAGAD
BAJURA
MANMA(KALIKOT)
RUPALGAD
GANDIGAD
DOTI
ACHHAM
JHUPRA(SURKHET)
CHAURJHARI
SYARPUDAHA
PHOEGAD
DOLPA
JOMSOM
TATOPANI/MYAGDI(+ri)
MANANG
CHAME
KHUDI
SANGE
MARDI
LOWER NYADI
MAILUNG
SETI
ARUGHAT
DHADING
HELAMBU
TADI
LOWER (INDRAWATI)
PHEWA
MADI-1
THOPPALKHOLA
BARAMCHI
SUNKOSI SMALL
SYANJA
MARSYANGDI
RARANG
SUNDARJAL
SALNADI
CHAKU KHOLA
BAGLUNG
SISNE
TINAU
PHARPING
NAMCHE
SALLERI
RAMECHHAP
OKHALDHUNGA
RAWA KHOLA
MOLUNG KHOLA
BHOJPUR
KHANDBARI
PILUWA KHOLA
TERHATHUM
DHANKUTA
TAPLEJUNG
PHEME
PHIDIM
GORKHE
UPPER MAIKHOLA
BIRATNAGAR
LEGENDS
INTERNATIONAL BOUNDARY
ZONAL BOUNDARY
HYDRO POWER STATIONS
EXISTING
UNDER CONSTRUCTION
PLANNED
OTHERS
SOLAR POWER STATIONS
DIESEL POWER STATIONS