



*Kathmandu
Nepal*

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*Vice-Chairman
Council of Ministers*

MESSAGE



It is a moment of great pleasure and honor to me as the Chairman of Nepal Electricity Authority (NEA), the country's largest public sector utility, to put few words into its annual publication "A Year in Review 2004/05". NEA is entering its twenty first year of service at a very crucial juncture where the country demands full devotion and optimal efficiency in its services to fulfill the growing needs and overcome the challenges ahead. This occasion, on one hand, is a moment of glory and jubilation for NEA for what it has achieved in the past and on the other hand, it is an occasion to come out with conducive promises to continue to deliver and excel its services in the coming days.

The country is currently passing through a period of turmoil but the future is bright with new initiatives to normalize the political situation. During the previous year, despite the odd situation, NEA has shown great sincerity in its effort of maintaining a level of self-sufficiency in supplying electricity. The newer initiatives such as the demand side management aiming at improving efficiency of consumption at a period which saw absence of any major addition to its generation capability is an example of mature thinking by NEA management. The internal unbundling, development of bye laws for its business groups, performance appraisal systems, community participation in electricity distribution and management at rural areas, public-private joint venture initiatives, initiatives for issuance of power bonds, etc. have been remarkable achievements in the past for which I must thank NEA staff at all levels.

One of the indicators of a country's development is its energy consumption. We can therefore foresee an increase in the current trend of power consumption with the country's leap forward towards its path of development. This growing need can be fulfilled with the addition of small, medium and large-scale hydropower generation utilities. However the investment requirements, especially for medium and large hydropower projects are high which compel us to constantly rethink the various alternatives of project financing. In this regard, NEA can work towards promotion of investment friendly environment within the country for public-private joint venture endeavors for small and medium sized projects. Similarly it can work towards creating more congenial environment for attracting foreign investments in medium and large storage type and ROR projects on a priority basis. At the same time it can facilitate in promotion of private sector through sharing its experience and providing required technical assistance.

Efficient transmission and distribution of electricity is another area where NEA has to concentrate more. In this regard, the effort made by NEA during the previous year to avoid bottlenecks in transmission through careful studies and development of appropriate transmission projects is commendable. Involvement of large number of community organizations in distribution and management of electricity in rural areas is yet another example of NEA's commitment to reach the rural consumers through effective participation. I look forward to seeing NEA perform its duties and responsibilities in the most efficient manner. I thank all NEA staff for the valuable contribution they have made through their honesty, hard work and dedication, and wish them a bright future where they would feel glory through their achievements as the corporate members of the country's valuable public sector utility.

Dr. Tulsī Giri
Minister for Water Resources and
Chairman, Nepal Electricity Authority



Dr. J.L. Karmacharya

I feel privileged to present, for the fourth successive year, the Annual Report to the General Meeting covering twentieth year of business of Nepal Electricity Authority (NEA). I am happy to report that new concept of governance in NEA business executed through performance agreement monitored by specific, and predetermined performance indicators with provision of half yearly performance auditing is now fully functional in all three businesses of Generation, Transmission and Distribution. To further enhance the efficiency of sta., a new sta. Performance Management System based on objective evaluation criteria is being worked out and intended to be applied in a staged manner. Engineering services will be given new mandate making its business more professional and transparent. I believe the cumulative impact of the above measures will be far reaching and enable NEA to establish itself as a modern utility. However, the improvement in financial area did not commensurate with the above reforms. It has largely been because of the factors beyond NEA's control. Not so encouraging growth in industry and tourism, disturbances in development works and damage to its assets due to insurgency, high cost of power purchased from IPPs together with high cost of money invested through government lending and non adjustment of tariff for last four years required to take in to the global inflation had an adverse effect on NEA's financial health. Some positive initiatives and efforts have checked any sharp deterioration in NEA's financial health compared to that of the previous year. One of the biggest challenges NEA is facing is the lack of investment in its expansion activities. There has been no significant additional investment either from multilateral/bilateral donors or from private sector during all the four years. This has put severe stress on the development activities of NEA. With its limited internal resources coupled with almost 75% of expenditure governed by external factors, even the maintenance of the system could not be carried out up to the expected level. However, in the rural electrification front, the picture has been encouraging with the HMG/N financing innovative programs in this area.

Organizational Restructuring and Capacity Building within NEA

The organizational reform process initiated with an objective to operate NEA in commercial principle and bringing in efficiency by reduced cost and increased revenue and profitability has shown positive results. The process of Internal Unbundling with formal establishment of Generation, Transmission and System Operation, Distribution and Customer Services as its core business and Electrification and Engineering Services as other business groups has been reinforced with the approval of separate by-laws covering the operation of the main business groups. To run its core business semi autonomously and to bring in accountability, the concept of auditing performance is already implemented in the core business areas. By measuring performance results, comparing the results with performance targets and by rewarding the performers and punishing the non-performers, the system envisions to bring significant improvements in loss reduction, profitability and strengthen customer focus and result oriented organizational culture. Independent auditors have already completed the performance audit for all the core business. The preliminary results as reflected in the audit report are very encouraging.

Most of the Distribution Centers recorded a reduction in loss-rate, positive change in differential surplus and reduction in account receivables period. In the Distribution and

Consumer Services, the performance shows that:

- a) Line connection to consumers from the day of application has been completed within 3 to 7 days in comparison to earlier job completion time of 25 to 30 days
- b) No-light service has been improved with the grievance redressal time reduced to within 6 hours as compared to earlier no-time-limit situation.
- c) Transformer fuse replacement has been executed within one hour at all accessible locations.
- d) Collection has improved to 95% as compared to earlier collection of less than 80%
- e) Time of Day meters have been well marketed and promoted for use by the industrial as well as commercial consumers.

Following the encouraging performance of most of the 20 Distribution Centers, 14 new DCs have been formed. The managers of all 34 DCs are currently under performance contract.

The Transmission and System Operation business group has prepared a Grid Code, which has been approved by the NEA Board.

NEA has continued its efforts to introduce computerization to enhance efficiency in its operations. Computerization of the existing dBase billing system in nine Distribution Centers and DCS branches have been up graded into Oracle based system. Additional eleven Distribution Centers and DCS branches have undertaken computerization of the billing system in Oracle based system. In order to reduce queuing time at the collection counters NEA engineers have already developed and tested a system which shall enable the customers to make payments through any bank. NEA, in this regard, is at the verge of implementing a pilot project covering Lagankhel and Bhaktapur Distribution centers using spare channel available in the fiber optic communication network installed by the LDC project. Under Strengthening of Financial Management, application of computerization has been extended to facilitate analytical and decision making procedures in the fields of financial and inventory management by the adoption of a computerized accounting and inventory management system in 72 branches. Realizing that its human resources are most important assets and that training is a critical component of its institutional development, NEA has embarked on a corporate approach to training by focusing on technical and management skills for improved performance. Training programs are being continuously developed with a view to meet training requirements of different levels of technicians, engineers, managers, finance and administrative personnel working in the power sector. The upgraded computerized Personnel Data Bank that has come into operation has also contributed to realize a more efficient management of NEA's human resources. The USAID funded South Asia Regional Initiative/Energy Partnership program has been helpful in institutional capacity building efforts of NEA. Under this program, NEA executives have had the opportunity to interact with professionals and familiarize themselves with the current trends of electric utility business in the region and the US. In addition USAID's support in the development of grid codes, transmission pricing, a road map for establishment of a suitable computer networking and a study on the potential of power trade with India in the context of promulgation of Electricity Act, 2003 in India will open new marketing horizon.

Operational Performance

The last financial year saw a remarkable increase in NEA's system peak load. On December 4, 2004 the interconnected system peak surged to a record 557.53 MW registering an 8.21 percent increase over that of the previous year.

Cumulative electrical energy availability during Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review the last year for use within the NEA system totaled to a new high of 2642.75 GWh. This is an increase of 11 percent over the previous year's figure of

2380.89 GWh. The hydro and thermal generations of NEA were 1522.9 GWh and 13.67 GWh respectively. NEA purchased 864.79 GWh of electrical energy from IPPs and imported 241.39 GWh from Indian State Electricity Boards under the Power Exchange agreement between India and Nepal. In fiscal year 2004/05, the electricity sales totaled 1964.39 GWh, which is an increase of about 9 percent as compared to the previous year's sales figure. The total electricity sales comprised of 1853.69 GWh as internal sales and 110.70 GWh as energy export to India. The internal sales volume increased by 11.70 percent whereas the export decreased by 21.62 percent from the previous year. However, the quality of sales did not turn out to be adequate, as the proportional revenue increase is not satisfactory. In the same way, the export also has not been up to the expectation. Last year saw a continued increase in number of consumers in NEA's integrated grid. The total number of consumers by the end of fiscal year 2004/05 stood at 1159855 registering an annual growth of 10.05 percent. This comprised of 1113740 consumers in domestic sector, 22500 in industrial sector, 6000 in commercial sector, 9950 in non-commercial sector and rest in other categories of consumers. The domestic consumers contributed 37.94 percent of the revenue while the industrial, commercial and non-commercial categories contributed 36.23, 7.58 and 7.07 percent respectively.

Financial Performance

NEA's financial position in the FY 2004/05 has remained far from being satisfactory. The atmosphere of insecurity prevailing in the country continued to slow down economic activities, affecting the industrial performance which can be observed from the decreased percentage share of revenue from the industrial sector. The rising cost of IPP energy was another prime factor attributing to NEA's grim financial health. Similarly, the tourism sector, a significant revenue contributor, once again failed to regain its position as one of the country's major cash earners and dampened NEA's hopes of picking up in revenue generation. The security situation in rural areas made revenue collection extremely difficult. The impact of adverse security situation was such that meter reading in some 100 thousand households could not be done. However the overall financial indicators in many other areas have improved. The increase in number of domestic consumers and subsequent sales increase was a positive indicator. NEA's total revenue increased over the previous year's figure by 6.72 percent to NRs. 13,389 million. NEA's net fixed assets decreased marginally by 0.37 percent to an estimated NRs. 58,747.48 million. Expenditure in generation including cost of power purchases increased by NRs. 796.12 million over last years figure to NRs. 7,362.02 million. In transmission it increased by NRs. 41.21 million to NRs. 240.71 million. Similarly distribution expenditure increased by 13.09 percent over last years figure to NRs. 1,556.23 million. While the administrative expenses increased by NRs. 22.54 million to Rs. 511.64 million. One of the reasons for increased administrative expenses was the allowance of extra twenty percent of salaries to the employees. In the fiscal year 2004/05 NEA achieved an operating surplus of NRs. 1,529.59 million but registered a net loss after tax and interest of NRs. 1,914.90 million.

Looking Ahead

In its continued endeavor to expand the generation, transmission & distribution infrastructure in-order to make electricity available to the larger segment of population, NEA prepared a new load forecast incorporating future electricity demand up to fiscal year 2020. Least cost generation expansion plan was prepared to meet the forecasted demand and investment plan was prepared to arrive at the financial resources requirement to finance such endeavors. Similarly, transmission and distribution plans are prepared for efficient transmission and distribution of electricity in coming years. Altogether 31, feasible generation projects consisting of 6 NEA, 20 private and rest public-private joint venture schemes will need to be commissioned within a period from FY 2005/06 to 2019/20 to meet

the forecasted demand. In the generation sector the 70 MW Middle Marsyangdi Hydroelectric Project (MMHEP), undertaken with a grant assistance of Kreditanstalt für Wiederaufbau (KfW) of Germany, is heading towards completion by Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review December 2007. Process have been initiated for the arrangement of finance for the construction of Upper Tamakoshi (309 MW), Upper Seti Storage (122 MW) and Chameliyagad (30 MW) hydroelectric projects. Preliminary works will be initiated towards the construction of Kulekhani III (14 MW) hydroelectric project during F/Y 2062/2063 under NEA's own finance. Rehabilitation and upgrading of Devighat (14.1 MW) and Sunkoshi (10.05 MW) will be under taken after the on going studies are completed. Hewa (10 MW), Mewa (18 MW) and Tamur (83 MW) are other projects for which NEA will proceed for the arrangement of financing.

In order to maintain system requirement, NEA will continue to encourage Private Developers to help add electricity generation to the system. But as private sector is essentially developing run of-the river plants, NEA will have to construct storage projects to maintain the adequate balance between demand and supply throughout the year. For the intervening period, NEA will be looking for arrangement with India to meet the shortfall in both seasons across the border.

In order to improve quality and reliability of electricity supply the staffs manning Load Dispatch Center will be exposed to additional training to develop and reinforce their expertise in the high-tech facilities installed. Arrangement has been made with Siemens to continue the training program into the coming year as well.

The effective enforcement of the NEA Grid Code is another area which will be pursued vigorously in the coming days. The Code will also address many grievances of the Grid Users and facilitate integration of non-NEA Grid Users into the national grid.

Augmentation of transformer capacities and establishing a culture of preventive maintenance will continue to receive top priority. To reduce shutdown time, hotline maintenance training will be imparted to maintenance crews and some emergency restoration towers will be procured for quick restoration of transmission lines. Modern high-tech testing equipment are also being procured to detect early signs of potential equipment breakdown so that advance precautionary measures could be adopted to prevent their occurrences.

Likewise, NEA is going all out to complete the Pathlaiya-Parwanipur 132 kV transmission line project in the coming fiscal year. It will also spare no effort to expedite the implementation of other ongoing projects, especially the Khimti Dhalkebar 220 kV transmission line and the Thankot-Chapagaon-Bhaktapur 132 kV transmission line in the Kathmandu Valley. Financial sources will also be sought for the construction of the Hetauda-Bardaghat 220 kV transmission line, which is proving very critical in the operation of the national grid. Apart from the transmission projects within the country, NEA will continue with its efforts to contact various utilities in neighboring countries for their cooperation in its quest for creating a regional grid in South Asia.

In the distribution sector measures will be taken to improve the availability and reliability of distribution network by concerted effort on improved maintenance and capacity augmentation of network components. Effort will also be made to continuously improve the quality of consumer services in order to make it more customers focused and the Multi channel Queue Management at present implemented at two distribution centers will be implemented gradually at all distribution centers.

NEA will continue its engagement in rural electrification (RE) programs for meeting electricity needs of rural people to uplift their economic standards through HMG as well as donor assisted schemes. The ADB funded Rural Electrification and Distribution System Reinforcement Project will start implementation of field work from the current fiscal year. Similarly the ongoing rural electrification schemes such as the World Bank funded Distribution and Rural Electrification Project in Bagmati zone, DANIDA funded Kailali Kanchanpur RE Project in far western region and HMG funded Sindhu-Dolkha RE Project will

also continue to be completed in the stipulated time.

Under the latest TA received from ADB, detailed techno/economic and social studies will be conducted for the preparation of proposed Rural Electrification and Renewable Energy Project. Under the new Japanese Non Project Grant scheme rural electrification will be initiated from the current fiscal year. Implementation of HMG funded community rural electrification schemes will continue in several areas of the kingdom through people's participation. Efforts will also be made to add more number of communities managed rural schemes as well.

Engineering Services will be made a subsidiary company for the development of hydropower Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review and to conduct detail engineering design and construction supervision of power projects (generation, transmission and distribution) to fulfill the long and short-term power demand of the country. The Training Center will be gradually developed into a Regional Research Center for the Hydropower Development. Effort will be made to extend its services beyond Nepal to other parts of the world, individually or through the joint venture partnership.

A staff Performance Management System (PMS) based on two part evaluation has been developed in house that will be test implemented during current fiscal year. The PMS will be formally implemented from the beginning of FY 2063/64.

NEA will continue to apply efforts to comply with the International Accounting Standards (IAS) recommendations in order to make the NEA's Accounts in line with internationally acceptable practices. A recognized international consulting firm will be employed to carry out the task of improving financial management, accounts and auditing practices under the grant assistance of the World Bank.

In line with the recent government declaration to permit NEA to issue long term power bond in order to mobilize domestic financial resources NEA will issue Power bond to the size of NRs 3 billion in total to meet the investment requirements in power generation projects. The first power bond will be issued in the current fiscal year. NEA will continue dialogue with the concerned government ministries for the reduction of prevailing re-lending rates applicable to NEA in the context of decreasing trend of interest rate in the domestic financial market.

Acknowledgements

For the achievements and the progress that we have been able to attain I wish to thank all those associated with NEA's activities during the past year. I wish to thank His Majesty's Government of Nepal particularly Ministries of Finance and Water Resources for their cooperation and continued support to our development activities. I also wish to express my special gratitude to the Chairman and Members of the NEA Board of Directors for leading NEA at such a difficult time. I also thank the Bilateral Donors such as Germany, Japan, Norway, Denmark, Sweden and USA and development banks such as the World Bank, Asian Development Bank, Japan Bank for International Cooperation and Kreditanstalt fur Wiederaufbau for their contribution in our development and institutional strengthening activities. I regard their financial support, technical assistance and advices as crucial for our achievements and steering NEA ahead.

Recapitulating my affiliation with NEA over more than three decades in different capacities, I extend my sincerest thanks, for the continued support, hard work and cooperation I have received from the entire sta. of NEA at all levels. I wish to express my special thanks to those who have stood by me in times of trial. I have always enjoyed working with sta. members of NEA at all levels. I believe the sta. members of NEA have appreciable latent talent, capacity and dedication to lead NEA to newer heights of development. The understanding and critical support of the unions must be appreciated.

Finally and most importantly, this acknowledgement would be grossly incomplete without thanking our valued customers for their proactive interest in NEA's activities and also for bearing with us and sharing some turbulent times together. I feel confident that the day will come in near future when NEA will be able to provide its valued customers with the highest

quality of electricity supply that is most reliable and adequate for their needs.

Thank you.

Dr. Janak Lal Karmacharya

Managing Director



Mr. S. P. Upadhyaya
General Manager



Mr. T. N. Thakur
Director
Generation Operation and
Maintenance Department



Mr. R. N. Pradhan
Director
Kaligandaki 'A' HE
Department



Mr. J. Jha
Director
Generation Construction
Department

Middle Marsyangdi Hydroelectric Project



Mr. S. R. Shrestha
Project Director



Mr. G. S. Pokhrel
Director

The signing of Performance Agreement between NEA management and the General Manager of this Business Group at the start of the fiscal year is a milestone. The main thrust of the agreement was to improve the reliability of the hydropower stations. The generation availability has increased in this year to 96.27% from the previous years value of 96.62 %

With a yearly plant factor of 38.60 % and the average productivity ratio of 1162.68 MWh/employees, the energy generation from power plants under this business group during fiscal year 2004/05 was 1533.57 GWh, which is 16.27 percent more than that of the previous year. These generation plants contributed 58.03 percent of the total electrical energy available in the system.

The last fiscal year saw improvements in the operation and maintenance of generation plants. New meters were installed replacing the old ones at most of the power stations for better accuracy of measurements of the generated and the transmitted units to the Integrated Nepal Power System (INPS). A plan for the rehabilitation and upgrading of Sunkoshi and Devighat Hydropower Stations is under study through the Engineering Service, which is expected to be completed by the mid of .scal year 2005/06 (2062/63).

Major Projects

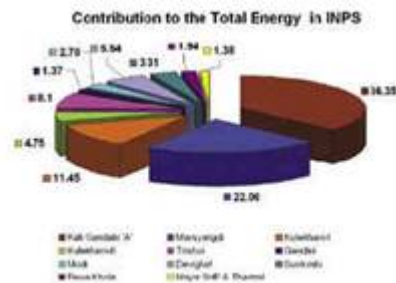
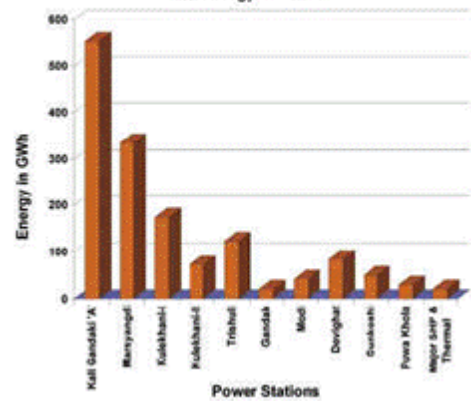
Chameliya Hydroelectric Project

Chameliya Hydroelectric Project (CHEP) is a six hour daily peaking run-of-the river (PROR) scheme with an installed capacity of 30 MW and average annual energy generation of 184.21 GWh. The project lies about 950 km west of Kathmandu in Chameliya valley of Darchula District in Far Western Development Region. The detailed design and tender document preparation of the project was completed in December 2001, with the grant assistance from Korea International Co-operation Agency (KOICA).

Construction of access road needed for the project is in progress. Earthworks and Structural works of 17 kilometers out of 18 kilometers of the road have been completed. Local transportation services are in operation on the road. Construction of four number of bridges out of the total seven number of bridges required for the project has been completed. Similarly, construction of four numbers of buildings out of twenty proposed for camp facility has also been completed. The Environment Impact Assessment (EIA) study as per the Environment Protection Rule 1997 (First Amendment 1999) of the project and .nal dra. report of 132 kV transmission line route has been completed. The IEE study of 35 km long 33 kV transmission line from Gothalapani, Baitadi to Balanch powerhouse site for construction power supply has also been completed.

The project cost as per the Detailed Design Report, Dec. 2001 is US \$ 74.90 million

Generation by Power Stations Contributing More than 1% Energy in INPS



including the construction cost of 131 km long 132 kV Transmission line.

The project is envisaged to be implemented with co-financing of HMG/NEA and other donor agencies like Govt. of Republic of Korea, Economic Development Co-operation Fund, (EDCF) and Organization of Petroleum Exporting Countries (OPEC) Fund. As per the request made by NEA, the Economic Development Cooperation Fund, Korea (EDCF) has shown interest and given positive response for providing so. loan for electro-mechanical equipment and transmission line portion including project engineering components of the project. In this respect, NEA has already applied for the proposal for EDCF loan.

Kulekhani III Hydropower Project

Kulekhani III Hydroelectric Project is located about 40 km south west of Kathmandu in Makwanpur District of Narayani Zone. This project lies on the right bank of Rapti River near Hetauda-Bhainse Road. The proposed headworks site is located at Bhainse Village Development Commi.ee. It will utilize a net head of 107 m and a design discharge of 15 cumecs to generate 14 MW of peak power. A 4.5 km long headrace tunnel, surge tank and surface power house are the main components of the project. The power will be evacuated to Hetauda through the second circuit strung on the KL-II- Hetauda existing 132 kV line and a 500 m long new 132 kV line.

The Environmental Impact Assessment (EIA) of the project has been approved by Ministry of Population and Environment (MoPE). The social and environmental impacts of the project are minimum with only 25 hectares of agricultural land and a few households being affected. Existing infrastructures in the vicinity of the project such as the Tribhuvan Highway, transmission line from KL-II, dry port at Birgunj and the prevailing high security environment in the area makes it more attractive. The project has been found technically, financially and environmentally viable. NEA is planning to implement the project using its own financial and human resources.

The project cost is estimated at US\$ 27.60 million. It will be commissioned to meet the peak demand of dry season by 2009. The annual energy output of the project will be 40.82 GWh. Detailed design of the access road and the bridge over the Rapti River has already been completed.

Generation by Major Hydro Power Stations (FY 2061/62)

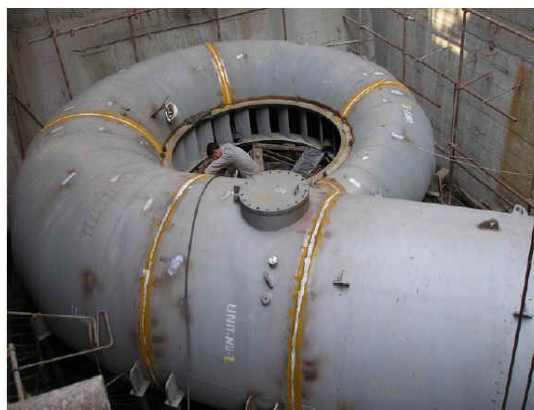
Power Stations	Generation (GWh)	Increase/Decrease over Previous Year Generation (%)
Kali Gandaki 'A'	556.61	5.49
Marsyangdi	336.90	40.65
Kulekhani-I	174.09	10.67
Kulekhani-II	73.06	11.41
Trishuli	125.23	31.67
Gandak	21.59	162.01
Modi	44.22	1.73
Devighat	85.61	25.75
Sunkoshi	49.88	0.60
Puwa Khola	29.89	4.66

MIDDLE MARSYANGDI HYDROELECTRIC PROJECT

This 70 MW project located about 170 km west of Kathmandu, in Lamjung District is being funded by KfW (Germany), HMG/N & NEA. In this year, most of the night shift works could not be carried out due to imposition of curfew at the project area. The Contractor DDC JV stopped its entire construction works from August 24, 2004 citing security reasons. The work could only be resumed from January 03, 2005. The night shift could only be started from April 25, 2005.

The major progress and the milestone of the project:

Marsyangdi River was diverted on March 01, 2005 at the head works site. About 89% of the excavation works has been completed in the head works area by the end of June 2005. Similarly, excavation of intake tunnels and valve chamber has completed and power tunnel excavation has finished up to about 67%. Lining of the power tunnel started from June 21, 2005 and about 3.2% of works has been completed. In the desanding caverns, about 87% of excavation has been completed. About 18% concreting of the control section in the desander has been accomplished. About 12% of surge tank excavation has finished. About 98% of the pilot shaft excavation for the surge tank excavation has been completed. In the powerhouse area, about 93.4% of 1st stage concreting and 31.4% of 2nd stage concreting works has been carried out. Similarly, 25% super



structure concreting work and about 61% of concreting of outlet (tailrace) has been finished. As for the status of the other lots, Mechanical Equipment (Lot M) Contractor Voith Siemens Hydropower Generation GmbH & Co. has completed about 95% of its manufacturing works. Presently, erections of two spiral casings are in progress with about 65% work already completed. Testing and commissioning of 132 kV GIS switchgear equipment (Lot SS2) at the existing lower Marsyangdi power station has been completed by Alstom Energie-technik GmbH in January 2004. The contractor of Electrical Equipment (Lot E) ALSTOM Power Generation AG has been instructed to start procurement of the generator in Switzerland to commence manufacturing of all Lot E equipments. Presently, Alstom is carrying out vertical up linking of the earthing straps at powerhouse. Commencement of Transmission Line (Lot TRL) Project is awaiting concurrence from KfW to start Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review negotiation with the lowest bidder SAG. 132 kV Substation/Switchyard (Lot-SS1) Contractor, ALSTOM Energie-technik GmbH, has completed manufacturing works and is in the process of delivering the equipment. Lot HSS (Hydraulic Steel Structure) Contractor VA-Tech Hydro is in the process of fabrication of penstock at the site. Installation of Manifold is almost completed. Pressure testing of spiral casing, manifold and Bifurcator are planned to start in Middle of August 2005.

Land and property acquisition as well as the resettlement at various construction sites is about 98% complete. The project (RERU) has also carried out income generation oriented training program and community awareness program focused on public health and traffic safety to the members of the project affected families and the local people of the project. The Neighborhood Support Programme (NSP) of the project is supporting the development activities of nine Village Development Committees (VDCs) in the vicinity of the project area by carrying out various activities in five key areas of Health, Education, Water Supply & Sanitation, Roads and Electrification. Udipur Substation upgrading to 5 MVA and the construction of 33 kV new bay has been completed. Local electricity supply is being supplied through the new bay and the interruption due to overloading of the transformer is avoided.



Mr. B. R. Shrestha
General Manager



Mr. Y. K. Shah
Director
Grid Operation Department



Mr. H. M. Palikhe
Director
TL/SS Construction
Department



Mr. M. P. Khakurel
Director
System Operation
Department

The year took off with the successful organization of the Regional Grid Operators Forum hosted by NEA in Kathmandu on August 18-19, 2004. It was a momentous gathering of the leaders of the power industry in the SAARC region, which included Managing Director of Power Grid Company of Bangladesh Ltd., Managing Director of Bhutan Power Corp., Chairman of Sri Lanka Electricity Board, representatives from Water and Power Development Authority of Pakistan and Managing Director of Nepal Electricity Authority. The main objective of this mega event was to reach a general consensus among the leaders of the power industry for development of a regional power grid in South Asia to sustain and accelerate the present economic boom in the region. As an outcome of this meeting, the delegates were unanimous in recognizing the benefits of regional interconnection of power grid and confirmed to work collectively towards the goal of establishing a regional grid in South Asia. The conference was sponsored by USAID under the SARI/E program. The signing of the Performance Agreement between the NEA Management and the TSO General Manager at the start of the fiscal year was another important milestone in this fiscal year. The main thrust of this Agreement is to gradually improve the operational efficiency of the power system and eventually attain international standards by achieving a given level of performance in various tasks. According to this Agreement, the TSO General Manager is solely accountable for the progress of these tasks and it has prescribed a number of performance indicators, like quality of power supply in terms of voltage and frequency, availability of equipment, reliability of supply, productivity ratio and stock turnover ratio. Other minor indicators include transmission loss, capital investment and budget disbursement. These indicators carry different weights, the highest being assigned to availability and reliability and the lowest to capital investment and budget disbursement. The Agreement provides cash reward for the personnel of the organization as well as penalty for the non-performing General Manager. An independent auditor appointed by the NEA Management has completed appraisal of the performance of this group for the first performance audit period covering the first six months of the fiscal year.



They have declared the results as very encouraging and also recommended in their evaluation report that this group is qualified to receive financial reward based on the criteria prescribed in the Performance Agreement. The implementation of the NEA Grid Code in this fiscal year was another feather in this group's cap, although it came into effect only in the last quarter of the fiscal year. The Grid Code will also facilitate evacuation of power from IPPs and grid connection of high voltage consumers. This year finally saw an end to the saga of the stringing of the seven-km-long second circuit on the existing Hetauda-Dhalkebar 132 kV line. The work had been suspended for over four years because of the problem regarding compensation for the right of way. The work was eventually completed with the cooperation of the security personnel. Although this second circuit has improved the security of the power supply to the eastern region, the problem of low voltage in the Duhbi region still persists. This problem will be partially solved when the Khimti powerhouse is connected to the Dhalkebar substation.

This group has also initiated handing over of 11 kV and 33 kV lines and substations, which are presently being operated and maintained by this group, to the appropriate business group. As continuation of the group's policy to install adequate number of under frequency relays to enable curtailing at least 50% of the system load during low frequency emergencies so as to minimize the number of system collapse and at the same time reduce the duration of system outages, the Grid Operation Department has procured eleven additional under frequency relays in this fiscal year and these are being installed at appropriate substations throughout the system. This brings the total number of under frequency relays installed in the system to fourteen. As a result of their efforts, there has been substantial improvement in system operation since the new Load Dispatch Center came into operation. The number of system outages recorded in this fiscal year dropped from 28 occurrences in the last fiscal year to 23 occurrences, out of which only 15 were attributable to system faults, the other eight occurrences being the result of relay malfunctions. Similarly, the cumulative system outage duration in this fiscal year stood at 409 minutes with calculated energy loss of 1972 MWh during this period as against 569 minutes of system outage and 2703 MWh energy loss respectively in the last fiscal year. The Center was also able to achieve faster restoration of the system as the minimum and the average restoration time after system collapse in this fiscal year was registered at 3 minutes and 18 minutes respectively compared to 7 minutes and 20 minutes in the last fiscal year. All these add up to substantial revenue gain for the NEA. Installation of fiber optic cables in the communication system of the LDC has already started paying. Last year one fiber optic link was leased to Nepal Telecom. The Department was able to increase its earnings by leasing out another link to the same Company. Several private parties have also shown keen interest to rent these optical links. Under the regular program, the transformation capacity of existing



substations was augmented by 84.15 MVA at different voltage levels.

Because of these additions the multi fuel plants are no longer required to be operated to meet 19 Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review the peak load of the Duhbi region.

Similarly, Nepalgunj has stopped import because of capacity addition at Kohalpur substation, which has also enhanced the operational flexibility regarding the utilization of Tanakpur power station. It was a difficult year for the transmission line maintenance crew as it faced one of its toughest ever challenges. The job involved erecting a 22 ton 65 meter high tower in a very unfriendly environment that required the use of boats for conductor stringing. It was by far the heaviest and tallest tower being handled by NEA. The original tower located in Koshi Tappu on the bank of the mighty Koshi River had been brought down to zero level by miscreants who had loosened the bolts at the lower end of the tower body. The successful completion of this job has instilled tremendous confidence in the NEA maintenance group as well as the local contractors who undertook the erection works to carry out any such job in any kind of terrain in the future. In the construction of new transmission projects, TSO faced challenges on two fronts.

The first challenge was to resume the construction of the Pathlaiya-Parwanipur Transmission Line Project, which had been suspended due to security problems in the site. The Project is back on track and the TSO is channeling all its resources to complete the Project as early as possible. The second challenge came from Hetauda-Bardaghat 220 kV Transmission Line Project. TSO had planned to implement this Project during this fiscal year. In the absence of this line, the Integrated Nepal Power System is being increasingly vulnerable to interruptions. In this fiscal year the business group completed one new substation in the Kathmandu Valley. Two transmission links dedicated for power exchange between Nepal and India had to be dropped for the time being because the necessary commitment for the construction of the line falling on the other side of the border had not been received. The funds for these two projects are being reallocated in two new projects. Some of the projects under the TSO are given below.

Birgunj Corridor 132 KV Transmission Line Project

The objective of this Project is to meet the power demand of the Birgunj corridor, which is dominated by big industrial consumers. This will relieve the power congestion in the existing 66 kV lines and thereby improve the quality and reliability of the power supply delivered to the region. The Project comprises of a new 132/11 kV substation with 2x /18/22.5 MVA transformers at Parwanipur and 20 km of 132 kV double circuit transmission line from Pathlaiya to Parwanipur. The Project is estimated to cost NRs. 254 million and Nepal Electricity Authority is bearing this entire cost. At present, major substation civil works have been completed including super structure for control building.

The substation equipment manufacturing works are under progress and expected to be delivered for erection works soon. Similarly, works associated with transmission line and its right of way (RoW) clearance is under progress. The project is expected to be completed by fiscal year 2005/06.

Thankot-Chapagaon-Bhaktapur 132 kV Transmission Line Project

Under this project a 28 km long 132 kV transmission line from Thankot (Mata.irtha) to Bhaktapur via Harisiddhi will be constructed. This will complete the 132 kV ring main in the

Kathmandu Valley. The line will comprise of double - circuit towers for about 26 km and four-circuit towers for about 2 km. The scope of the project also 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. After completion of the project, this will not only cater the growing power demand in the valley but also reduces system losses and improve quality and reliability of the electricity supply in the area. The contract for the construction of transmission line has been awarded and tenders have been invited for the substation works. Estimated cost of the project is US\$ 17 million and it is jointly funded by the loan assistance of Asian Development Bank (ADB), Organization of Petroleum Exporting Countries (OPEC), His Majesty's Government of Nepal and Nepal Electricity Authority. The project is expected to be complete by 2007.

Butwal-Sunauli 132 kV Transmission Line Project

The proposed transmission line is dedicated for power exchange between India and Nepal. The transmission link connects Anandanagar substation situated in Uttar Pradesh of India with Butwal substation in Nepal through a double circuit 132 kV transmission line. Under the Project a 25 km long 132 KV double circuit transmission line will be constructed from Butwal substation to Sunauli (the intermediary point at Indo Nepal border) along with the associated line bays at Butwal substation. The Project is jointly financed by His Majesty's Government of Nepal and Nepal Electricity Authority and expected to be completed in fiscal year 2006/07 at an estimated cost of NRs. 140 million.

Khimti-Dhalkebar 220 kV Transmission Line Project

This will be the first 220 kV transmission line in the country. Its immediate objective is to improve the reliability of power withdrawal from Khimti-1 HEP, provide a direct route for export via Dhalkebar substation and improve the voltage problem in the eastern region. In future, the line will also be used to evacuate power from the 300 MW Upper Tamakoshi HEP and other generations in the Khimti region. The Project comprises of a 75 km long 220 kV transmission line on double circuit towers from Khimti HEP to Dhalkebar along with a 132 kV line bay extension at each end. Till Upper Tamakoshi or a similar large generating station is connected to this line, only one circuit with ACSR, BISON duplex conductor will be strung under the present scheme and charged at 132 kV level. The Project has already acquired the necessary Environment Impact Assessment clearance from concerned authorities of His Majesty's Government of Nepal. The employment of the consultant for the Project is complete. The cost of the Project is estimated at US\$ 22 million and it is funded jointly by International Development Association of World Bank, His Majesty's Government of Nepal and Nepal Electricity Authority. The project is scheduled for completion by the end of the fiscal year 2006/07.

System Reinforcement Project at Chandranigahpur

This Project is designed to meet the increasing power demand of Chandranigahpur, Harsaha, Haripur, Gaur and Nijgadh areas. This will improve reliability and quality of electricity supply in these areas and reduce system losses as well. Under this project, a new 132/33 kV, 30 MVA, and 33/11 kV, 8MVA substations will be constructed at Chandranigahpur. This new substation will be linked to existing 33/11 kV substations at Harsha, Gaur, and Haripur through 33 kV sub-transmission lines with a total length of about 70 km. The project is estimated to cost US\$ 6.5 million and it will be financed by International Development Association (IDA) of World Bank, His Majesty's Government of Nepal and Nepal Electricity Authority. The project is expected to be complete by the end of 2007.

Grid Reinforcement Project

The Project is designed to augment transformer capacity at three substation, namely,

Suichatar substation in Kathmandu, Anarmani substation in Jhapa and Pokhara substation in Pokhara. The existing 132/66 kV, 2x37.6 MVA power transformer at Suichatar substation will be supplemented with a third 37.6 MVA power transformer. Similarly, one 132/11 kV, 7.5 MVA power transformer will be replaced by 31.5 MVA transformer at Pokhara and one 132/33 kV, 15 MVA power transformer will be replaced by another 30 MVA transformer at Anarmani substation. The Project is estimated to cost US\$ 3.39 Million. The Asian Development Bank has agreed in principle to finance this Project along with His Majesty's Government of Nepal and Nepal Electricity Authority. The Project is expected to be complete by 2007. Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review

Hetauda-Bhardaghat 220 kV Transmission Line Project

After the expected completion of the Khimti-Dhalkebar 220 kV transmission line, this will be the second 220 kV transmission line in the country. The immediate objective of this project is to improve the reliability of power withdrawal from Kaligandaki A hydropower station. The proposed line will also form a segment of the 220 kV Grid that is being envisaged under future generation expansion plans. The project comprises of construction of about 143 km long 220 kV double circuit transmission line from Hetauda to Bardaghat. Till the Upper Seti HEP is connected to this line, only one circuit using ACSR, BISON conductor will be strung under the present scheme and charged at 132 kV level. Updating of route alignment survey and Environment Impact Assessment (EIA) study for this transmission line is in progress. Funding for this transmission line project is expected from Japan Bank for International Cooperation (JBIC). The cost of the project is estimated at US\$ 32 million.

K3 Substation Project

Constructed with grant assistance from the Government of Japan at a cost of US\$13 million, the project was commissioned on March 2005. The project comprises of a new 45 MVA 66/11 kV GIS substation connected to the existing Teku and Suichatar substations through a 3.5 km long 66 kV double circuit underground cable. The project aims at relieving the stresses on the existing distribution system in the central part of Katmandu city accompanied by a reduction in system loss and improvement in quality and reliability of supply in the area.



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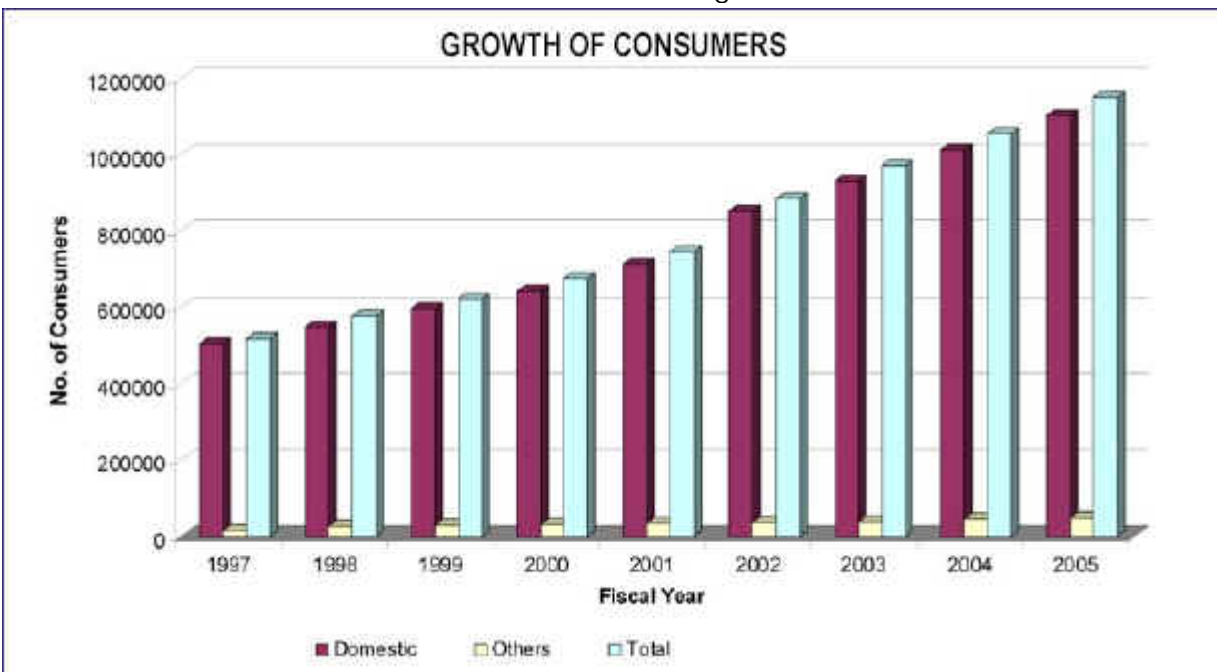


Mr. R. C. Mandal
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Mr. T. M. Shakya
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Mr. G. P. Raj
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The Distribution and Consumer Services (DCS) Business Group is responsible for planning, design, construction, operation and maintenance of the distribution system up to 33 kV voltage level. It is also responsible for consumer services providing new connections, meter reading and billing and revenue collection. DCS is providing its services to the consumers through two Departments, five Regional Offices, thirty-four Distribution Centers and thirty Branch Offices spread throughout the integrated system of NEA grid. During the FY 2004/05, the total internal energy sale was 1853.69 GWh, which accounted for 94.36% of the total sales. The total energy sale during the year was 1964.39 GWh. This is an increase of 194.11 GWh over the previous fiscal year's figure. Due to unfavorable situation prevailing within the country, meter reading of about 100 thousand consumers could not be done. Approximate sold energy to such consumers is estimated around 45 millions units. The revenue for FY 2004/05 was Rs. 13389.00 million, which is an increase of 6.72% over the previous fiscal year's figure. The total number of consumers at the end of fiscal year 2004/05 was 1159855, an increase of 10.05% over the previous year. Fiscal year 2004/05 has yet again registered continued rise in the number of consumers within the NEA system. The following chart represents the growth of consumers in domestic and other sectors in fiscal year 2004/05 and preceding years. Since this business group covers almost the entire consumer services under NEA, several regional offices as well as supporting departments

help run the day to day activities of the business group.

Distribution Centers

In continuation of its reform process, NEA has transformed additional fourteen branch offices into Distribution Centers in fiscal year 2004/05. This has led to the implementation of profit center strategy to thirty four of its distribution branch offices which are running more effectively on a semiautonomous model. The Distribution Centers are evaluated for each Performance Audit Period (PAP) on a half-yearly basis. The performance evaluation of twenty Distribution Centers for the second Performance Audit Period was carried out in last fiscal year and the draft report is currently under review. The result of some centers made overwhelming good results while some have difficulty of achieving the benchmark,

Technical Services and Commercial Department

This Department has been fully responsible for programming of the TOD energy meters and it is also helping in downloading and analyzing data of TOD energy meters. This group prepared a Project Preparatory Report identifying the potential RE schemes and other components for power system improvement for the proposed Rural Electrification and Renewable Energy Project (Ninth Power Project), which is expected to be financed by Asian Development Bank (ADB). ADB has already approved the Technical Assistance for the Project and the Consultants are expected to arrive in Kathmandu by August 2005 to finalize the formulation of programs for the Project. Similarly, the department proposed a Draft Distribution Code to facilitate regulation of distribution system in the present scenario of multiplayer participation in power distribution system and circulated it for comments and suggestions before preparing the final report. The Department is also engaged in the execution of reinforcement of the following sixteen distribution substations under three packages.

Package A:

Mahendranagar, Dhangadhi, Gularia and Nepalgunj

Package B:

Chandragadhi, Damak, Rajbiraj, Dhankuta, Udipur and Baglung

Package C:

Kalaiya, Gaur, Harsaha, Malangawa, Haripur and Jaleshwar.

Altogether, 10 numbers of 6/8 MVA 33/11 kV power transformers are being added under this program. It will increase the power distribution capacity of the existing overloaded distribution substations and enhance the reliability of power supply in these areas. The contracts for the above works have already been awarded. The construction works have also commenced. The substation equipments are arriving at site and the works are scheduled to be completed by April 2006. Some of the noteworthy projects operating under this group are:

Distribution Profit Center Project

A consultant for this project has already submitted draft inception report, which was reviewed by the project steering committee. The steering committee finally recommended the performance management indicators.

Computerized Billing Project

The Computerized Billing Project is being implemented to help maintain accurate records of consumers, meters and revenue accounting, reduce non-technical losses and account receivables and expedite reporting. It will also help in reducing operational expenses and improve NEA's relationship with the consumers. Its objective is to introduce a common system throughout NEA for improved billing and revenue collection processes in a modern, efficient and cost effective manner. Under this project, an appropriate computerized billing system will be selected and implemented in 20 large branch offices within the year 2006. In

the remaining branch offices NEA will implement it gradually. The tender for procurement of the Billing System is in final stage and testing of the system in Pilot Branch is expected to be completed by the end of 2005.

Other Major System Reinforcement works

In Biratnagar area, a new 10/13.3/16.6 MVA 33/11 kV substation is being constructed at Tanki Sinwari and will be linked with 132 kV Duhabi Nepal Electricity Authority, Fiscal Year 2004/05 - A Year in Review S/S by a 33 kV double circuit transmission line. The proposed 33 kV transmission line linking 132 kV Duhabi Substation and 33 kV Tanki Sinwari substation is 6.5 km long. All electrical/civil drawings have been already approved and the work is under progress. All the electrical components like power transformer, station transformer, 33 kV control and relay panel, isolators, 11 kV VCB etc. have been already delivered to the site by the contractor. The construction of control building is in full swing. Foundation work for equipment installation is complete and steel structures are subsequently erected while power and station transformer are already mounted. The construction work of Tanki Sinuwari S/S was scheduled to be completed by June 1, 2005. But due to some unavoidable factors the project work is likely to be delayed by some months. Similarly, the proposed erection of 33 kV transmission line with its tendering process in matured stage is likely to be completed within the fiscal year 2062/63. Similarly, under Tanahu Branch Office, a 6/8 MVA, 33/11 kV substation at Dumre will be added. Under this contract one 33/11kV, 6/8 MVA power transformer will be installed in place of 33/11kV, 1.5 MVA transformer at Dumre substation and a new control building with five 11 kV outgoing feeder will be constructed. At Anbu S/S, 33 kV VCB for line and 2X2 MVA power transformers will be added and all of the old 12 kV switchgear panels will be replaced by new ones. Construction work is expected to be complete by fiscal year 2005/06. The total cost of the work excluding taxes is about NRs. 45 million.

Other Initiatives

NEA's high level executive visited and interacted with large consumers in Biratnagar, Birgunj and Kathmandu. NEA assured the top-level management of the industrial and business entities to improve the power quality and executed:

- a) the installation of capacitor banks in Biratnagar area
 - b) the installation of capacitor banks in Birgunj area
- Collecting dues for the street lighting was very important to NEA management. Besides the above initiatives, NEA has persuaded and received 210 million rupees out of the outstanding dues of the street lighting from Local Development Ministry.



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Mr. R. C. Pandey
Director
Community Rural
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Mr. S. K. Pradhan
Director
RE Distribution System
Reinforcement Project

The Electrification group was established in the dire need for a separate entity to coordinate the substantial rise in planned financial investments in the expansion, reinforcement and management of rural distribution systems. This group is responsible for development of distribution network (up to 33 kV); construction, operation and maintenance of distributed o.-grid small hydro generations and associated networks as well as for management of rural distribution systems through community participations. ADB and OPEC loan assisted Rural Electrification, Distribution and Transmission Project, headed by Director; is entrusted to coordinate different five program components namely, Rural Electrification and Distribution System Reinforcement, Transmission Line, Computerized Billing, Distribution Profit Center and Fixed Assets Revaluation. One of the challenging tasks in community Rural Electrification is screening of the applications, as the allocated funds are limited.

CRED PROGRESS TILL JUNE, 2005

Up to June 2005 altogether 323 RECs have applied for generation, electrification and

distribution management under the scheme. The details of Electric Distribution Institution

Under CBRE, CBOM and CBG scheme are as follows.

CBRE Scheme :

20 % Participation Recorded , NRs 195 Million

80% Matching Fund Required, NRs 780 Million

Line length (HT/LT) 2184.5 km

Bene.ciary House Hold 1,21,129

No of Distribution Transformers 418

3 MVA, 33/11 Kv Substation 1 nos

Application Registered 130

RECs in Implementation 72

Coverage Districts 33

VDC Coverage 277

CBOM Scheme:

Application Registered 190

RECs in Implementation 12

Coverage Districts 37

CBG Scheme:

Application Registered 3

Abbreviation:

Under the community based rural electrification scheme altogether 323 communities have applied for generation, electrification and distribution schemes till June 2005. 20 % participation fund amounting to NRs. 195 million has been received from applicants registered under community based rural electrification that requires an 80% matching fund of NRs. 780 million. The proposed scheme includes construction of 1 No. of 3 MVA, 33/11 kV substation, 2184.5 kMs of primary and secondary distribution lines, and 418 Nos. of distribution transformers. These schemes will benefit 121,129 households from 77 VDCs of 33 districts. Similarly, 190 applications from 37 districts have been received under the community based rural operation and maintenance scheme and the screening process is under process. 12 Nos. of communities have already been given the responsibility in first lot for management of community based schemes. They are performing satisfactorily till now. In contrary to the thrust in community based rural electrification scheme and community based operation and maintenance scheme, only three applications are received for community based generation schemes. In this year many of the development activities under this group are being affected by the insurgency. Construction of two small hydropower projects in Humla and Mugu districts have been delayed further by two years. Similarly, the construction works for various rural electrification projects have also been delayed. A serious set back has been experienced in Kailali Kanchanpur RE project, where the main Danish contractor has stopped the site

CBOM : Community Based
Operation & Maintenance
CBRE : Community Based Rural
Electrification
CBG : Community Based
Generation
RECS : Rural Electric
Communities

works since March 2005 citing security reasons. Efforts for alternative measures are under way for continuation of the suspended work. Some of the small hydro construction and rural electrification schemes are being affected by the insurgency. As a result few projects have been delayed by two to three years. A number of small hydropower plants and substations have been destroyed in this year also. All the plants except Bhojpur have already been put into partial operation. Two small hydro plants and more than ten sub transmission line construction projects are under way. These sub transmission line projects will help to connect many isolated rural small hydro plants to the main grid.

Sindhu Dolkha Distribution Line Extension Project

After completion of this project, about 50,000 households and small scale industries in the project area will get direct benefit. The major scope of the project includes:

- ◆ Construction of 82 km of 33 kV, 200 km of 11 kV and 460 km of LV line
- ◆ Installation of 278 Nos. of distribution transformers
- ◆ Construction of 4 Nos. of 33/11 kV sub-stations

Till now two number of distribution substations and network expansion with 52 km of 33 kV line, 172 km of 11 kV line, 340 km of LV lines and 168 nos of distribution transformers have been completed. Funded by His Majesty's Government of Nepal (HMGN), the project is estimated to cost Rs. 40 million. This project is expected to be completed by FY 2006/07.

Distribution and Rural Electrification Project

This project is aimed for rural electrification and distribution system reinforcement in Dhading, Nuwakot, Lalitpur, Bhaktapur and Kavrepalanchowk districts. This project is funded by International Development Association (IDA) of the World Bank under Power Development Project. About 16,920 consumers will be benefited from this reinforcement work. The procurement of material and equipment is being made through several lots and packages. Contract agreement has already been made for supply of PSC poles. Tenders called for other packages are under evaluation. This project is scheduled for completion by FY 2008/09.

Kailali Kanchanpur Rural Electrification Project

The project was started in 1999 (2056/057) with DKK 66.3 million grant assistance of Danish Government and Rs. 669 million from HMG/N and NEA. The project will electrify 33 VDCs and two municipalities of Kailali and Kanchanpur districts. About 64,000 households will benefit from this project. It is expected to be completed in 2007 (2063/64). Construction of three numbers of 3 MVA, 33/11 kV substations at Lamki, Attariya and Lalitpur have been completed. Similarly, construction of 180 kms of 11 kV line and 550 kms of low voltage lines in 124 load centers had been completed, which represents fifty percent of the envisaged task. Citing security reasons, the Danish contractor has suspended the works since March 21, 2005, as a result of which 50% of the project works need yet to be completed. Considering this situation, alternative arrangements have been made to carry out implementation of the remaining works within current fiscal year. One of the specialties of this project is that the community based cooperative will take responsibility of the operation and maintenance. After completion of the project, load center based users' cooperatives will take over the responsibility of operation and maintenance of low voltage lines and distribution transformers. Cooperative formation works have been assigned to a

Non Governmental Organization (NGO).

Rural Electrification and Distribution System Reinforcement Project

Progress made so far includes acquisition of land for 14 new substation sites. The total procurement is divided into 11 lots and 21 packages. Out of which, contracts for 8 lots and 12 packages have been awarded. Delivery of some materials is in final stage. Tenders have been called for installation of distribution system. The field construction works are expected to be commenced from the next fiscal year. Civil works like construction of boundary walls for new substation sites and construction of warehouses at various places have been completed this fiscal year. Tenders for sta. quarter construction for various substation sites are under process. Funded by Asian Development Bank, His Majesty's Government of Nepal and Nepal Electricity Authority, this project is expected to be completed by FY 2007/08 at an estimated cost of US\$ 52.3 millions.



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Mr. S. S. Rajbhandari
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The Engineering Services Business Group is responsible for various level of engineering studies and design of power projects. It has nearly two decades of experience in design and construction supervision of a number of hydropower plants with capacities up to 144 MW. It comprises of four departments, namely, Project Development Dept., Soil Rock and Concrete Laboratory, NEA Training Centre and Environment & Social Studies Dept. The field of expertise offered by this business group also includes Electro-Mechanical Services, which also consists of a concrete pole plant and a central workshop. To ensure its efficient functioning, it has a steering committee headed by the General Manager Engineering Services Business group.



The directors from all of the four Departments are members of the committee. The services provided by this business group include all aspects of hydropower development ranging from project investigation and master plan studies to construction supervision and management of hydropower projects including detailed engineering studies. During the fiscal year 2004/2005, Department of Environment and Social Studies (ESSD) of this group completed Environment Impact Assessment (EIA) of Kathmandu III substation, Khimti- Dalkebar 220 kV transmission line Projects and received approval from the Ministry. TOR and Scoping documents of Seti-Trisuli storage project has been approved as well. Studies in process of approval of line agencies are EIA of Upper Tamakosi hydroelectric Project, Gongor-Khimti 220 kV transmission line and Upper Hewa Khola hydroelectric project. Public hearings for these projects have already been completed except for nine VDCs in Kaski district which is scheduled in near future. IEE reports of Sarada and Inuwa Khola Small Hydro project have been prepared.

This Department also takes care of studies conducted through local consultants like EIA of Chamelia Hydroelectric Project, Balach -Atariya 132 kV, Kulekhani III 132 kV and IEE of Dhading-Nuwakot 33 kV transmission line projects. Operational stage mitigation and monitoring program for Kali Gandaki-A Project has been initiated in FY 2004/05 which will continue for two years. A draft Operation Manual for operational stage social and environmental management of Kali Gandaki-A Project has been prepared for the first time in Nepal. Under Soil, Rock and Concrete Laboratory of this group, surface geological mapping, core drilling works, construction material investigation and laboratory testing are the major

activities carried out for Upper Seti Storage Hydroelectric Project. Geological mapping has been carried out, a total of 810 m of core drilling works and 21 numbers of test pit excavation have been completed. All drilling machines and materials were transported manually to the sites for which SRCL has constructed 2.5 Km. of access path in difficult topography. Despite adverse site conditions, all field works have been carried out smoothly in time. Other activities in which this group has been involved are:

- ◆ Assistance in geological investigation of Gamgad Small Hydroelectric Project.
- ◆ Assistance in geological investigation for the foundation of damaged tower no.55 of 66 kV Atariya ◆ Dipayal transmission line.
- ◆ Assistance in geological investigation of damaged tower of Chatara ◆ Dharan 33 kV transmission line at Sardu Khola.
- ◆ Laboratory testing of sediments of Upper Tama Koshi, Upper Seti Storage Hydroelectric Project and Seti-Trishuli Storage Hydroelectric Project.
- ◆ Strength test of concrete, rock and cement which are requested to perform by different institutions.
- ◆ EIA study of Upper Seti Storage Hydroelectric Project.
- ◆ EIA report on Dhalkebar ◆ Bhi.amode 132 kV T/L.
- ◆ EIA report of Butwal-Sunauli 132 kV T/L.
- ◆ IEE report of Duhabi-Biratnagar 33 kV Reinforcement Project.

NEA Training Center under this group at Kharipati, Bhaktapur is envisaged for upgrading the professional knowledge and skills of manpower involved in the power sector. The following table shows training Conducted in the Fiscal Year 2061/62.

These training were conducted on contract with corporate level offices of NEA. For the first time, 4 Engineers from Department of Electricity Development (DoED) HMG have also participated in the training conducted under this group. On the request of Promotion Committee of NEA, Practical tests for the internal competition of different assistant level positions were also conducted under this group for the first time in 2004/05. Project Development Department under this business group conducted various studies in FY 2061/62.

Upper Tamakoshi Hydroelectric Project

Upper Tamakoshi Hydroelectric Project (UTKHEP) is a run-of-river type project with daily peaking pondage. The Phase- I feasibility study was conducted during 2001-2003 by NEA. Under grant assistant of Royal Norway Government, the consultant Norconsult AS submitted bankable feasibility study report (Phase-II) of this project in May 2005. The head works is located at Lamabagar VDC, Dolakha District. This project has many attractive features such as 300 m high natural dam, good geology, high firm flow, very low sediment and minimum environmental impact. This project will utilize 820 m gross head in order to generate maximum output of 309 MW and average annual energy of 1737.7 GWh. According to the Generation Expansion Plan of NEA, UTKHEP should be commissioned by 2012 AD in order to meet the future demand of electric energy of Nepal. This project has very low specific energy cost. The project is planned to be implemented under public-private participation.

S.N.	Types of Training	Officer		Assistant		Total
		Technical	Non-Tech	Technical	Non-Tech	
1.	On the job training (Short-term course)	127	54	201	141	523
2.	Induction Training (Recruited in NEA)	73	0	423	209	705
	Total	200	54	624	350	1228

Environmental Impact Assessment (EIA) of the project has been carried out separately for generation and transmission. Public hearings have been conducted on November 19, 2004 and on December 22, 2004 in Charikot, Dolkha. The EIA have identified many positive environmental effects such as fishery resource at intake pond, land reclamation, flood control at Lamabagar, community development, employment opportunities, district development and improved access etc. For a project of this size, adverse impacts are minimal and can be duly mitigated. Estimated cost of project as per the final feasibility report is US\$340 Millions including access road and transmission line. The unit price of energy is calculated as USc.2.6/kWh.

UTKHEP is currently engaged in the following works:

1. Land acquisition along the 28km Access road between Singati and Lamabagar.
2. Evaluation of technical proposals of Package- 1contract of Access road.
3. Construction of Office building at the Power house site, Gongar.
4. Updating of hydrological and sediment logical data from the project site and their analysis.



Upper Trishuli 3 'A' Headworks Site

Other projects under study under this business group are Upper Seti Storage Hydroelectricity Project, Seti Trishuli Storage Project. Beside these this business group is also carrying out medium sized Project Identification Study, studies on maintenance of existing power plants like silt problem of Trishuli Balancing Reservoir, Discharge Capacity of Devighat intake and repair works of Tinau head works. Some additional field investigation of Upper Modi $\diamond A \diamond$ was also made in FY 2004/5.

Project Development Department continued sedimentation monitoring of the Kulekhani reservoir in 2061/62. The original capacity of the reservoir was 85.3 million m^3 out of which total live storage was 68.25 million m^3 . The gross capacity of the reservoir as per the study of January 2005 is 62.248 million m^3 , accounting to the total loss of 23.05

Mm³ of reservoir volume in a period of 23 years. The live storage is calculated to be 55.54 Mm³ and the dead storage 6.71 Mm³.



Mr. K. P. Upadhyaya
Director
Managing Director's Secretariat



Mr. L. Ghimire
Director
Internal Audit Department



Mr. S. N. Neupane
Director
Public Relation and Grievance
Management Department

NEA Board Matters

Dr. Tulsi Giri, Vice Chairman of the Council of Ministers, who is also holding the portfolio of Ministry of Water Resources has been chairing the meetings of NEA Board of Directors since 2061/12/2 (3/15/ 2005) as ex-officio Board Chairman. Prior to this, the then Minister of State for Water Resources, Mr. Thakur Prasad Sharma was NEA Board Chairman. Mr. Mahendra Nath Aryal, Secretary, Ministry of Water Resources is the ex-officio Board member since 2061/4/29 (8/13/2005). Mr. Hemjung Gurung and Mr. Aang Gelbu Sherpa were nominated as members to NEA Board on 5/6/2061 (9/21/2004). During FY 2004/05, the NEA Board meetings were held 23 times. Some important by laws on Generation, Transmission & System Operation and Distribution & Consumers Services and the NEA Grid Code were adopted and the Policy for purchasing power from Bio-mass and Wind Power plants was approved. NEA Corporate Structure also underwent a minor revision.

Internal Audit Department

The Internal Audit Department carries out financial, technical and energy audit of NEA offices. It has the target to cover all of NEA's offices and complete internal audit before the commencement of final audit. To increase the internal audit coverage, unit offices have been established in 5 development regions. These regional offices will audit all the NEA offices falling under them. Activities up to last Poush have already been audited. Coverage is around 85

percent of total budget centers. Remaining activities are expected to be audited by the end of Aswin 2062. The Department also conducts training for its sta. on Financial Audit, Technical Audit and Energy Audit to enhance their professional capabilities.

Public Relation and Grievance Management Department

To address public grievances on a timely manner, NEA established a new department named Public Relation and Grievance Management Department. This department was formed to work as a focal point of NEA to deal with public complaints and forward the same to NEA's core-business units for necessary action. This department sends information and reports on NEA's activities to the concerned authorities on a regular basis. During FY 2004/05, the department received altogether 29 complaints from the public. Fifteen of those complaints have already been addressed while the remaining complaints are being processed for necessary action.



Mr. Dipak P. Upadhyaya
Officiating Deputy Managing Director



Mr. U. D. Bhatta
Director
Information Technology
Department



Mr. S. B. Shrestha
Director
Corporate Planning Department



Mr. R. M. Sulpya
Director
Power Trade Department



Mr. V. B. Singh
Chief
Monitoring Department



Mr. J. M. Pradhan
Chief
System Planning Department

To cope with the increasing demand for electricity, proper short and long term generation and transmission planning have become a crucial aspect in NEA's investment decisions.

The planning, monitoring and information technology wing of NEA periodically evaluates and

monitors on the development projects executed by NEA for their timely and successful completion.

This office is supported by five departments namely System Planning Department, Information Technology Department, Monitoring Department, Corporate Planning Department and Power Trade Department.

System Planning Department

The System Planning Department is mandated by the NEA Board to formulate NEA's long-term investment plans on generation and transmission. During the year under review, the Department brought forth three important documents on:

- ◆ Load Forecast
- ◆ Generation Expansion Plan and
- ◆ Transmission Expansion Plan.

All of these reports formed the basis for formulating NEA's Corporate Development Plan FY 2005/06 - 2009/10. The department also played a crucial role to conduct on-the-job training on Generation and Transmission Planning for NEA planning engineers through NEA's training center.

Corporate Planning Department

The Corporate Planning Department, undertook the following major works during the fiscal year 2004/05:

- ◆ Preparation of Annual Corporate Development Plan (CDP).
- ◆ Formulation of Annual Development Budget.
- ◆ Preparation of proposals for foreign assistance.
- ◆ Obtaining licenses from HMG/N for its development initiatives.
- ◆ Preparation of Action Plan for HMG/N's Budget Policies related to NEA.
- ◆ Preparation of Medium Term Expenditure Framework (MTEF) paper for the fourth MTEF (FY 2005/06 - 2007/08).
- ◆ Preparation of Business Plan on Rural Electrification for the National Planning Commission.
- ◆ Preparation of Demand Side Management Policy.

In addition, NEA obtained nine new licenses from HMG/N for development works. Out of the nine new licenses; three were for the distribution survey, two for the transmission survey and the remaining four were for the generation survey.

In the capacity building measures for NEA staff, six senior NEA officials took part in various trainings, workshops, seminars and partnership programs under the USAID sponsored South Asia Regional Initiative/Energy (SARI/E) program in the region. Similarly, two senior sta. went to Argonne National Laboratory in the USA for the training on Generation Planning Models sponsored by USAID funded Private Sector Hydropower Development Project of HMG/N.

Power Trade Department

Besides negotiating, conducting and administering PPA with IPPs, this Department also coordinates the cross border power exchange and trade with India and acts as NEA's nodal point in order to deal with the Power Trading Corporation (PTC) of India for the sale of seasonal surplus energy on a "as-and-when available" basis. During FY 2004/05, this Department concluded PPAs with Gautam Budha Hydropower (P) Ltd (Sisne Khola Small Hydropower Project, 750 kW), East Nepal Development Endeavour (P) Ltd (Upper Mai Khola Small Hydropower Project, 3.1 MW) and Aadishakti Power Development (P) Ltd (Tadi Khola Small Hydropower Project, 970 kW). Currently, a number of PPA proposals are under review. The Department also finalized the commercial operation date (COD) of three small hydropower projects during FY 2004/05. Sanima Hydropower Company, successfully generated and supplied electricity to the national grid from the Sunkoshi Hydropower Project (2.6 MW), with effect from Chaitra 11, 2061. Similarly, Rairang Hydropower Development Company (P) Ltd (Rairang Khola Small Hydropower Project, 500 kW) and Alliance Power Nepal (P) Ltd (Chaku Khola Small Hydropower Project, 1.5 MW) have also successfully supplied electricity to the national grid starting Mangsir 01, 2061 and Asadh 01, 2062 respectively. This Department also provides support to NEA's Corporate Finance Department in processing the invoices of the IPPs. Currently, the Department is drafting a model Power Purchase Agreement for power purchase from IPPs up to 10 MW.

Monitoring Department

This Department collects and evaluates monthly, quarterly and annual progress reports of different projects implemented by NEA. It conducts internal review meeting of different projects and participates in the Ministry level quarterly progress review meeting. It also acts as the Secretariat to the Petition Committee of NEA as provisioned in the Electricity Loss and Electricity Distribution by-laws. As the nodal officer of NEA, the Department also takes responsibility for collecting the progress report and reporting to HMG's concerned authorities regarding delivery of services effectively by monitoring the progress reported by NEA's departmental and district level nodal officers. Apart from the above tasks, this department also co-ordinates with and reports to various Government Agencies, such as the Ministry of Water Resources, National Planning Commission etc. regarding the progress of NEA executed projects.

Information Technology Department

The Information Technology Department in FY 2004/05 developed a number of application software for organizational efficiency such as Board minute tracking system, sales revenue & collection system, document control system etc. These application systems are in use in the respective offices and the NEA intranet site disseminates the information gathered from these applications software in a graphical format. The Computerized Accounting and Inventory System (CAIS) was implemented in six more budget centers and more than 56 sta. were trained in the use of the software.

The total number of installation of CAIS in NEA now stands at 97, more than fifty network nodes were added to the NEA corporate office local area network (LAN) in FY 2004/05. The department also tested the use of V.24 interface of the fiber network provided by the Load

Dispatch Center. This network will augment the existing Virtual Private Network (VPN) service and the dial in service provided by the Department for remote offices. NEA intranet site was improved with the inclusion of important facilities like telephone inquiry system, library book inquiry system, document dispatch system etc. Development of a strong intranet system will enable NEA to share information, monitor performance, establish accountability, maintain transparency, improve efficiency and ultimately will pave a way for the establishment of a virtual office. Most of the information about NEA activities can be downloaded from the NEA website: www.nea.org.np



Mr. U. K. Shrestha
Deputy Managing Director



Mr. L. M. Maskey
Director
Finance & Accounts
Department



Mr. R. P. Adhikari
Director
General Services
Department



Mr. D. Poudyal
Director
Corporate Finance
Department



Mr. B. K. Dhakal
Director
Human Resources
Department

The office of Finance and Administration looks after the overall activities of the financial management, central accounts, the human resources development and the general administration within NEA. This office takes care of the activities in the corporate financing and human resources planning. Assisted by directors of Corporate Finance Department, Finance and Accounts Department, Human Resources Department, General Administration Department, this office is headed by Deputy Managing Director.

Corporate Finance Department

Total NEA sales in Nepal grew by 11.7 percent to reach a figure of 1853.7 GWh in FY 2004/05. Export to India however felt a setback with only 110.7 GWh of export. This is 21.6 percent less than previous year's figure. The total NEA sales however grew by 9.08 percent to reach a figure of 1964.4 GWh. Income from other sources; such as surcharge, bank interest, lease rent, penalty in contracts etc. in FY 2004/05 was Rs. 566 million. This is 4.3 percent of the total gross revenue and 15.6 percent less compared to previous year's figure. Rebate to consumers amounted to Rs. 280 million and represents 2 percent of the gross income. Total income after rebate in FY 2004/05 was Rs. 13.39 In FY 2004/05, total expenditure stood at Rs. 15.25 billion, an increment of 12.2 percent over the previous year's figure. Power purchase expenditure increased by 3.7 percent, mainly due

to additional import of 100 GWh of energy in the eastern region, and amounted to Rs. 5.62 billion. Interest expenses amounted to Rs. 3.32 billion which is an increase of 10.6 percent over the previous year's figure. The royalty expenses when compared to previous year's figure increased by 40 percent. Operation and maintenance expenditure that comprises expenses for: staff salary and perks, fuel, maintenance of machines and structures, administrative support etc. increased by 12.4 percent and amounted to Rs. 3.61 billion. Reasons that are attributed to increase in O & M expenditure are additional thermal generation, increase in staff facilities, additional maintenance of infrastructures etc. In the year 2004/05 also NEA carried on its business without increasing the tariff. During FY 2004/05, NEA suffered a net loss of about Rs. 1.91 billion. To every kWh served NEA carried a loss of around Rs. 1.00. During FY 2004/05 price rises on various items (petroleum products, construction materials etc.) and increase in the VAT rate worsened NEA's financial position. NEA also requested HMG/N to consider reducing the prevailing interest rate in view of the fact that US\$ exchange rate vis-à-vis NRs. grew by only 3.4 percent during the past 10 years and the fact that the prevailing interest rate in the market is modest. The reduction in interest rate obviously reduces the pressure for tariff increment requirement.

In FY 2004/05 NEA faced the challenge of managing its cash requirement. NEA spent an additional amount of Rs. 450 million towards the cost of foreign component in the Middle Marsyangdi Hydroelectric Project. A total of Rs. 18.17 billion was spent against a total of cash receipt of Rs. 18.15 billion. Cash collection during FY 2004/05 could not remain satisfactory due to security problem prevailing in the country. During the year in review, total cash collection from sales stood at Rs. 11.24 billion. Arrears from public sector consumers reached Rs. 1.5 billion mainly due to outstanding dues of Municipalities whereas the collection rate of individuals and private sector consumers remained satisfactorily at 95 percent.

NEA's treasury management is being improved by adopting various available methods and tools of modern financial management. From FY 2004/05, NEA started buying foreign currency to pay power purchase bills of Bhoite Koshi Power Company. Direct bank collections are being operated effectively to generate interest income from Call and Time deposits. A new scheme of introducing Power Bond is in the offing to finance NEA's future projects.

For institutional strengthening, a sub-component of Nepal Power Development Project has completed the selection process of consultants. These consultants, after appointment will carry out the task of enhancing NEA's capability in financial management, accounting and auditing.

Finance and Accounts Department

NEA's net revalued fixed asset at the end of FY 2004/05 reached NRs.58,747.50 million in comparison to NRs.58,963.40 million as of end of FY 2003/04. Total revenue in FY 2004/05 was NRs.13389.00 million as compared to NRs.12546.10 million of FY 2003/04, which is an increase of 6.72 percent.

Total operating expenses under generation, transmission, distribution and administration are NRs.7362.00, NRs.240.70, NRs.1556.20 and NRs.511.60 million respectively for FY 2004/05 and NRs.6565.90, NRs.199.50, NRs.1376.10 and NRs.489.10 million respectively for FY 2003/04. They represent an increase of 12.1, 20.7, 13.1 and 4.6 percentage respectively, whereas the increase in total expenses was 11.4%. NEA suffered a net loss of NRs.1915.00 million in FY 2004/05. NEA's financial performance has not been encouraging and is suffering a loss for the fifth year in row due to various reasons cited in this report.

In FY 2004/05, NEA invested NRs.7100.10 million in capital works and projects. Out of this, NRs.1060.90 million comprised of HMG equity, NRs.3949.20 million as HMG loan and NRs.2090.0 million from NEA's internal source. NEA's total borrowing stood at NRs.4917.98 as of end of FY 2004/05. In FY 2003/04, NEA contributed a total sum of NRs.48386.91 million to the national treasury. Out of this, NRs 3324.55 million was for interest payment, NRs.621.45 million for loan repayment, NRs 41.61 million towards corporate tax and NRs.851.08 million as royalty. The financial audit for FY 2003/04, carried out by M/s TR Upadhyaya and CO., was completed within ten months of conclusion of the fiscal year. Tax audit for FY 2003/04 has also been completed. NEA appointed auditor to conduct the performance audit of General Manager's Office of the core business units and the distribution centers for the first and third performance audit period respectively.

NEA has successfully computerized its financial accounts and inventory management system in 97- branch offices out of the 126 operational level offices. This will help to prepare financial accounts in due course of time and it will facilitate to complete the financial and tax audit at stipulated time. It will help the financial reporting system of NEA and also help to comply with the loan covenants of donor agencies. The audit qualifications of the period FY 2030/31 to 2050/51 of then Electricity Department, development Projects and Development Committees has been cleared by 61 percent out of the total outstanding audit qualifications in FY 2004/05.

Human Resources Department

The Human Resources Department has been entrusted with the functions of Manpower Planning, Staffing, Training and Development, Employees Record Keeping, Staff Welfare, Disciplinary Actions and Administrative Management. The total approved positions as of end of FY 2004/05, is 10317; out of which 9779 positions are filled constituting 479 women staff in different levels. During the year under review; 768 staff were appointed, 25 staff retired, 28 resigned and 52 died. Under disciplinary actions; 23 staff have been cautioned, 9 have been debarred promotion, 6 suspended, 19 dismissed and 3 dismissed with ineligibility for future NEA service. The recruitment process of appointing 768 permanent new staff for Technical and Non-technical positions have been completed.

As regards promotion, 5 employees in the officer level and 95 in the assistant level have been promoted under the 12 years time bound promotion system. Similarly, 1378 employees have been promoted in different levels based on performance evaluation. A new Personnel Management Software has been developed for efficient record keeping of employees and enhancing the existing Personnel Data Bank (PDB).

Staff Recruitment FY 2004/05

S.N.	Level	Technical	Non-Technical	Total
1	10	1	1	2
2	9	0	1	1
3	8	5	4	9
4	7	75	0	75
5	6	0	0	0
6	5	2	9	11
7	4	68	30	98
8	3	219	134	353
9	2	170	7	177
10	1	15	45	60
		555	231	786

Staff Promotion FY 2004/05

S.N.	Level	Technical	Non-Technical	Total
1	11	8	6	14
2	10	10	9	19
3	9	28	17	45
4	8	9	4	13
5	7	100	21	121
6	6	77	47	124
7	5	78	91	169
8	4	148	68	216
9	3	283	70	353
10	2	396	8	404
		1137	341	1478

Employees Status FY 2004/05

Level	Service	Approved Position			Existing Position			
		Regular	Pool	Total	Permanent	Monthly Wages	Daily Wages	Total
Managing Director		1	0	1	1	0	0	1
G. M./ D.M.D. (Level-12)		8	0	8	4	0	0	4
Officer Level (Level 6-11)	Technical	1056	2	1058	853	15	1	869
	Non-Technical	483	1	484	415	1	0	416
	Total	1548	3	1551	1273	16	1	1290
Assistant Level (Level 1-5)	Technical	5330	173	5503	4197	453	703	5353
	Non-Technical	2970	293	3263	2441	280	415	3136
	Total	8300	466	8766	6638	733	1118	8489
	Grand-Total	9848	469	10317	7199	749	1119	9779

Job Descriptions for levels up to 8 have been revised. A new Performance Appraisal System is being developed for levels up to 10 that incorporate performance standards for improving quality of service delivered by both the employees as well as the organization. A total of 152 staff participated in trainings, seminars, workshops, higher studies and equipment inspections abroad whereas 236 staff participated in trainings, seminars, workshops and higher studies conducted by different organizations of Nepal. Similarly, 254 officer level and 974 assistant level staff received training from the NEA Training Center. Under the staff welfare program, additional financial support has been provided to 9 employees for the

treatment of serious diseases. Similarly, under the staff welfare loan; 470 staff received house/land purchase and construction loan, 190 staff received house maintenance loan, 240 staff received social activities loan, 287 staff received 3 months salary loan and 6 staff received natural disaster loan.

General Services Department

The General Services Department is responsible for general administration, legal and arbitration, property management and procurement for NEA's central office.

It provides all administrative support to the central office as well as ensures the security of the premises. To support the various functions of the Department, two divisions (General Administration and Legal & Arbitration) and two sections (Property Management and Procurement) are presently functioning.

There were altogether 118 legal cases involving NEA in FY 2004/05. Out of this, NEA won 48 cases, lost 10 and remaining 60 cases are sub judice. Cases are related mostly to: theft of electricity, land acquisition, staff promotion etc. Some of the disputes related to the contracts of projects under construction are being resolved through arbitration.

Highlights of FY 2004/05

Description	2005*	2004	Increase/Decrease	
			Amount	P
Revenue:				
Net Sale of Electricity (M.NRs.)	12,822.900	11,874.700	948.200	
Income from Other Services (M.NRs.)	566.100	671.400	(105.300)	
Total Revenue (M.NRs.)	13,389.000	12,546.100	842.900	
Operating Expenses:				
Generation Exps. (incl. Power Purchase) (M.NRs.)	7,362.020	6,565.900	796.120	
Transmission Expenses (M.NRs.)	240.708	199.500	41.208	
Distribution Expenses (M.NRs.)	1,556.228	1,376.100	180.128	
Administration Expenses (M.NRs.)	511.642	489.100	22.542	
Depreciation Expenses (M.NRs.)++	1,838.810	1,686.000	152.810	
Deferred Revenue Expenditure (M.NRs.)	350.000	320.091	29.909	
Total Operating Expenses (M.NRs.)	11,859.408	10,636.691	1,222.717	
Operating Surplus (M.NRs.)	1,529.592	1,909.409	(379.817)	
Interest on Long-Term Loans (M.NRs.)	3,324.600	2,991.500	333.100	
Net Income/(Loss) (M.NRs.)	(1,914.900)	(1,780.300)	(134.600)	
Longterm Loans (M.NRs.)	49,201.300	45,252.000	3,949.300	
Net Fixed assets (M.NRs.)	58,747.484	58,963.400	(215.916)	
Number of Consumers	1,159,855	1,053,935	105,920	
Total Sales of Electricity (GWh)	1,964.393	1,800.814	163.579	
Internal Sale (GWh)	1,853.691	1,659.579	194.112	
Annual Average Consumer's Consumption (kWh)+	1,598.216	1,574.658	23.558	
Average Revenue Rate (NRs./KWh)+	6.53	6.66	(0.13)	
Peak Load Interconnected System (MW)	557.530	515.240	42.290	
Total Available Electric Energy (GWh)	2,642.753	2,380.894	261.859	
Hydro Generation (GWh)	1,522.900	1,345.456	177.444	
Purchased Energy (GWh)-India	241.389	186.675	54.714	
-Nepal(Internal)	864.795	838.844	25.951	
Exported Energy (GWh)	110.702	141.235	(30.533)	
Thermal Generation (GWh)	13.669	9.920	3.749	
Self Consumption (GWh)	22.200	23.298	(1.098)	
Net System Losses (Percentage)	24.83	23.01	1.82	

Note:

NEPAL ELECTRICITY AUTHORITY

BALANCE SHEET AS AT July 15 2005

Particular	* 2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
Capital and Liabilities											
Capital and Reserve											
Share Capital	19276.8	18215.9	16976.9	16601.3	15360.3	14634.0	13365.8	12324.3	10952.6	9231.6	8122.9
Reserve and Accumulated Profit	3950.6	4550.6	5584.3	8153.8	10492.7	11689.6	12040.3	13464.5	14746.7	15416.9	14194.5
Secured Long Term Loan	49201.3	45252.0	43786.0	41474.5	36707.5	30155.7	23824.3	20848.4	17403.2	14900.4	13367.0
Grand Total	72428.7	68018.5	66347.2	66229.6	62560.5	56479.3	49230.4	46637.2	43102.5	39548.9	35684.
Asset											
Fixed Assets	58747.5	58963.4	56949.0	58538.2	37104.0	35196.0	31223.0	29891.3	28633.4	29438.3	28414.0
Capital Work in Progress	14259.7	10619.6	8655.5	4837.8	23640.0	18947.0	16542.7	14179.0	11974.6	7362.7	5229.1
Investment	813.0	713.0	613.0	553.0	517.1	521.1	326.1	247.7	150.6	54.0	30.5
Sub Total	73820.2	70296.0	66217.4	63929.0	61261.1	54664.1	48091.8	44318.0	40758.6	36855.0	33673.
Current Asset											
Inventories	1197.8	1048.0	1017.2	1058.1	960.9	982.3	740.0	914.9	804.0	617.9	429.1
Sundry Debtors and Other Receivable	4123.3	3735.7	3380.2	2284.9	1678.5	1525.5	1530.9	1435.4	1209.1	1040.0	682.6
Cash and Bank Balance	1225.4	1036.4	1076.2	664.6	1039.3	1321.3	1148.1	1632.3	1526.5	1244.8	1349.2
Perpaid,Advance, Loan and Deposits	2486.8	2063.3	2216.9	3314.4	2634.9	1932.0	1634.2	1709.6	1329.0	848.4	471.7
Total Currents Asset	9033.3	7883.4	7690.5	7322.0	6313.6	5761.1	5053.2	5692.2	4868.6	3751.1	2932.6
Less: Current Liabilities and Provision											
Sundry Creditors and Payables	9949.2	9707.7	7444.8	4703.9	5070.80	4488.5	4349.7	3555.7	2512.1	1475.5	1414.3
Provision	715.6	681.5	753.3	1244.2	1042.90	988.9	436.8	449.3	413.1	328.2	240.5
Total Current Liabilities and Provision	10664.8	10389.2	8198.1	5948.1	6113.7	5477.4	4786.5	4005.0	2925.2	1803.7	1654.
Net Currents Assets	-1631.5	-2505.8	-507.6	1373.9	199.9	283.7	266.7	1687.2	1943.4	1947.4	1277.
Deferred Expenditures (To be Written Off)	150.0	250.0	506.8	916.5	978.6	1302.8	615.0	443.3	267.3	410.8	588.5
Inter Unit Balance(Net)	90.0	-21.7	130.6	10.2	120.9	228.7	256.9	188.7	133.2	335.7	144.5
Total Def. Exp.& Inter.	240.0	228.3	637.4	926.7	1099.5	1531.5	871.9	632.0	400.5	746.5	733.
	72428.7	68018.5	66347.2	66229.6	62560.5	56479.3	49230.4	46637.2	43102.5	39548.9	35684.
	-	-	-	-	-	-	-	-	-	-	-
	<i>* Budgeted</i>										

* Provisional figures, Subject to final audit.

INCOME STATEMENT

For the F.Y. 15 July 2005

Particulars	**2005	2004	2003	2002	2001	2000	1999	1998	1997	1996
Sales	12,822.9	11,874.7	11,012.6	9,476.2	8,160.80	6,856.00	5,396.70	5,082.50	4,767.50	3,728.90
Cost of sales	7,602.7	6,765.4	5,348.0	5,886.7	4,480.70	2,190.30	1,950.50	1,743.60	1,176.20	784.80
Generation	7,362.0	6,565.9	5,169.4	5,728.7	4,343.40	2,068.53	1,849.32	1,642.82	1,098.82	729.86
Transmission	240.7	199.5	178.6	158.0	137.30	121.73	101.18	100.78	77.48	54.94
Gross profit	5,220.2	5,109.3	5,664.6	3,589.5	3,680.10	4,665.70	3,446.20	3,338.90	3,591.30	2,944.10
Other income	566.1	671.4	512.5	459.6	593.10	356.40	384.70	350.20	316.30	283.20
Distribution Expenses	1,556.2	1,376.1	1308.6	1,174.4	982.22	711.53	600.26	546.69	436.88	386.95
Administrative Expenses	511.6	489.1	536.10	447.4	850.08	703.47	629.24	564.21	445.12	402.75
Profit from operation	3,718.5	3,915.5	4,332.4	2,427.3	2,440.90	3,607.10	2,601.40	2,578.20	3,025.60	2,437.60
Interest	3,324.6	2,991.5	2,973.4	1,395.5	1,188.20	1,244.30	1,141.20	1,317.20	1,207.50	813.50
Depreciation	1,838.8	1,686.0	1,656.7	1,420.1	1,119.30	948.80	976.40	696.70	598.90	547.80
Profit/ loss on foreign Exchange	50.0	59.1	0.0	271.6	0.00	0.00	0.00	0.00	0.00	0.00
Loss on fixed assets	0.0	0.0	191.5	37.0	0.00	0.00	0.00	0.00	0.00	0.00
Deferred revenue expenditure written off	350.0	320.1	411.1	512.5	426.90	440.80	236.80	270.10	188.70	204.40
Sub total	5,563.4	5,056.7	5,232.7	3,636.7	2,734.40	2,633.90	2,354.40	2,284.00	1,995.10	1,565.70
Profit/ loss from operation including interest+Dep.	-1,844.9	-1,141.2	-900.3	-1,209.4	-293.50	973.20	247.00	294.20	1,030.50	871.90
Prior years adjustment (net)	50.0	344.9	444.4	492.0	291.60	-216.70	-79.40	-91.70	-176.60	-99.00
Net profit/ loss before tax	-1,894.9	-1,486.1	-455.9	-717.4	-1.90	756.50	167.6	202.50	853.70	772.90
Provision for Tax	-	-274.2	1,497.8	143.3	49.10	571.40	263.60	28.80	146.30	74.40
Net profit/ loss after tax	-1,894.9	-1,760.3	-1,953.7	-860.7	-51.00	185.10	-96.0	173.70	707.40	698.50
Balance of profit as per last account	-3,475.2	-1,694.9	278.9	1,159.6	1,230.60	1,065.30	1,181.50	1,027.80	340.40	-338.20
Total profit Available for appropriation	-5,370.1	-3,455.2	-1,674.9	298.9	1,179.60	1,250.60	1,085.50	1,201.80	1,047.80	360.40
Insurance fund	20.0	20.0	20.0	20.0	20.00	20.00	20.20	20.00	20.00	20.00
Profit /loss transferred to balance sheet	-5,390.1	-3,475.2	-1,694.9	278.9	1,159.60	1,230.60	1,065.30	1,181.50	1,027.80	340.40
	**Budgeted									

Basis of Accounting

The financial statements are prepared as per Nepal Accounting Standards except where stated otherwise, and presentational requirement of the Company Act- 2053. The

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.

Revenue from Sale of Electricity

- i. Revenue from sale of electricity is recognized at the time of raising of bills on the consumers, as per the billing cycle. Revenue from the billing cycle dated upto 31 Ashad has been accrued taking average rates. Revenue from sale of electricity is shown net of rebate.
- ii. Accounting of rebate and surcharge for delayed payments and liquidated damages, obligations has been done on cash basis.

Income from Other Services

- i. Revenue from other services is recognized on cash basis.
- ii. Interest on investments in call and time deposits is recognized on accrual basis.
- iii. Dividend on investment in shares is recognized at the time of receipts.
- iv. Revenue from services provided by Engineering Services are accounted for on cash basis on the completion of the relevant job.

Fixed Assets

- i. Fixed assets (other than those identified in para (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 2048-49 (1991-92) by applying the multiplying factor as applied to other revalued assets.
- ii. The following assets are stated at their historical cost less accumulated depreciation
 - a) Solar Power Plant
 - b) Meter and Metering Equipment
 - c) Consumer Service
 - d) Public Lighting
 - e) Tools and Instruments
 - f) Vehicle and Mobile Plant
 - g) Furniture and Fixtures
 - h) Office Equipment
 - i) Miscellaneous Properties
- iii. 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%
- iv. Liabilities in foreign currencies relating to acquisition of fixed assets are carried in the books at the exchange rates prevailing as on the date of incurring the said liabilities and exchange loss/ gain arising there from, is adjusted to the cost of respective fixed assets on actual disbursement of the respective loans.
- v. 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 adjusted to the Exchange Variation Reserve and losses in excess of the balance in this account are charged to the Income Statement. During the year, Rs.59.152 million of loss on foreign

exchange is charged to the Income Statement.

Revaluation of Fixed Assets

(i) A major portion of fixed assets was revalued during the financial year 1988/89 and 1989/90, 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 the financial years 2003 and 2004 for foreign and local component in the ratio 80:20. Independent valuers are not used for annual revaluation of fixed assets.

(ii) The multiplying factor computed for the year and applied to the assets for annual revaluation is 2.85% (previous year 0.63%).

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

Depreciation

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

rates:

		Revalued Cost Basis	Historical cost Basis
(a)	Land	-	-
(b)	Buildings	1.00%-2.00%	2.00%
(c)	Hydro Electric Structures	2.00%-2.90%	2.00%-3.00%
(d)	Hydro Electric Plant & Machinery	3.35%-5.00%	3.00%
(e)	Internal Combustion on plant & machinery	4.00%	2.50%
(f)	Transmission Lines (66 KV, 132 KV and above)	3.35%	3.00%
(g)	Transmission Lines (33 KV)	5.00%	3.00%
(h)	Transmission Substations	4.00%	3.00%
(i)	Distribution System (including below 11 KV Transmission Lines)	4.00%-5.00%	3.00%-4.00%
(j)	Solar Power	-	3.00%
(k)	Meter & Metering Equipment	-	10.00%
(l)	Consumer Services	-	7.00%
(m)	Public Lighting	-	3.00%
(n)	Vehicles, tools and instruments, furniture and fixtures.	-	20.00%
(o)	Office Equipment	-	15.00%
(p)	Miscellaneous Properties	-	50.00%
(q)	Additions during the year	At applicable rates for full year	At applicable rates for half year

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

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

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

(v) An amount of Rs 930.269 million (previous year Rs 971.416 million) equivalent to the additional charge for depreciation, arising due to revaluation of fixed assets is transferred from the Revaluation Reserve to the Income Statement and not adjusted against retained earnings as per IAS 16.

Contributions from Consumer/Local Authorities

Contributions received from the consumers/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 2053-54 (1996/97). With effect from 2054-55 (1997/98) such contributions are netted off from the respective fixed assets. An amount aggregating to Rs. 181.06 million on account of consumer contribution pertaining to earlier years has not been adjusted and disclosed in the financial statements as Capital Reserve.

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 adhoc 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. However, Rs 475.798 million (previous year Rs. 461.863 million) is provided by the management on an estimated basis. Liability on account of accumulated home and sick leave aggregating to Rs 142.208 million (previous year Rs 123.658) has been provided for on an estimated basis to cover the liability as at Ashad 31, 2061. Liability on account of medical reimbursement continues to be accounted for on cash basis which is not in accordance with Nepal Accounting Standards.

Insurance Fund

Insurance fund is created by setting aside a sum of Rs. 20 million every year irrespective of profit/loss for the year to cover 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. Rs 260 million (previous year Rs 240 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. This fund is not created in the current year as NEA has incurred loss.

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

(Effective from the Billing of September 17, 2001)

1:	DOMESTIC CONSUMERS		
A	Minimum Monthly Charge: METER CAPACITY	Minimum Charge (NRs.)	Exempt (kWh)
	Upto 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:		
	Upto 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 Meter	Rs. 5.10 per unit	
B	Without 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 (Rs/kVA)	Energy Charge (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 (11kV)	190.00	5.90
C	Medium voltage (33kV)	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

LOAD FORECAST

