

Nepal



By Ken Zita

The mountainous Kingdom of Nepal has established an attractive investment environment for telecommunications, but implementation of the national sector liberalization plan has lagged behind expectations. The country is landlocked, which increases the costs for transportation and undermines its foreign trade potential. Since 1996, an ongoing Maoist insurgency has further eroded Nepal's economic growth. Nonetheless, reforms in governance and economic reforms adopted after the assumption of democracy in 1991 and a liberal trade agreement with India establishes Nepal as a destination for limited trade of U.S. investment, goods, and services.

As part of the Government's Poverty Reduction Strategy, a new Telecommunications Policy is expected in early 2004 to introduce meaningful competition through open licensing and restructuring of the incumbent, state-owned operator, the Nepal Telecommunications Corporation (NTC). In the near term, U.S. firms have an opportunity to participate in NTC's \$83 million capital expansion plan for 2004. Key trade opportunities include the provision of infrastructure for an expanded GSM network (\$30 million) and deployment of a new full-mobility CDMA 800 network (\$40 million). Additionally, the Government has stated its intention to issue two new mobile services licenses this year.

Nepal is a difficult market given the current political climate. However, export opportunities for platform technologies are real and immediate.

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Key Indicators

Kingdom of Nepal	
Population	23.1 million (2001)
GDP	\$5.85 billion (2003)
GDP growth*	-0.6%
GDP per capita	\$242
PPP	\$37.3 billion (2002)
PPP per capita	\$1,400 (2002)
Pop. below poverty	38%
Literacy	53.7%
Phone lines	377,000
Telephone density	1.54
Mobile phones	110,000
Mobile density	0.48

*Adjusted for inflation

Sources: CIA World Factbook 2003, U.S. Department of State and World Bank 2003

Political and Economic Brief

Nepal has been a constitutional monarchy since 1990, when a popular uprising led to the abolition of the quasi-autocratic "panchayat" system. It has a parliamentary democracy in which the King acts as the head of state and the Prime Minister serves as head of government. The advent of democracy has not, however, brought political stability to Nepal; the country has seen 15 governments over the past 14 years. A violent Maoist insurgency, which has ravaged the country since 1996, and the 2001 murders of King Birendra and eight other members of the royal family by the Crown Prince, who then killed himself, have further aggravated this volatility.

King Gyanendra ascended to the throne on June 4, 2001 after the royal murders/suicide wiped out all other heirs to the throne. At the request of then-Prime Minister Sher Bahadur Deuba, King Gyanendra dissolved Parliament on May 22, 2002 and scheduled national elections for November 13 the same year. On October 4, 2002, the King dismissed the government for its inability to hold national elections as scheduled, and has since appointed two successive interim governments. The leaders of the two largest political parties, the Nepali Congress and the Communist Party of Nepal – United Marxist Leninist (UML), opposed the King's appointment of the interim government and are leading a five-party coalition to protest the King's actions.

Prime Minister Surya Bahadur Thapa, appointed by the King in June 2003, presides over the second interim government since October 2002. Prime Minister Thapa has committed to hold elections as soon as possible, although no date has been set.

Approximately 9,000 people have died as a result of the eight-year "People's War" launched by Maoist insurgents in February, 1996. The Maoists, who espouse the abolition of multiparty democracy and constitutional monarchy, use murder, torture, extortion, abduction, and intimidation to enforce their views on the population. The movement, initially concentrated in western and mid-western regions of the country, has since spread to affect nearly all of the country. The Government has pursued two unsuccessful rounds of negotiations with the Maoists in 2001 and 2003; both efforts failed after the insurgents unilaterally broke off talks and resumed hostilities against Government forces. Maoist propaganda sometimes singles out the United States and its affiliated interests as enemies of the movement, and the Maoists have claimed responsibility for the murders of two Nepali employees of the U.S. Embassy in 2001 and 2002.

Demography and Economy

Although the Government of Nepal (GON) is open to foreign direct investment, bureaucratic delays, inefficiency, and pervasive corruption often distorts policy implementation. The government is aware of deficiencies in Nepal's investment climate and during the past five years has moved slowly toward more investor-friendly arrangements. Over the past year, however, liberalization of the market has been stalled by the dissolution of Nepal's parliament, leaving proposed legislation to improve the business climate unaddressed. The binding provisions of Nepal's membership within the World Trade Organization (WTO) will obligate the GoN to improve its trade practices regardless of the government in power. In addition to government policy considerations, foreign companies must also consider the political risks brought about by the eight-year-old Maoist insurgency; foreign organizations and investments, specifically U.S.



interests, in Nepal have been targeted by the Maoist insurgents with extortion demands and intimidation threats.

Nepal has made great progress in recent decades transitioning from an isolated medieval kingdom with no infrastructure to a modern state. Poverty reduction remains the greatest development challenge for this nation of 23.1 million. Many of its social indicators are among the lowest worldwide: nearly 40 percent of its population lack access to basic healthcare and education; half Nepal's children under the age of five are malnourished; 80 percent of its citizens rely on subsistence agriculture, even as only 20 percent of Nepal's rugged terrain is arable. Half the country's population is crowded into the hilly, fertile southern Terai region, straining the area's carrying capacity, particularly in the Kathmandu Valley, depleting forest cover for crops, fuel, and fodder and contributing to erosion and flooding.

The country is the size and shape of Tennessee, landlocked in the Himalayan Mountains between China and India. It has eight of the world's ten highest peaks. After the capital Kathmandu, Nepal has six provincial cities: Biratnagar, Patan, Pokhara, Birgunj, Dharan, Nepalgunj. Nepal's people are 81 percent Hindu. Other religious minorities include Buddhists (10.7 percent), Muslim (4.2 percent) and others (4.2 percent). Nepali is a derivative of Sanskrit related to Hindi. Business and government officials often use English. Literacy is low at 53.7 percent.



Nepal's GDP is an estimated \$5.85 billion. Per capita income is \$242, though 42 percent of the population earns less than \$100 per year. Purchasing power parity (PPP), at \$1,400, is among the lowest in the world. Since 1996 the ongoing Maoist insurgency has set back socioeconomic development and international investment.

Nepal remains isolated from the world's major land, air and sea transport routes though air traffic is frequent. There is only one reliable road route from India to the Kathmandu Valley. The only practical seaport of entry for goods bound for Kathmandu is Kolkata in India. Internally, the poor state of development of the road system (22 of 75 administrative districts lack road links and the entire country has only some 9,605 miles of roads) makes volume distribution unrealistic for many products.

Nepal's recent economic performance has plunged due to a number of internal and external factors. The economy registered negative growth for the first time in two decades in 2002, in part due to a 40 percent decrease in tourism, a key source of foreign exchange. The agriculture sector, which accounts for 38 percent of GDP and at least 81 percent of the labor force, saw growth decline by half in 2002. Industry, which accounts for 20 percent of GDP, mainly through the manufacturing of carpets and textiles, also shrank. Hydropower has bright prospects with 83,000

MW potential, and success is tied with Nepal's trade relations with India for downstream distribution. Nepal's relations with India, now Nepal's largest foreign investor and trade partner, have warmed considerably in the last decade, and are no longer hostage to tensions with India over Nepal's relations with China.

Nepal's overall potential as a market for U.S. exports is modest. Total U.S. exports to Nepal in NFY 02/03 (July to July) amounted to only \$21.87 million, largely surveying instruments, parts of aircraft, radio receiver, telecommunications equipment, and electro-medical equipment. At present, there are 877 foreign investment projects in Nepal, worth a total of approximately \$1.64 billion. Indian is by far the largest investor with more than 38 percent of the projects. The U.S.' status as the second largest foreign investor (with 88 ventures) is somewhat misleading: two companies: Coca Cola and Bhote Koshi Power Company comprise a majority of the U.S. investment and the remaining U.S. investment can be characterized mostly as small and medium sized enterprises (SMEs).

Nepal Telecom Policy Environment

Nepal has developed a progressive policy and legal framework for telecommunications. The first *National Communications Policy* was adopted in 1992 and updated in 1999 to encourage private sector participation. A sound *Telecommunications Act* was passed by Parliament in 1997, establishing the Nepal Telecommunications Authority (NTA) and a Radio Frequency Policy Determination Committee. Today the Policy is being revised once again. The new draft, expected to be adopted in early 2004, aims to remove restrictions on investment and accelerate broad market opening. The Government's guiding documents for the sector are uniformly articulated, purposeful and well reasoned. On paper, Nepal has consistently adopted a "global best practices" approach to sector reform. In actuality, progress has substantially lagged behind the lofty language of the strategy papers and market growth has overwhelmingly failed to meet expectations.

Nepal's telecoms have suffered from recent years of political instability. In the time since the reforms began, and despite a proper regulatory platform, only one alternative provider has emerged to the incumbent operator, Nepal Telecommunications Corporation (NTC). With the absence of meaningful competition, expansion of basic (and mobile) services has been predictably disappointing. Rural regions average one line per 1,000 population while more than 60% of rural districts have no telecommunication services of any kind. Virtually no investment has been in rural areas since 2000. Kathmandu, by contrast, has a telephone density of about 21%. With a waiting list estimated to top 290,000 lines, market demand clearly outstrips supply, even with the economy's low purchasing power.

Given the Government's recognition of telecommunication as a prerequisite for development, the clear sector roadmap defined in policy and obvious consumer demand, international investors invariably ask: why has Nepal's telecoms market not taken off?

The first and most obvious answer is that the Government has not had the political constancy required to implement its own meticulously crafted reform program. Over the past 13 years, Nepal has had 13 governments. Since the dissolution of Parliament in May 2002 and the sacking of the Prime Minister in October of that year, the Government has been unable to steer a steady



course for the sector. In the absence of apparent executive direction, efforts to liberalize the economy and introduce competition have largely failed to materialize.

The enthusiastic support on paper for reform has been no match for the traditional inertia of the established state institution. Within Nepali telecom circles, the sentiment to protect NTC runs deep. It has been treated like a national treasure. The chairman of NTC is the Permanent Secretary for Ministry of Communications. The chief of NTC routinely assumes the position of the nominally independent NTA. To date the checks and balances have been weak between the Government, the incumbent and new market entrants. As a result, competitors have had a rough run.

In 2000 a tender stipulated by the 1999 Policy was held for a first GSM service operator to compete with NTC. An award was issued to Modi Group, the Indian mobile service provider, and a local investor, Khetan Group. Despite auspicious beginnings, the venture quickly became encumbered by a series of barriers. First, a formal protest to the contract was issued by the NTC trade union. While NTC was not directly complicit, a petition from the labor union had special resonance in a society combating a strong Maoist opposition. The consortium overcame this impasse only to be instructed to apply for a radio spectrum license, a process that introduced a nine-month delay. Once the license and spectrum issues were agreed, the Government demanded a bank guarantee for bid insurance – a condition that was not a part of the initial tender. The issue was resolved after months of negotiation when a local bank stepped in. Finally, after all the legal, labor, regulatory, spectrum and financial impediments failed to deter the entrepreneurs, the Government threatened criminal inquiry and invoked an investigation by the Commission for Investigating Abuse of Authority. The group was cleared of charges. In the end, after four years of wrangling, no investment has been made and the company has failed to initiate operations. In the mean time, NTC's operations have prospered.

Telecommunications Policy of 2004

The new draft Policy, crafted with international assistance, defines a liberal regulatory environment based on open licensing; widespread competition; specific service obligations for licensed operators; a proposed regime for non-compliance; an explicit reference to WTO interconnection obligations; and a schedule to corporatize and privatize NTC. It is a how-to manual for aggressively liberalizing the sector. What remains to be seen is how assertively the Government will be implementing the plan, or whether continued political instability thwarts effective execution.

Selected recommendations specified in the new Policy include the following:

- *Liberalize the telecommunications sector fully* so that the telecommunications sector is open to new operators without restrictions, except where radio spectrum limits the number of operators (Section 4.4).
- *Introduce a multi-service and multi-operator environment* so that any operator can offer any service and each service can be obtained from a number of operators. The only restrictions shall pertain to services that require access to radio spectrum. Operators are allowed to resell services (Section 5.4.1).



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- *Introduce an Open Licensing regime*, in which new licensing methods are applied to open the sector to new operators in a transparent manner that creates a level playing field (Section 4.5).
 - *Commercialize and privatize the incumbent, NTC* and reduce the Government's ownership. NTC will be converted to a company, restructured to meet increasing competition, and the Government is expected to eventually sell down its position (Section 4.10 and 5.10.3).
 - *Promote private sector participation* in operation of telecommunications. The Government Ministry of Information and Communications and NTA are directed to keep the private sector informed of sector reform development and licensing opportunities in a transparent manner (Section 4.6).
 - *Introduce new mobile operators through tenders* on the basis of maximum rural coverage which will define commercial coverage without subsidies (Section 5.1.1). Two new mobile licenses are expected to be awarded by late 2004 or early 2005. The World Bank has agreed to provide a technical assistance grant to draft the tender documents. Solicitation and selection of consultants is expected in the spring/early summer 2004.
 - *The Government will purchase services from several operators* based on price and quality assessments to demonstrate its commitment to market liberalization, rather than obtain services from the incumbent (Section 5.4.6).

Other key strategic provisions not explicitly stated in the Policy include:

- Radio spectrum will be awarded through allocation, not auction. The Government is mindful of avoiding the pitfalls other countries have pursued with crippling frequency charges. It prefers to ensure that scarce investment capital is reinvested directly into the sector.
- Spectrum fees, in the form of a revenue share, are slated to be modest and intended only to cover the operating costs of the regulator, NTA.
- Nepal is pursuing a technology neutral regulatory regime. No restrictions will be placed on mobility services in the 800/1800 MHz bands, that is, there will be no requirement to restrict the potential of CDMA technology based on artificial constraints.

An Annex to the draft Policy identified a proposed timetable for implementation. Timing should be considered 'best case':

Figure 1: Proposed Policy Action Plan

Liberalization	2004 Q1	2004 Q2	2004 Q3	2004 Q4	2005 Q1-2	2005 Q3-4	2006	2007	2008
New mobile operators		Tender		licences		roll-out done			
Operators for corporate services			Standard license						
Rural least subsidy tenders		plans		tender	licences		roll-out done		
Standard Licences		first licences issued							
Commercialization									
Convert NTC to company									
Restructure NTC		Plans		first phase		second phase		third phase	
Reduce ownership									
Action plan		options developed		strategy adopted	implemen- tation				
Legislation									
Urgent amendment of legislation	enacted								
New rules & regulations				done					
Cyber legislation	plans	Done							
Regulation									
RTDF				manual done					
Introduce Open Licensing		introduced							

Telecommunications Market Overview

The introduction of telecommunication services in Nepal is relatively recent. The first telephone exchange was established in Kathmandu in 1960. Since then, the state-owned Nepal Telecommunications Corporation (NTC) has been the monopoly supplier. Throughout its history until 1997, Nepal was dependent on investment assistance from the World Bank and other donors. Up to 60 percent of its capital for network expansion was derived from external donor sources. With the sudden adoption of the “Washington Consensus” – when the international community collectively chose to embrace market reform over financial subsidy in the telecom sector – NTC growth came to a virtual halt. The company ceased deployment in rural areas altogether in 2000 as it could no longer commercially justify the investments.

Today Nepal has an estimated 377,000 basic phone lines in service yielding a teledensity of approximately 1.54. Most of the lines are in Kathmandu and teledensity in the capital is approximately 21. NTC provides 365,000 lines and UTL, the new fixed wireless operator that began service in December 2003, has 12,000 subscribers in Kathmandu Valley. Between 1995 and 1999, the annual growth rate of telephone service was 28.8%, the third highest in Asia-Pacific region after Sri Lanka (33.8%) and Cambodia (32.1%) but admittedly from an extremely low base. Tariffs on local service have been unchanged for nearly 10 years. Average revenue per user per line is about \$14 per month (NPR 1000), fully blended (with international call revenues from urban users). The waiting list for a line is thought to be about 290,000. Most Nepalese place calls from small storefront public call offices.

Attacks by Maoist insurgents on civilian infrastructure have increased the level of frustration with the lack of service. Since the outbreak of insurgency in 1996, the Maoists have damaged 133 telephone facilities including repeater stations, satellite terminals and network exchanges. An estimated 8,720 telephone lines have been affected causing damages exceeding \$6.2 million.

NTC's GSM service has an estimated 110,000 GSM subscribers but capacity is saturated. The network currently has a total of 150 base station controllers, of which 40 are in Kathmandu. HuaWei is the principle supplier. An estimated 80 percent of customers are pre-paid. Mobile ARPU is \$18-\$20 (NPR 1300-1500).

NTC is in the second year of a \$325 million capital expansion program (2002 – 2007). Spending in 2004 is expected to reach approximately \$83 million (NPR 6 billion). The budget will be funded entirely from NTC operations rather than through government subsidies, grants or loans. The company is planning a dramatic expansion of both its GSM network with the addition of about 300,000 new lines, valued at \$30 million. It will also launch a 400,000 line full-mobility, wireless local loop network based on CDMA 800 technology, valued at \$40 million (see project summaries below). NTC anticipates that competition will finally be approved and introduced this year and seeks to position itself with robust facilities.

NTC is currently constructing an East-West fiber route which will establish the first terrestrial international connectivity via China.

The first competitor to NTC is United Telecom Limited (UTL), a collaboration of three Indian government owned firms: Mahanagar Telephone Nigam Ltd (MTNL), which holds the highest stake (26.68 per cent), Telecommunications Consultants India Ltd (26.66 per cent), Videsh Sanchar Nigam Ltd (26.66 per cent) and a Nepalese company Nepal Ventures Pvt Ltd (20 per cent). The firm is actually administered by India's Department of Telecommunications, a state agency – a role that belies India's strategic position in the sector. UTL has a 10-year extendable license to provide basic telephone service using wireless technology. It is deploying a full-mobility CDMA 1800 system in Kathmandu Valley and the neighboring districts of Lalitpur and Bhaktapur. The platform is provided by LG with a capacity for 500,000 lines. The company has 12,500 subscribers as of January 2004 and hopes to reach 57,000 subscribers by year-end. UTL has a license for international traffic and acquired a 9 meter earth station from the U.S. firm Globecom Systems International (GSI).

Rural communications presents Nepal's greatest challenge. Current phone density in rural areas is among the lowest on earth – about one line per 1,000 population. There are over 4,000 village development committee areas of which only 1,500 are linked by telecom. Huge areas of the country have no service at all. The Maoist insurgency has its roots in rural areas and the absence of effective communications is believed to fuel popular discontent with the government. The Maoists have taken a hard line politically and their opposition to development makes deploying facilities in the remote regions both difficult and dangerous. In the mid-90s the Government called for introducing at least one phone in each village. NTC was also directed to commit 15 percent of its spending to rural areas. Neither target is close to having been met.

In September 2003 an award was issued to the U.S. firm STM networks to construct a 1000-node rural satellite network. The World Bank is providing \$12 million in financing, out of a total

project cost of \$16 million. The scope includes installation and operation of public call offices systems in at least 2 separate locations within each of 534 Village Development Committees (VDC) in Eastern Nepal. STM's consortium includes Samart Communications Services and a local partner, Vishal Group, through tender conducted by NTA. Rural expansion could be spurred further by the introduction of a universal service obligation totaling 2 percent of revenues on licensed services providers.

Near Term Opportunities

American telecom groups interested in Nepal can potentially participate as services providers. The announcement of a new tender for mobile services is anticipated by summer. Up to two new licenses are expected to be issued. U.S. companies are encouraged to begin market positioning.

Vendors have an opportunity to participate in supply of platforms for GSM and CDMA equipment to NTC through immediate tenders (for details see project summaries below).

In addition to the two marquee wireless infrastructure projects, NTC's 10th Five Year Plan (2002/3 –2006/07), which is subject to change with market conditions, is expected to add 300,000 fixed telephone lines, 200 additional rural exchanges (with 200-500 lines each), expansion of national and international long distance trunk capacity, establishment of inter-city optical fiber transmission links, and introduction of new technologies and services. At the end of the project period, teledensity of fixed telephone lines is expected to reach an estimated 2.7 and mobile density, 0.63 (the combined teledensity will be 3.2).

Of the cumulative investment cost, NTC would meet 70% (\$225 million) of the required funding from internal resources, while the rest of the funds would be received through bilateral grants, soft loans, mixed credit, or hard loans from national and international banks. With the establishment of NTC as a private company in 2004, it will also obtain for the first time the legal right to enter into equity joint ventures.

Figure 2: NTC Procurement Budget

(\$US millions)

	Headings	Local Currency	Foreign Currency	Total
1	EQUIPMENT	34.41	216.39	250.80
2	HRD CONSULTANCY, OFFICE AUTOMATION, TRAINING CENTER, VEHICLES, PLANNING TOOLS etc.	3.7	16.30	20.00
3	LAND, BUILDING, CIVIL WORKS CONTINGENCY ON EQUIPMENT COSTS	3.654	28.716	32.37
4	TAXES, DUTIES	22.0156	0	22.0156
	TOTAL	63.7796	261.4060	325.1856

Figure 3: NTC Procurement Plan Details

Sr. No.	Project Component	Quantity	Unit Cost In US \$	Foreign Component US \$M	Local Component US \$ M	Total Cost US \$ M
1	Switching Equipment, OSP system, Power /Airco, Transmission	300,000 Lines	295	82.8	5.7	88.5
2	Rural Exchange, OSP, Power/ Airco, Transmission	40,000	295	9.44	2.36	11.8
3	B-WLL (Urban)	20,000	850	15.3	1.7	17.0
4	GSM Mobile	100,000	325	26.0	6.5	32.5
5	VSAT WLL (Rural)*	2500 25000		41.25	13.75	55.0
6	SDH Radio Systems			9.5	0.5	10.0
7	E-W Optical Fibre Project			20.0	2.0	22.0
8	Spur Radio, Access Network	200 links	25,000	4.0	1.0	5.0
9	Int'l Gateway & Earth station			3.6	0.4	4.0
10	New Technology, AIN, Multimedia, Data networks, VOIP etc.			4.5	0.5	5.0
11	HRD Consultancy, Training centre, Office Automation, Planning tools			11.5	2.5	14.0
12	Vehicles	200	30,000	4.8	1.2	6.0
13	Contingency, Land/Building, Misc.			28.716	3.654	32.370
14	Taxes & Duties				22.0156	22.0156
15	Total			261.406	63.7796	325.1856

*Note: Refer to GSM and CDMA Project Summary details

