

## Output-based aid in Nepal Expanding telecommunications service to rural areas

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**A** landlocked country in South Asia, Nepal has a population of around 24 million, with about 88 percent living in rural areas, and a GDP per capita of about \$240. The government, headed by a prime minister, functions as a multiparty parliamentary democracy within the framework of a constitutional monarchy. In October 2002, however, the new king dismissed the prime minister and his cabinet. The king and his appointed cabinet are now governing the country until elections are held. A Maoist insurgency, launched in 1996, threatens security in much of the country, a situation exacerbated by frequent general strikes.

Telecommunications services are provided by the state-owned Nepal Telecommunications Corporation (NTC), which had achieved a teledensity (lines per 100 inhabitants) of 1.78 for fixed line service and 0.21 for GSM cellular service by 2003. Second national licenses have been issued for fixed line service and for GSM cellular service.

### Designing the project

Despite liberalization efforts, the government recognized that a large gap in access to telecommunications would remain, especially in rural areas. In 2000, 56 percent of Nepal's village development committees (VDCs) had no telecommunications service.<sup>1</sup> That year the government decided that service provision in rural areas could be achieved more efficiently by involving the private sector through an output-based aid (OBA) scheme. The new policy was first implemented in the Eastern Development Region, targeting the 534 VDCs in the region that lacked service. To fund the project, the government would use a credit from the International Development Association (IDA) of the World Bank Group.

In designing the OBA project, the project team drew on the successful experience in Latin America with using minimum subsidy auctions to provide rural telecommunications service. Analyzing projected capital and operating costs and revenues for the 534 VDCs, the team confirmed that a substantial subsidy would be required to make the project commercially viable. The project was therefore designed around a one-time subsidy, to be provided by the IDA credit, and a 10-year renewable license for a rural service provider. Because of perceived security and country risk, other incentives were included to increase the chances of success. The rural service provider would receive limited exclusivity for five years in the 534 VDCs. The provider would also have the right to obtain a domestic and international long-distance service license.

The license requires the rural service provider to install and operate at least two public access lines in each of the 534 VDCs. The two lines are to be installed in two public call offices in different wards of each VDC. The license requires the provider to offer local, domestic long-distance, and international telephone service, as well as free emergency calls and directory assistance. The license also specifies standards for quality and availability of service, but it does not dictate the technology that the service provider must use. In addition to the mandatory services, the service provider

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may offer others on an optional basis, including Internet service.

The telecommunications regulator, Nepal Telecommunications Authority (NTA), has overall responsibility for designing and executing the project. It has been assisted in this by international advisers. IDA disburses the subsidy to the service provider in tranches, as it achieves milestones (table 1). To help ensure completion of the project, the service provider was required to submit a performance guarantee that will be forfeited if it fails to meet its obligations.

## Conducting the bidding

The NTA used a minimum subsidy auction to select a rural service provider. Bidders were required to submit an application providing evidence that they met eligibility requirements (including operational experience, financial capacity, and Nepalese participation) and specifying the OBA subsidy they required. Unlike in some minimum subsidy auctions, the maximum subsidy available was not publicly announced. With limited competition expected, there was a risk that bidders would have little incentive to propose a subsidy much below that amount. Nevertheless, there seemed to be sufficient interest from serious bidders to run an auction rather than pursuing an alternative, such as a negotiated service contract with a single service provider.

The NTA conducted a transparent auction. It detailed the auction procedures in the request for applications (RFA), posted drafts of the RFA and license on the Web before the auction, and solicited comments on the proposed approach. The NTA also held a prebid meeting allowing potential bidders to ask questions

and offer comments on the project design and, with its international advisers, took these comments into account in revising the design. Finally, the NTA opened the applications at a public meeting.

**The first round** – In the first round of bidding, launched in September 2000, two applications were submitted, and a letter of intent was issued to the qualified bidder proposing the lowest subsidy. After reassessing the security situation in Nepal, however, the company withdrew its application, forfeiting its bid bond.

Discussions about the decision to withdraw the application, and issues relating to the forfeiture of the bid bond, took several months. By then the other application had expired. Moreover, security in Nepal was clearly deteriorating, and the NTA, its international advisers, and the World Bank decided to review the OBA project in this environment.

**Midcourse corrections** – Despite the initial failure to secure a rural service provider, the project team believed that the process could still succeed if the OBA package was revised to mitigate country risk and improve its financial attractiveness. To further boost the chances of success, the international advisers undertook extensive marketing to increase awareness among potential bidders.

In the regulatory sphere the package was revised to make the assignment of spectrum to the rural service provider more secure. But the biggest regulatory change related to consumer tariffs and interconnection charges. In the first round of bidding the RFA simply applied the existing regulatory framework for consumer tariffs and interconnection charges, noting that

**Table 1 Network rollout and subsidy payment schedule**

| Milestone | Timeline (from license date) | Rollout obligation   | Subsidy payment (percentage of total) |
|-----------|------------------------------|--|---------------------------------------|
| 1         | 6 months                     | Activation of VSAT network hub station                               | 20                                    |
| 2         | 6 months                     | Activation of access lines in 20% of VDCs <sup>a</sup>               | 20                                    |
| 3         | 9 months                     | Activation of access lines in 50% of VDCs <sup>a</sup>               | 30                                    |
| 4         | 18 months                    | Activation of access lines in 100% of VDCs <sup>a</sup>              | 20                                    |
| 5         | 24 months                    | Certification that quality of service standards have been maintained | 10                                    |

**Note:** The schedule assumes that the rural service provider uses VSAT technology (as is the case), logical choice for most of the 534 VDCs given the mountainous terrain. If the provider had not used VSAT technology, it would have received subsidy payments according to a different schedule.

<sup>a</sup> *Activation* means that the mandatory services are available at the public call offices, as certified by an independent technical consultant.

the service provider would have to negotiate interconnection with NTC. In the absence of a negotiated agreement the NTA would approve the default interconnection charges set out in its 1999 Guidelines for Interconnection. No comparable guidelines existed for consumer tariffs.

The project team recognized that this regulatory framework was imperfect. But given the overriding objective of moving forward with the OBA project, it was decided to proceed with this framework, subject only to feasible changes to the RFA. For the second round of bidding the RFA included specific default consumer tariffs and interconnection charges for the rural service provider.

Requiring consistent application of the guidelines to the rural service provider and NTC had the advantage of helping to avoid the interconnection difficulties that new rural operators often experience with incumbent operators. Lack of clear guidelines often results in delays in achieving interconnection and rural service provision. Further, having the guidelines as a “base” allowed the international advisers to devise a reasonable and consistent set of consumer tariffs for the rural service provider. Nepal was hence able to avoid a situation as in some other countries whereby new service providers incur financial losses on certain types of calls because of unresolved inconsistencies between consumer tariffs and interconnection charges.

Other measures were also adopted to increase the chances of success:

- *Accelerating the payment schedule.* The schedule of subsidy payments was accelerated to offset start-up costs.
- *Increasing flexibility for proving financial capacity.* Bidders were given more options for demonstrating sufficient financial capacity to undertake the project.

- *Adapting to the security situation.* To mitigate the risk of increased Maoist action, the rural service provider would be permitted to serve alternative areas if security in the designated areas deteriorated.

**The second round results** – The second round of bidding, launched in February 2003, again attracted two applications, though the bidders were different (except for one party in one consortium). The qualified bidder with the lowest bid (\$11,865,000) was a consortium led by STM Communications Services, a U.S.-based satellite service and equipment provider. After completion of the licensing preconditions, the NTA issued a license to STM’s new Nepalese affiliate, STM Telecom Sanchar, in November 2003.

The minimum subsidy auction in Nepal resulted in a higher subsidy per locality than the average of earlier ones in Latin America (table 2). This outcome can be attributed to several factors, including the relatively high proportion of remote and mountainous localities in Nepal and the generally lower per capita income in the 534 VDCs compared with project areas in Latin America. Another likely factor is the higher level of risk due to political insecurity. In the end the bidders determined the subsidy required. Interestingly, the subsidies proposed by the four bidders in the two rounds were not far apart.

## Next steps – and Lessons Learned

STM began to roll out its network in April 2004. Though progress was slowed by customs delays and greater Maoist activity in the region, STM achieved the first and second rollout milestones by October 2004 and is on track to meet the third by the end of December 2004. STM intends to develop itself as a full-service telecommunications operator in Nepal.

**Table 2 Outcomes of minimum subsidy auctions for new public rural telephones**

| Indicator  | Chile | Colombia | Dominican Republic | Peru  | Nepal |
|--|-------|----------|--------------------|-------|-------|
| Projects   | 200   | 6        | 1                  | 7     | 1     |
| Average subsidy per locality (thousands of U.S. dollars) | 3.6   | 4.6      | 6.8                | 9.5   | 11.2  |
| Localities served  | 6,059 | 7,415    | 500                | 4,420 | 1,068 |
| Population served (millions)                             | 2.2   | 3.7      | 1.0                | 1.6   | 4.0   |

Source: World Bank and other sources.

Several features that distinguish the Nepal telecommunications project suggest lessons for other OBA projects.

*Nepal's was the first OBA project for telecommunications in which the World Bank funded the subsidy.* In earlier projects general government revenues or universal access funds typically financed the subsidies. Nepal planned to set up a universal access fund, but had not yet done so when the project started. Because the fund was expected to take several years to generate enough resources to finance an OBA project of this size, the government decided to jump-start its universal access program by using IDA funds, demonstrating that international financial institutions can provide technical assistance and financing to help speed the expansion of telecommunications service.

*When the first round of bidding failed, the project team persisted—and succeeded—with a second round.* The government's strong commitment to sector reforms and rural access, the NTA's leadership, and the project team's drive created the momentum needed. Drawing on the knowledge gained in the first attempt, the project team revised important aspects of the project to increase the chances of success.

The project *made progress toward market conditions despite a political and regulatory environment that is far from perfect.* Despite several years of donor financing and technical assistance, Nepal's telecommunications sector remains largely state controlled, service levels and coverage are far from adequate, and many parts of the regulatory framework are still being developed. It would have been easier to complete an OBA project, and to attract new investors to the sector, with a robust institutional structure and comprehensive regulatory framework in place.

Even as the government and the NTA worked to improve the regulatory framework, they decided, with IDA, to proceed with licensing a rural service provider, making changes to the regulatory framework where possible through license conditions. Though this approach was far from optimal, it increased the viability of the project. Now service is being rolled out to about 4 million people who have never before had it.

## Notes

<sup>1</sup> Nepal is divided into five development regions, which are further divided into districts. These are then divided into village development committees, which in turn are made up of wards, the smallest administrative unit in Nepal.

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