

## Easing tariff increases

### Financing the transition to cost-covering water tariffs in Guinea

*Penelope J. Brook and Alain Locussol*

*Penelope J. Brook (pbrook@worldbank.org) is program manager of the Rapid Response Unit, Private Sector Advisory Services, at the World Bank. She has worked extensively on the design of infrastructure sector reforms to benefit the poor. Alain Locussol (alocussol@worldbank.org), lead water and sanitation specialist in the Africa Region at the World Bank, was in charge of the World Bank's support for the Guinean water project in 1985–89.*

Guinea entered into a lease contract for water services in its major towns and cities in 1989. The government was committed to cost recovery for the services, but wanted to avoid a major tariff shock at the beginning of the contract. So, for the first six years of the contract an International Development Association credit subsidized a declining share of the private operator's verified supply costs while the water tariff was raised until it covered costs. This arrangement jump-started the move toward cost recovery and more sustainable water services—giving credibility to reform in a region and during a time in which there was little experience with private provision of water services—while also setting a time limit on subsidy commitments.

When a public sector water utility does not recover the costs of providing service, it is often unable to extend the system—leaving poorer, marginal areas unconnected to the water grid. Consumers who are connected often receive poor-quality water and intermittent service because there is not enough revenue for treatment and maintenance. Unconnected poor consumers generally pay much more for water than do consumers with access.

Guinea faced this situation in the late 1980s. Its urban water supply system was one of West Africa's least developed. Less than 40 percent of urban dwellers had access to piped water through household connections or standpipes. Where connections existed, service was often interrupted and water treatment inadequate. To improve this situation, in 1989 the government entered into a lease arrangement for private operation of water services in the capital city, Conakry, and 10 other cities and towns. Under a lease contract, because the lessor effectively buys the rights to the income stream from the utility's operations (minus the lease payment), it assumes much of the commercial risk of operations. The lessor's profitability depends on how much it can cut costs while still meeting the quality standards in the lease contract. Thus the lessor has incentives to make operations more efficient.

When the reform was implemented, the water tariff charged to households was far below cost recovery levels. The government was committed to seeing tariffs rise to cover costs, to ensure the financial viability of providing water services and enable their expansion over time. But it wanted to phase in tariff increases gradually, both to ease the burden on consumers and to exhibit improvements in performance before the full costs of those improvements showed up on consumer bills.

The challenge was finding a way to subsidize services while tariffs were raised to cost recovery levels without undermining the private provider's incentives to make service provision, billing, and collection more efficient. In this context an International Development Association (IDA) credit that also financed extension of the water supply system introduced a transparent, limited duration subsidy of the consumer tariff. This subsidy was designed to achieve two objectives. First, the subsidy sought to preserve the operator's incentives to improve performance—by increasing staff productivity, reducing unaccounted-for water, and increasing connections and collection ratios. Second, in the early stages of the contract the subsidy was meant to protect the private operator against foreign exchange risk—a common obstacle to private participation in the water sector.

Bidding for the lease contract was based on the lowest rate that the operator would receive for each cubic meter of water billed and collected, separated into local currency and foreign exchange components, and on the lowest price it would charge customers for new connections. The winning bid, by a consortium of *Compagnie Générale des Eaux* and SAUR, was 30 percent below consultant estimates and 15 percent below the second-lowest bid.

Two organizations were central to the lease arrangement: a state-owned water authority, *Société Nationale des Eaux de Guinée* (SONEG), and a water management company, *Société d'Exploitation des Eaux de Guinée* (SEEG). SONEG owned the water supply facilities in the cities and towns covered by the lease and was responsible for sector development, including servicing debt and planning, financing, and implementing new investments. SONEG was also responsible for setting tariffs, subject to ministerial approval.

SEEG was owned by the state (49 percent) and the winning consortium of *Compagnie Générale des Eaux* and SAUR (51 percent). SEEG held the 10-year lease contract with SONEG, which made SEEG responsible for operating and maintaining urban water supply facilities, billing customers, and collecting charges. The private consortium provided management services to SEEG through a separate technical assistance contract.

### **Making the move to cost-covering tariffs**

Before the reform Guinean households paid US\$0.12 a cubic meter (1989 U.S. dollars) for water provided through the grid. Initial projections were that the average charge to consumers would need to rise to US\$0.76 a cubic meter in 1995, and then fall back to US\$0.68 (Triche 1990). This implied a tariff increase of up to 630 percent.

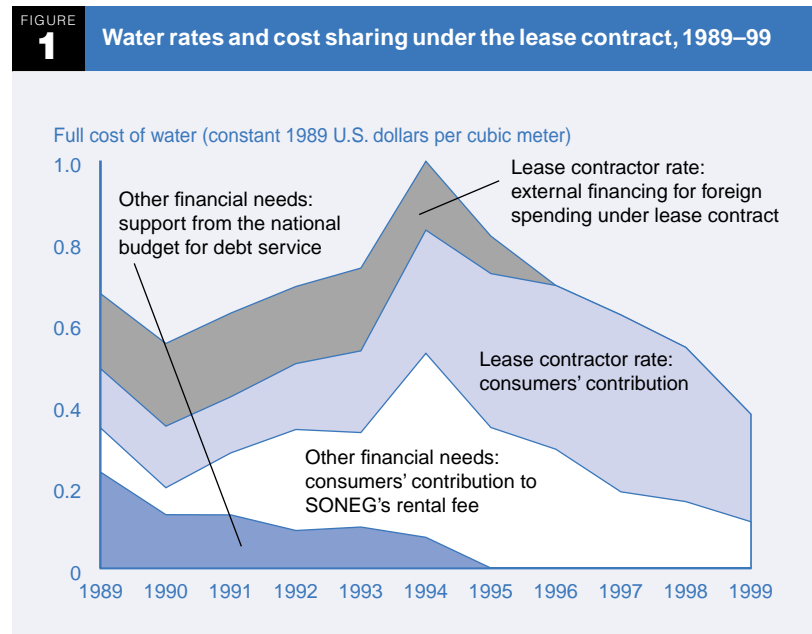
As noted, SEEG was remunerated based on the rate set in the lease contract. That rate was intended to cover SEEG's operating expenses—in both foreign exchange and local currency—and depreciation on its assets, and to provide a return on equity. Over the course of the contract the goal was to raise the tariff paid by consumers to cover the lease contractor rate and to provide an asset rental fee to SONEG, calculated to cover operating expenses, service debt, and finance investment. In other words, the goal was to make water services financially viable and so sustainable. At the same time, tariffs would need to be kept in check through continuing pressure on the operator to reduce costs.

The cost of phasing in increased tariffs was funded by the IDA credit (US\$16.9 million), calibrated to finance SEEG's foreign exchange costs by 100 percent for the first four years, and on a declining basis over the next two

years. The credit was combined with a government commitment to finance SONEG's debt service on a declining basis over these first six years. Through this mechanism SEEG obtained the lease contractor rate it had bid, but its financing was shared between consumers and the credit (figure 1).

At the start of the contract SEEG received an advance installment from IDA calculated to be 30 percent of estimated first-year water sales. This advance was compensated by deductions from disbursements of the credit over the next five years. Following this initial payment, the credit was disbursed by the Guinean government based on independently audited statements of collections by SEEG, issued every four months. Access to the credit was thus directly linked to service delivery and collections performance.

At the same time, SEEG made monthly asset rental payments to SONEG. In the first two years the rental fee was set to cover SONEG's operating costs. Over the following four years it rose to cover an increasing portion of SONEG's debt service obligations, with full coverage of these costs by the end of the sixth year. Two years into the contract, SEEG for a time discounted its rental payments to SONEG because of long arrears from public sector clients.



Source: World Bank data.

Under the lease contract the lease contractor rate could be adjusted quarterly to reflect changes in foreign exchange costs and biannually to reflect changes in local costs. In addition, provision was made to renegotiate the lease contractor rate after four years—when a new, cheaper supply source came on-line. (This renegotiation did not occur, however.) Consumer prices were adjusted based on a cost-plus formula, intended to reflect changes in service costs for SEEG and SONEG.

Based on this cost adjustment process, the tariff continued to increase after the subsidy was phased out, reaching US\$0.83 in 1996, then holding constant in local currency for the rest of the lease contract. By late 1997 the minimum bimonthly payment for service was about US\$13 per customer—very high given household incomes. The result was a steep fall in collections and a rise in inactive connections.

Why did tariffs rise so high? One reason was costs that appear high by regional standards—costs driven by low labor productivity, a large continuing presence of expatriate staff, high debt servicing costs, and considerable bad debt. Moreover, regulatory pressures to control these costs were weak—as reflected, for example, in the government’s failure to renegotiate a reduction of the lease contractor rate or revise the cost indexation formula after four years of operation. Complicating matters were disputes between SEEG and SONEG over definitions of water losses—and hence responsibility for actions to reduce them.

### **Improving services and operations**

The contract led to many service improvements. Investments in new capacity (external to the lease but financed by IDA and other donors), combined with rehabilitation and maintenance, increased the share of the population with access to safe water from 38 percent in 1989 to 47 percent in 1996. By 1994 piped water in Conakry was in compliance with World Health Organization norms (Gélinas and others 1996, cited in Ménard and Clarke 2000). Household connections increased (if less than originally hoped), and metering increased from 5 percent to 98 percent for private customers, and to 100 percent for government customers. Customer service also improved, with shorter delays for new connections and for repairs to the network.

But the contract did a poor job of reducing physical and commercial losses and achieving big improvements in access. These failures probably contributed to the high tariffs, because production inefficiencies could be passed through to the tariff, and slow progress on connections meant that capital costs were covered by a small customer base. New connections were proba-

bly inhibited by the absence of financing for small social service connections (an approach used successfully in Benin and Côte d'Ivoire) and by abundant alternative water sources, at least during the rainy season. Conakry's annual average of more than 4 meters of rainfall can yield sufficient roof catchment for low-income households even if roofs are small.

With the high price of water from the network, many residents could not or would not pay for it: in 1994 nearly 12,000 connections were inactive because of nonpayment. The record on billing and collection was patchy. In 1987 the public water utility collected on only 12.5 percent of its billings (Ménard and Clarke 2000). Bill collection from private customers improved to about 75 percent with the implementation of the lease contract. But as tariffs rose, collections fell to around 50 percent in 1991–92, rising to about 60 percent in 1993–96. Collecting from the public sector proved even more problematic, particularly after the early years of the contract, with collections falling to 50 percent in 1991 and 10 percent in 1993. SEEG sought legislation to penalize illegal connections and facilitate recovery of arrears, but the legislation failed to receive political support. Following this, little attempt was made to eliminate illegal connections.

### Conclusion

A recent analysis of the reform estimates that between 1989 and 1998 the contract generated a net welfare gain in the region of US\$33 million (1996 U.S. dollars). Most of this gain went to domestic players, including consumers (Ménard, Clarke, and Zuluaga 2000).

While the subsidy scheme worked smoothly, operating and regulatory performance were mixed. Guinea's experience illustrates the challenges of creating effective performance incentives for private operators when regulations and monitoring are weak and the operator is not fully subject to commercial risk. The lease contract in Guinea, which expired in 1999, was not renewed, and the international partners left the country in early 2001. Given the bad publicity surrounding these events, it may be difficult for SONEG to attract a new private operator through the competitive bidding now being prepared.

The declining, output-based subsidy used to smooth the introduction of Guinea's lease contract holds promise for other developing countries where tariffs are well below cost recovery levels and the long-term capacity to subsidize is limited. But the resulting arrangements are likely to be efficient and sustainable only if the tariff-smoothing process is combined with credible contractual and regulatory mechanisms for achieving cost savings, and these savings are passed on to customers.

### Note

This chapter draws extensively on Brook (1999) and Ménard and Clarke (2000). Details on the design of the subsidy arrangement are drawn from Triche (1990). Evidence on results and on the welfare impact of the lease arrangement is drawn from Ménard, Clarke, and Zuluaga (2000). The authors are grateful to George Clarke and Richard Verspyck for comments and to Lorenzo Bertolini for assistance in preparing figure 1.

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