

## The Design of the Manila Concessions and Implications for the Poor

### Summary

Metro Manila's water and sanitation network was privatized in 1997 under two separate concession arrangements. Four years on, many poor residents are benefiting thanks to large scale network expansion and innovative programs that target low-income neighborhoods.

The concession contracts do not require specific programs or strategies for reaching the poor. Rather, they call for an aggressive program of expansion aimed at nearly universal water coverage in the first ten years, and provide the concessionaires with a large measure of freedom in the way they comply. This combination of coercion and flexibility has ameliorated the impact of the tariff structure, which would otherwise render poor areas unattractive to the operators.

This is exemplified in the concessionaires' sales of bulk water to community groups and companies, which resell it to households using their own small-scale networks. These resellers are not bound by the concessionaires' obligations to service standards, and are free to charge whatever tariffs the market will bear. One such enterprise is rapidly expanding service in low-income neighborhoods that would be loss making for the concessionaire. Others may follow.

Overall, the experience illustrates the importance of extending flexibility to the concessionaire, and of allowing alternative providers to serve markets where they have an advantage in doing so. It remains unclear, however, if in Manila's case this advantage is real or simply the result of limits placed on prices charged by the concessionaires. Insofar as small scale providers of piped service lack the concessionaires' capacity and efficiency, the city – and its poorest residents – may have much to gain from a fundamental change in tariff policy.

### Background

With a population of more than 11 million, Metro Manila is one of Southeast Asia's largest cities. Though it is also one of the region's wealthiest, until recently more than a third of residents lacked a connection to the city's aging water network. Those lacking access to piped service depend instead on public standposts and local vendors, and usually pay higher prices. Sewerage services are far less developed, with less than 7% of households having direct access to the network (David 2001).

In the mid-1990s the government concluded that the extent of improvements and network expansion needed to meet growing demand was beyond the capacity of the public utility. It embarked on a process of involving the private sector, seeking to delegate as much responsibility as possible short of divestiture.<sup>1</sup>

Following a competitive selection process, concessions were awarded in 1997 to two consortiums, each a partnership of international and local firms. The Manila Water Company became responsible for the network in the eastern part of the city ("Zone East"), while Maynilad Water Services took control in "Zone West".

The concessions were won on the basis of the largest reduction in tariffs. Tariff levels fell,

---

<sup>1</sup> Dumol (2000) provides an insightful account of the process leading to the award of the two contracts.

but the pricing *structure* remained the same -- an increasing block tariff that distinguishes residential, commercial and industrial customers (see Figure 1). Residential customers are charged less on average than commercial establishments, while industrial customers pay the highest rates. In order to charge poorer residential customers less than richer ones, the rate per unit rate for water rises with total consumption. The assumption, of course, is that low consumption is associated low income.

### **The contracts require expansion**

At the heart of both contracts is an obligation to provide service to an increasing proportion of residents in exchange for the right to collect revenues throughout a 25 year term. Maynilad is required to offer water connections to at least 98.4 percent of residents in its service area by the end of its agreement, and Manila Water must reach 94.6 percent (see Figure 2). Non-performance is to be met with financial penalties. In an effort to achieve a balanced pattern of investment, targets are detailed for each of 36 municipal units in the two service areas for each five-year period. Most progress is set to take place in the first two periods. Targets are also detailed for sewerage connections, but these are not emphasized until later in the contract term. The focus of this note is on water.

Motivated by the prospect of profits and penalties, the concessionaires are making significant progress toward their targets in the first five year period, and as a result many households have improved water service. The number of residential water connections increased from about 740,000 in 1997 to more than 900,000 in mid-2001 (see Figure 3). This compares with an aggregate target of about        new connections by mid-2002.

Many of the new connections are to poor households. While there is no data on the income distribution of network customers, or other measures linking well-being with coverage, connections made under schemes aimed at Manila's poorest neighborhoods (discussed in more detail below) account for a large proportion. Additionally, a recent survey of residents by the regulatory body presents evidence that the poor have experienced improved service (Philippine National Engineering Center and MWSS Regulatory Office, 2001).

### **...And encourage innovation**

As the concessionaires go about the task of adding millions of residents to the network, they have faced few restrictions on the methods and materials they use. While each is required to meet the same standards for *outputs* such as water pressure, continuity, and customer service, technical standards for *inputs* (e.g. construction methods, pipe diameter) are not specified.<sup>2</sup>

The concessionaires have interpreted this as a license to innovate, developing special programs to expand the network in poor neighborhoods. Maynilad's *Bayan Tubig* ("Water for the Community") scheme uses small diameter pipes to connect households to the water main – sometimes running these along the ground or on walls -- and assigns maintenance responsibility to customers. In some cases it has lowered the connection fee and allows customers to pay it in installments over a period of up to twelve months. In the first three years the program installed more than 50,000 new water connections, which account for an impressive 65% of Maynilad's progress in the first five year period.

The Manila Water Company is also using these methods in poor areas, but its overall approach is more varied. The company's *Tubig para sa Barangay* ("Water for Depressed Communities") program is actually a menu of three different schemes. In the first, each

<sup>2</sup> There is an informal agreement that the concessionaires should follow guidelines established by the public utility before privatization, but this appears to be flexible.

household or family pays for an individual metered connection. Non-conventional materials are used, and the engineering approach is similar to the *Bayan Tubig* scheme. In the second scheme, one metered connection serves four or five households, which are responsible as a group for paying the connection charge and monthly bills – they are free to add individual connections of their own. Under the third scheme, an entire community is served with one metered connection.

**A permissive approach is taken to alternative providers**

The contracts are written in a way that permits alternative providers to play an active role in serving the poor. While the concessionaires are granted exclusive rights to serve customers in their service areas, in practice they do not prevent local firms from operating – even where these are providing piped water. Numerous housing associations, community groups, and at least one local company specializing in water distribution are buying large quantities of network water, and selling it to households via sub-networks. In many cases these services are reaching customers in low-income neighborhoods. Tankers and hand carts have also continued to serve off-network markets.

One explanation for this situation is that resellers of piped water are helping the concessionaires to achieve their coverage targets. The text of the contracts specifies that, “...the Concessionaire shall make at least sufficient connections... to meet coverage target percentages... (excluding users who obtain water from a legal source other than the MWSS system)...”<sup>3</sup> Targets are therefore partially fulfilled when any party serves new customers with a legal connection.

***How the contracts calculate coverage...***

$$\text{Coverage} = \frac{\text{Number of individuals served by the concessionaire}}{\text{Total population, less the number obtaining water from an alternative legal source}}$$

This may be good news for the poor. Consider Inpart Engineering, the largest alternative provider of piped water services in Manila. Using purchases of bulk water from Manila Water, and in a few cases deep wells, Inpart uses plastic hoses and small pipes to connect its customers to tanks that it builds on land provided by communities. Where network water is used, agreements are made with local authorities and Manila Water. Water vendors formerly active in the neighborhood are hired to collect bills, and in some cases distribute water to unconnected households via hoses. The technology differs from that conventionally used to connect households, and the prices that customers are charged are much higher than official tariffs. Demand for Inpart’s services has nevertheless been strong; by mid-2000 they were serving more than 200,000 households, mainly in Manila Water’s service area. This compares very well with the 134,000 residential customers added by the concessionaires.

Bulk water sales have become an important part of Manila Water’s strategy for serving the poor, and not just because intermediaries can contribute to its coverage targets. It charges housing associations, community groups and other buyers -- including Inpart Engineering -- the highest block rate in the residential tariff schedule, about three times the rate in the

<sup>3</sup> A footnote to the schedule of coverage targets refers to the excluded users in a slightly different way, as those “who are connected to a *pip*ed source of water other than from the MWSS system” (emphasis added). Whatever interpretation is made, the point is that these users are dropped from the denominator which helps determine the proportion of the population that is connected.

lowest block. The company's investment in tertiary distribution in such cases is nil. In effect, it delegates service delivery to a third party that operates outside the confines of the concession arrangement, including the official tariff structure. In doing so it has found a way to profit from a segment of the market that is otherwise loss-making.

### **Pricing is fundamental**

Differential pricing for high and low-demand customers inevitably lowers profitability in poor neighborhoods, and in large part drives the need for coverage targets and flexible standards. It is also used to justify exclusivity, since concessionaires depend on profitable customers to offset losses from others.<sup>4</sup> In Manila, however, at least one of the operators has found a way of extending service to unprofitable areas without directly serving customers *in* them. By allowing another firm to serve this part of the market, it escapes the pricing constraint placed on it by the official tariff structure.

The increasing block tariff structure is designed to benefit the poor but probably fails to do so, one reason being that low-priced blocks only benefit households that have individual connections. Many of Manila's poorest residents rely on standposts and vended water, where high levels of consumption push prices to the high end of the block structure. Also, the initial block of 10m<sup>3</sup> per month is higher than typical usage of very poor households, which is thought to be about 6m<sup>3</sup>. Since all customers are subject to a minimum charge for the entire first block, this effectively doubles the unit price of water for the poor relative to better off households consuming 12m<sup>3</sup>.

As for the average tariff level, this fell significantly after the concessionaires took over in 1997 -- even after accounting for an across-the-board increase of 38% just before the handover. While network customers have seen several tariff hikes since then, the average water bill is less today than it was in 1997 (see Figure 4). However, customers are likely to see significant increases in January 2003 when higher charges for sanitation take effect. Of course, efficiency gains made by the operators have reduced costs and helped avoid even higher rate hikes.

### **Lessons learned**

Improving the lot of Manila's poor, while not a driving force behind the city's decision to engage the private sector in water, has emerged as a priority for the two concessionaires. Both are making progress toward their coverage targets and have high-profile programs aimed at expanding service in poor areas.

What is it about the transactions that have led to this outcome? First, targets are disaggregated by municipality, requiring progress not just in high-demand, high-paying areas – but across the entire metropolitan area. Second, input standards are absent, or at least ambiguous, so that targets can be met in innovative and cost-saving ways. Third, targets can be achieved directly by the concessionaires, or indirectly when a third party provides piped service.

With the exception of the tariff structure, the Manila contracts score fairly well against a checklist for the design of pro-poor transactions that emerged from a recent gathering of transactions advisors, industry representatives, regulators and others (Water & Sanitation Program and Public Private Infrastructure Advisory Facility, 2002). It remains unclear if third party providers really have an advantage in serving poor neighborhoods, or if freedom from tariff regulation simply allows them to outcompete the concessionaires. While the

---

<sup>4</sup> It can also be argued that economies of scale are a sufficient barrier to entry, and that exclusivity is unnecessary. See Kerf et al. (1998)

concessionaires can be flexible in the way they meet coverage targets -- and have responded with a number of innovative schemes -- they still face disincentives for serving areas where tariffs fall below costs.

Would the concessionaires be better placed to serve the poor directly if tariffs were structured differently? If poor customers are willing to pay rates far above the lower blocks, as appears to be the case, the concessionaires and the regulator may wish to consider reforming the current tariff structure so as to make low-income residents more attractive as direct customers. It turns out that the contracts allow for this: “the Concessionaire may... propose to the Regulatory Office that certain [rates] be revised by different percentage adjustments.”

The operators’ desire to serve the poor nevertheless appears to go beyond coverage targets, to encompass reductions in non-revenue water and the development of their reputations as socially responsible companies. In its coverage of disputes with the government, the local media has often made reference to the predicament of the city’s poor; and the concessionaires make no secret of their schemes for low-income neighborhoods. With numerous opportunities to negotiate tariff increases during the term of the agreements, the concessionaires stand to benefit from meeting not just their contractual obligations, but also the expectations of politicians and the public at large.

## References

David, C., April 2000. “MWSS Privatization: Implications on the Price of Water, the Poor and the Environment.” Discussion Paper Series No. 2000-14. Philippine Institute for Development Studies.

David, C., 2001. “Private Sector Participation in Water Supply and Sanitation: Realising Social and Environmental Objectives in Manila. In Private Firms and Public Water: Realising Social and Environmental Objectives in Developing Countries. Nick Johnstone, Libby Wood, eds. Northampton, MA: Edward Elgar Publishing.

David, C. and A. Inocencio. 2001. Public-Private-Community Partnerships in Management and Delivery of Water to Urban Poor: The Case of Metro Manila. Discussion Paper Series No. 2001-18, Philippine Institute for Development Studies, Manila.

Divinagracia, N. and L. Provencher, 2000. “Water Supply in Blighted Areas.” Maynilad Water Services Incorporated. Manila.

Dumol, M., 2000. The Manila Water Concession: A Key Government Official’s Diary of the World’s Largest Water Privatization. The World Bank.

Kerf, M., R. D. Gray, et al., 1998. Concessions for Infrastructure: A Guide to Their Design and Award. World Bank Technical Paper, The World Bank, Washington DC.

Philippine Center for Water and Sanitation, 2001. “Vendors & small-scale independent providers: 30 years of urban water experiences in the Philippines,” Prepared for the Water & Sanitation Program East Asia Regional Office, Jakarta.

Philippines National Engineering Center and MWSS Regulatory Office, 2001. Public Performance Audit Consumer Survey Report, Mimeo.

Water & Sanitation Program and Public Private Infrastructure Advisory Facility, 2002. New Designs for Water and Sanitation Transactions: Making Private Sector Participation Work for the Poor. Washington D.C.

Whittington, D. and J. Boland, 2000. Water Tariff Design in Developing Countries: Disadvantages of Increasing Block Tariffs (IBTs) and Advantages of Uniform Price with Rebate (UPR) Designs. Draft paper. The World Bank

Special thanks to Philip Cases and Lisette Provencher (Maynilad), Perry Rivera (Manila Water), and Mai Flor (Ondeo) for their assistance with data and insights into the design and impact of the concessions.

### **Concession Highlights**

#### *Expansion mandate*

- Targets expressed as a percentage of population, detailed for each of 36 municipal units in the two service areas for each five-year period of the term of the agreements.
- Sewerage targets not as high as for water.
- Service from alternative legal sources contributes to achievement of targets for water
- In low-income areas, coverage targets may be met using individual connections or standpipes

#### *Standards*

- Water quality must conform with the National Standards for Drinking Water
- Water reliability must be at 24 hours/day by mid-2000
- Specific standards of water pressure and continuity

#### *Tariffs and connection fees*

- Increasing block tariff structure
- Tariffs can be adjusted every five years; more frequent adjustments for inflation and exceptional events.
- Maximum connection fees of 3000 pesos (adjusted for inflation); installment plans permitted

#### *Regulatory*

- Regulatory Office established to monitor concessionaires' performance, arrange regular independent technical and financial audits and respond to consumer complaints
- Appeals panel to settle unresolved disputes

Figures

