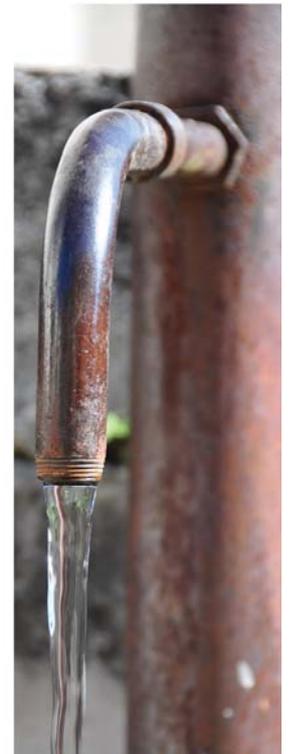


Poverty In Focus

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International Policy Centre for Inclusive Growth
Poverty Practice, Bureau for Development Policy, UNDP



**Equitable Access to Basic Utilities:
Public versus Private Provision and Beyond**

FROM THE EDITORS

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* We express our sincere condolences on the recent passing of Professor Peter Townsend, who was a member of the Advisory Board.

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IPC-IG is a joint project between the United Nations Development Programme and Brazil to promote South-South Cooperation on applied poverty research. It specialises in analysing poverty and inequality and offering research-based policy recommendations on how to reduce them. IPC-IG is directly linked to the Poverty Group of the Bureau for Development Policy, UNDP and the Government of Brazil.

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Providing universal access to basic utilities is justified on human rights grounds and also because of the positive externalities involved. Adequate provision of water, sanitation and electricity contributes to the achievement of the other Millennium Development Goals (MDGs). Access to these services, however, is still unequal in the developing world. Services do not adequately reach the poor. This *Poverty in Focus* brings together a mix of policy issues and some country experiences.

Degol Hailu and Raquel Tsukada provide an overview of the broad challenges involved in making access to basic services equitable and universal.

Hulya Dagdeviren and Simon A. Robertson point out the difficulties of expanding utility networks in slum areas, which include technical barriers and a lack of land and housing tenure. They make a case for stronger public interventions.

Kate Bayliss argues that the allocation of demand and investment risks during privatisation in Sub-Saharan Africa is distorted. This is because the risks are borne by governments and end users instead of the private contractors.

David Hall and Emanuele Lobina provide a critique of both the investment potential of the private sector and cost recovery schemes in the provision of sanitation services.

Ashley C. Brown discusses the externalities involved in supplying basic infrastructure to those who can least afford it. He argues that, contrary to established views, cross-subsidy schemes actually benefit all users and not only the targeted population.

Alison Post emphasises the benefits of water metering but highlights problems of implementation and poor design in Argentina.

Degol Hailu, Rafael Osorio and Raquel Tsukada examine the reasons for the privatisation and then renationalisation of the water supply in urban Bolivia.

Andre Rossi de Oliveira explores water privatisation in Brazil. He argues that the expansion of coverage has stemmed mainly from high levels of investment by private operators.

Suani Teixeira Coelho, Patricia Guardabassi, Beatriz A. Lora and José Goldemberg note that geographically isolated communities without access to electricity grids, such as those in the Amazon, can be served by renewable energy sources.

Luc Savard, Dorothée Boccanfuso and Antonio Estache present the findings of a general equilibrium model that assesses the impact of electricity price changes on the poor in Mali and Senegal.

Joana Costa, Degol Hailu, Elydia Silva and Raquel Tsukada empirically show that water provision reduces the total work burden on women in rural Ghana.

Nitish Jha conducts a sociological analysis of access to water and sanitation in India, emphasising the challenges encountered in community-based schemes.

Julia Kercher explains why and how a human rights framework must guide the design and implementation of private utility provision.

We hope that this collection of articles will contribute to the discussion of how to provide vital infrastructure services more equitably.

This *Poverty in Focus* is the result of an International Workshop on Equitable Access to Basic Services held on 5 December 2008 in São Paulo, Brazil. IPC-IG and the David Rockefeller Centre for Latin American Studies at Harvard University (DRCLAS) jointly organised the workshop. We gratefully acknowledge DRCLAS' contribution.

The Editors

by Alison E. Post,
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The Paradoxical Politics of Water Metering in Argentina

Metering consumption provides strong disincentives against wasteful consumption, reducing total demand and thereby helping utilities maintain adequate pressure levels in outlying districts.

Introducing water metering on a more widespread basis in developing countries promises to have numerous positive effects, especially for poorer city-dwellers living on the urban fringe.

Metering should lower overall demand, thereby allowing utilities to expand services and improve pressure levels in outlying districts with fewer major new investments in system capacity.

Two contrasting yet related scenes can be observed in Argentine cities during hot summer months. In affluent central districts, apartment building superintendents begin the day by washing off the sidewalks in front of their residences, waving hose nozzles from side to side as if water were free. Meanwhile, in outer and often less affluent districts, water pressure falls to such low levels that utilities must ration service; running water may only be available a few hours a day.

Water metering systems can help rectify such unfair allocations of a scarce resource. Metering consumption provides strong disincentives against wasteful consumption, reducing total demand and thereby helping utilities maintain adequate pressure levels in outlying districts.

Reducing total demand, where there is shortage of water, also enables utilities to use existing infrastructure more efficiently, thereby freeing up system capacity for expansion into the urban fringe, where the urban poor tend to live in many developing countries. This is very important, because the construction of facilities such as water and sewerage plants does not tend to be accorded political priority; after all, they are not as visible as bridges or schools and do not deliver concrete benefits to individual constituents. As a result, governments tend to under-invest in such “invisible” infrastructure.

Water metering, along with private sector management and regulation, was advocated by international institutions under the Washington Consensus reform programme of the late 1980s and 1990s. Despite the aforementioned benefits for overall system efficiency and for poorer city residents in particular, efforts to introduce water metering have met keen political resistance in developing

countries. This article examines efforts to introduce water metering by privatised utilities in the Argentine provinces. It highlights the types of political resistance encountered and the strategies identified by utilities and political officials to address household concerns.

Water Metering Provisions in Argentina under Washington Consensus Reforms

In response to pressure from the national government, most of the Argentine provinces chose to “modernise” their water and sanitation systems during the 1990s: 11 provinces granted 30-year management and investment contracts (concession contracts) to private operators, and two others established state-owned private companies that would be monitored by independent regulatory agencies.¹ Contracts and the enabling laws establishing regulatory agencies stipulated very ambitious water metering targets for the new service providers in many cases.

Table 1 shows the eight provincial concessions granted during the 1990s that had stringent targets. Note that these contracts typically required concessionaires to install meters for between 50 and 100 per cent of their residential customer base within the first few years of the contract or face financial penalties.

Problems of Implementation

Between 10 and 15 years after the start of the Argentine concession contracts, as Table 1 indicates, no concessionaire has met its contractual targets. Only two have come close to meeting their goals: Aguas de Corrientes and Servicio de Aguas de Misiones (SAMSA).² Importantly, this lack of progress is observable in concessions that have been widely regarded as successful in terms of extending services to new users, such as Aguas de Salta.

1. The contract for the Buenos Aires metropolitan area was granted by the national government rather than a provincial government. Three other provincial concessions were granted after the 1990s: Catamarca, La Rioja and a contract encompassing one part of Buenos Aires province.

2. As Table 1 indicates, only one of the eight contracts was cancelled: the Azurix contract. The rest remained in place as of January 2009.

3. See the August and September 2004 issues of *El Tribuno*, the provincial newspaper for Salta, Argentina.

4. While tariff hikes of 100 per cent in the province of Tucumán received international attention, more typical in Argentina were increases of 5-20 per cent at any one time.

Table 1
Argentine Concessions from the 1990s with Stringent Water Metering Targets* and Progress toward Water Metering Goals

Concessionaire (Province)	Year of Contract	Contractual Target	Metering rate for residential users circa 1997**	Metering rate in 2003, 2004, 2005, 2006***
Aguas de Corrientes S.A. (Corrientes) ^a	1991	Meters for 100% of customers by 3rd year of the contract.	88% (9/97 - 8/98)	2003: 96% 2004: 92%
Aguas de Formosa S.A. (Formosa) ^b	1995	Meters for 100% of non-residential users within 12 months; meters for 50% of residential users within 2 years.	19% (1997)	2003: 15% 2004: 14% 2005: 14%
Aguas de Santiago S.A. (Santiago del Estero) ^c	1997	Meters for 100% of non-residential users within 2 years; meters for 50% of residential users within 2 years (except in two villages).	0% (11/97 - 8/98)	2003: 0.4%
Aguas Cordobesas S.A. (Córdoba) ^d	1997	Meters for 20% of households by end of year 1, 40% by end of year 2, 100% by end of year 5.	0% (5/97 - 4/98)	2003: 16%
Aguas de Salta S.A. (Salta) ^e	1998	Meters for 10% of households by the end of year 1; by year 2, 30%; by year 3, 50%; by year 4, 70%, by year 5, 90%.	0% (8/98 - 9/98)	2003: 1% 2004: 8%
Obras Sanitarias de Mendoza S.A. (Mendoza) ^f	1998	Meters for 95% of customers by 2005.	0% (11/97 - 10/98)	2003: 5% 2004: 8% 2005: 8% 2006: 9%
Azurix S.A. (Buenos Aires) ^g	1999	Meters for 40% of households by year 5; 70% by year 10, 100% by year 15.	37% (1996)	2003: 40%
Servicio de Aguas de Misiones S.A. (Misiones) ^h	1999	Meters for 90% of users in Posadas by year 3; for 90% in Garupá by year 6.	58% (1997)****	2003: 77%*****

Notes: * Not included: concession contracts for Tucumán, Santa Fe, and the Buenos Aires metropolitan area, which had less stringent metering targets; ** Metering rates calculated from data reported by companies in ENOUSA-COFES (1999); residential users comprised the vast majority of accounts, and consumption by non-residential users was typically metered before privatisation; *** Metering rates reported by companies from the ADERESA benchmarking project, 2003, 2004, 2005, 2006; **** Company (SAMSA) records indicate that the metering rate was only 18.4% at the beginning of the concession. An additional 20% of consumers were billed at metered rates but had non-functioning meters or no meter at all; ***** SAMSA reports that, as of 2008, the company meters 95% of its consumer base.

Source: a.: Pliego de Bases y Condiciones, Capítulo 10; b.: Pliego de Condiciones Particulares, Anexo V, Parte E; c.: Pliego de Bases y Condiciones, Anexo V, Artículo 14.5; d.: Pliego de Bases y Condiciones, Anexo XIII, Artículos 1.14, 1.15; e.: Contrato de Concesión, Artículo 4.2.1; f.: Contrato de Concesión, Anexo II, Capítulo III; g.: Contrato de Concesión, Anexo F, Artículo 2.2; and h.: Contrato de Concesión, Anexo I.

What has stood in the way of implementation? One might suppose that tariff systems did not provide concessionaires with financial incentives to switch consumers from fixed charges to metered consumption. In the Argentine contracts listed above, however, concessionaires could generally charge higher tariffs when consumption was metered and when households consumed above a certain allotment. Rather, the main stumbling block has been consumer resistance. The historically quiescent population of Santiago del Estero province, for instance, took to the streets to march in protest against the installation of water meters, and secured a multi-year delay in the metering programme (Tenti, 2005, p. 165). Meanwhile, in neighbouring Salta province, individuals vandalised newly-installed

water meters, staged major protests in the central city, and voted not to accept metering at neighbourhood assemblies.³

What prompted these strong public reactions against meter installation? Let us start with the obvious explanations. First, metering was introduced at the same time as other controversial measures designed to move utilities to cost-recovery, including scaled tariff increases, the more vigorous enforcement of bill payment, and the “regularisation” of clandestine connections.⁴ Initially, regulatory frameworks for most of the contracts also required households to pay for the cost of meters in instalments. Governments and firms responded to protests sparked by this second issue by shifting the financial burden for meter installation onto the firm or government in most cases.

There were, however, more subtle reasons why consumers rejected metering, reasons that stem from widespread reservations about the motives of public and private institutions in societies plagued by corruption. The fact that different households paid different rates, for instance, aroused scepticism; who was to ensure that meters functioned correctly and bills were being calculated fairly? Technical difficulties only contributed to such doubts. Invisible leaks in household pipes, for example, could lead to extremely high monthly consumption rates. In areas where companies were unable to provide constant levels of water pressure, customers also wondered if they were paying for air rather than water coming through their pipes.

Ways Forward

The difficulties encountered in the Argentine provinces highlight the importance of approaching the introduction of meters in political terms; consumer expectations and scepticism must be anticipated and addressed pre-emptively. Fortunately, one can glean some effective strategies from the Argentine concessions.

- Metered *tariff formulas must be clear* and intelligible to consumers when they read their bills.
- *Rates for modest levels of consumption should be lower than those for higher levels*, and a level of consumption adequate for modest family living should cost no more than the fixed-rate regime.
- Meter installation will meet less resistance if *firms or governments foot the cost of installation*. Users will of course end up funding meters through regular tariffs, presuming the system is not subsidised, but users are unlikely to see this.
- Utilities can *send households bills containing meter readings for several months before metered billing* is

introduced. This gives individuals a sense of whether they should moderate consumption levels before the new rates come into effect.

- Utilities can *schedule meter installation after stabilising water pressure* in given districts, so as to avoid disputes about measurement.
- Finally—and most effectively, according to officials of the Misiones concession—utilities should *proactively identify households with abnormal consumption levels before the introduction of metered billing* and send specialised technicians to investigate if households have serious leaks on their property. According to most contracts, fixing such leaks is a household's responsibility; such proactive efforts by a utility, however, will help neutralise the most likely opponents to metering once it is introduced.

Introducing water metering on a more widespread basis in developing countries promises to have numerous positive effects, especially for poorer city-dwellers living on the urban fringe. Metering should lower overall demand, thereby allowing

utilities to expand services and improve pressure levels in outlying districts with fewer major new investments in system capacity. Recent efforts to implement metering under the Washington Consensus, however, have faced significant political resistance.

Future efforts to introduce metering should be preceded by careful thinking about political strategy, particularly the question of how to address longstanding citizen scepticism about the motives of public and private institutions. The aforementioned strategies identified in the Argentine context may be of use in dealing with consumer resistance in other settings.

■ **Asociación de Entes Reguladores de Agua Potable y Saneamiento de América Latina (ADERASA) (2003, 2004, 2005, 2006). *Ejercicio Anual de Benchmarking*. Processed data.**

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Tenti, María Mercedes (2005). *La Reforma del Estado Santiaguense: La Gestión política en los 90'*. Santiago del Estero, Argentina: Ediciones Universidad Católica de Santiago del Estero.

by Degol Hailu, Rafael Osorio
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A “Successful Privatisation” Was Nationalised in Bolivia. Why?

Political discontent and popular mobilisation in Bolivia led to the early termination of the private contracts in 2005.

Since the concessionaire did not comply with the number of new connections stipulated in the contract, the government felt compelled to demand termination of the contract.

Several developing countries corporatised and privatised their water provision on the grounds that the public sector lacked capacity to invest in maintenance and service expansion. The arguments supporting private sector participation in the provision of basic utilities are greater efficiency and a lower burden on public finances.

Privatisation, therefore, is believed to improve access to basic services through large investments in maintenance, network expansion and excellence in

delivery (regularity, more connections, higher quality and so on). Governments would play a regulatory role, setting the expansion targets and controlling tariffs.

There is scepticism, however, about whether profit-oriented concessionaires would really invest in expanding coverage. Concessionaires will not always expand the water grid to poor areas due to lack of market incentives. Private utilities may not find it profitable to supply slum-dwellers, for instance. The high incidence of illegal connections and the low-



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