Regulating Public and Private Partnerships for the Poor

Cranfield UNIVERSITY

Case Study:
INDIA

KEY FACTS

Population
1,049.5 million

Urban population
28.1%

GDP per capita 2002
US$ 2,670

HDI rank
127/177

Population living < $2 / day
79.9%

Exchange rate
$1 = 43.8 Indian Rupees

Urban household water connections
51%

Urban improved sanitation
58%

Water Poverty Index
53.2

PRE-REGULATION OF PUBLIC PROVIDER: Jaipur

The Government of Rajasthan has adopted a State Water Policy, which outlines a framework for sustainable development and efficient management of the water resources of the state. With respect to drinking water it requires: the gradual increase of water rates to support the urban and rural water supply piped schemes, increase of the budget allocation for upgrading the domestic water supply, ensuring water quality and encouraging private sector participation. State ownership of all the water resources within the State and introduction of abstraction licensing are also foreseen in the State Water Policy as well as introduction of necessary legislation for catering for the weaker sections of the population.

Even though the State Water Policy articulates the need for reforms and states the policy objectives, a major concern is that these have not been translated into action.

This study therefore represents a 'pre-regulation' study and is understood to be fairly representative of unregulated public providers. It is compared with the electricity sector which has recently started the process of regulation and which also demonstrates the extent of the challenge.

Study city
Jaipur, Rajasthan

Population
2.75 million

Regulator
none

Service Provider
Public Health Engineering Department & Jaipur Municipal Corporation

DFID
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Research Summary

Incentive based, economic regulation of monopoly water and sanitation providers is a powerful tool for improving services. Regulators determine the maximum water price ('price cap') to finance a desired level of outputs. Prices in high-income countries have tended to increase faster than inflation as society demands higher standards. The total revenue requirement (from which the price cap is derived) is determined by adding anticipated operating expenditure to planned capital expenditure (for capital maintenance as well as for improvements in quality, security of supply, service standards and service extensions), plus an acceptable cost of capital. Both opex and capex plans include efficiency targets derived from comparisons between a number of providers. Water companies are allowed to retain any further efficiency savings achieved within the price cap for a period (five years for example), an incentive to achieve even higher efficiency, before the benefits are shared with customers in reduced prices for the future.

This model has been adapted around the world with varying degrees of success, usually in the context of a Public Private Partnership, but until recently it has tended to be reactive rather than proactive regarding early service to the poor. There is now a recognised need for adequate economic regulation of public providers, as well as private companies, in lower-income countries, to deliver similar mechanisms for financeability and efficiency and as a prerequisite for developing effective pro-poor urban services.

The purpose of this DFID research project is to give water regulators the necessary technical, social, financial, economic and legal tools to require the direct providers to work under a *Universal Service Obligation*, to ensure service to the poorest, even in informal, unplanned and illegal areas, acknowledging the techniques of service and pricing differentiation to meet demand.

Looking to achieve early universal service, the research also considers how the role of small scale, *alternative providers* can be recognised in the regulatory process. *Customer involvement*, at an appropriate level, is seen as the third key aspect. The research investigates mechanisms for poor customers, and most importantly potential poor customers, to achieve a valid input to regulatory decision-making to achieve better watsan services

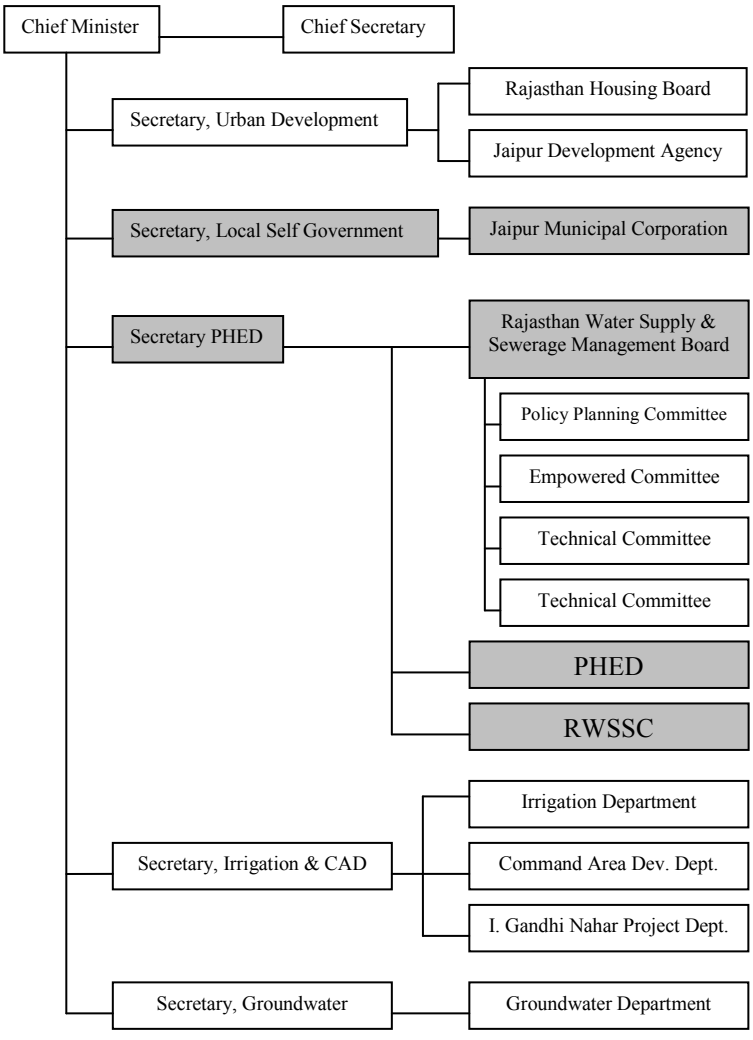
The Water Sector and Institutional Framework

Urban water management in Rajasthan

Under the Constitution of India responsibility for water is vested with the States. According to the 74th Constitutional Amendment (Municipal Act) the particular responsibility of urban water supply and sewerage should be transferred to urban local bodies. However, in Rajasthan the Public Health and Engineering Department (PHED), a department of the State government, continues to hold full responsibility for providing water supply and sanitation services.

The role of policy planning and formulation rests with the Government of Rajasthan. The body responsible for urban water supply in the Central Government, the Ministry of Urban Development and Poverty Alleviation, plays an advisory role by providing guidelines for developing policies and programs to facilitate the efforts of the state and municipal governments.

PHED is overseen by the Rajasthan Water Supply and Sewerage Management Board (RWSSMB), which controls, supervises and guides PHED on behalf of the Government of Rajasthan in policy, financial and technical issues. RWSSMB is not an independent body; it is an extended arm of the government.



PHED has the full responsibility for the water sector, for planning, implementation (design and construction), service provision and O&M of water supply projects in Rajasthan. However, PHED, being a department of the state government does not have autonomy and self-management authority and does not have a legislative framework for setting water tariffs.

Above: Borewell maintenance

In contrast to water supply, operation and maintenance of the sewerage systems are done by the local bodies such as Jaipur Municipal Corporation (JMC), but sewerage charges are levied and collected by the PHED and given to the local bodies in order to operate and maintain these systems. Responsibilities in sewerage and sewage treatment for Jaipur City are as follows:

PHED designs some sewerage systems and all sewage treatment installations, owns the assets created for the existing sewage treatment work and is responsible for O&M. PHED has to ensure the proper design and execution of all sewerage works carried out by other agencies.

JMC designs and constructs sewerage systems falling within their area and carries out all the sewerage O&M in Jaipur City.

The *Jaipur Development Authority* (JDA) designs and constructs the sewerage systems for new areas of Jaipur City falling under JDA area.

The *Rajasthan Housing Board* (RHB) designs and constructs sewerage systems for new housing estates.

JDA and RHB also execute water supply projects in new housing areas. After completion the assets are turned over to PHED for operation and maintenance works.

Overall, it is clear how many agencies are involved in planning, developing and operating the water supply and sanitation system in Jaipur. This multiplicity and overlap of responsibilities is a major bottleneck and partly responsible for ineffective and

Economic Regulation

Tariff setting and Financing

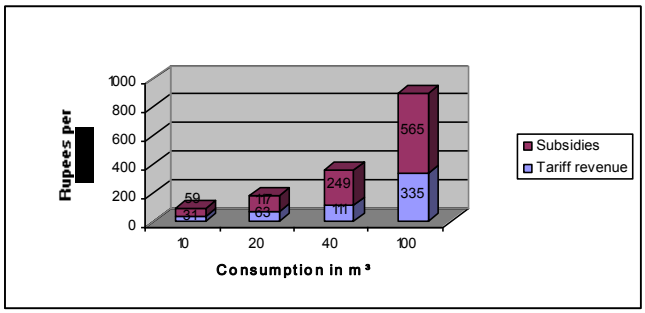
Tariffs are set by PHED. The initial proposal is put forward by the department to the RWSSMB. Upon approval by the Board, the tariff proposal is put forward for approval by the cabinet, the final decision-making authority for tariff setting. This means 'tariff decisions are not based on financial data analysis and reasonable planning, but purely on politicians tactics making popular decisions to win the next elections'. Consequently tariffs and revenues from water charges are too low and PHED is a bottomless pit for government's subsidies, a clear driver for a move towards more independent economic regulation.

Local governments and state governments provide funds for investment in new schemes and O&M through their annual budget. Monetary help in the form of loans is provided by institutions like World Bank (WB), Asian Development Bank and JBIC. The latter ones include conditions for reforming the water sector in Rajasthan. Any change other than technical upgrading yet has still to be proven.

The Rajasthan Water Supply and Sewerage Corporation (RWSSC) is involved in raising funds from financial institutions which are then handed over to PHED divisions. Originally RWSSC was formed in line with an agreement with WB while negotiating for a water supply and sewerage project. RWSSC was envisaged having wide-ranging powers and receiving assets, liabilities, obligation for service provision and staff from PHED. None of this has happened yet.

Operational performance

The National Water Policy 2002 (GoI 2002a) has accorded topmost water allocation priority to drinking water. The Tenth Five Year Plan (2002-2007) of the



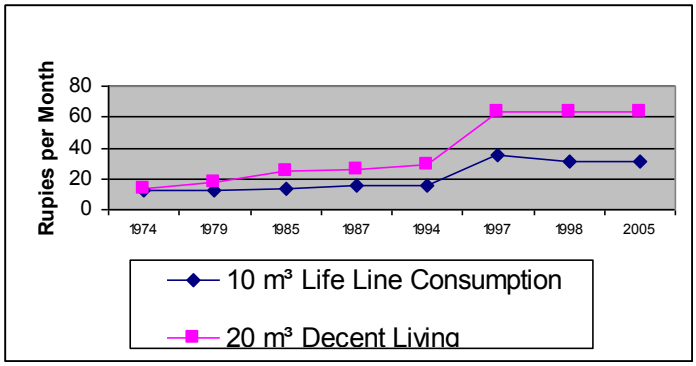
Government of India envisages 100% coverage for drinking water supply and 75% for sewerage and sanitation in Class I cities (>1 million). Jaipur City is far from meeting these goals.

At present 84% of the population of Jaipur is supplied by the PHED - 76% through individual connections, 5% through hand pumps and 3% through public taps.. The total number of PHED Jaipur employees is around 3000, which gives an average of about 11.5 employees per 1000 connections (SAPI 2004).

> The supply driven 'norms' adopted for urban domestic water supply are: 40 lpcd where only spot sources supply are available, 70 lpcd where piped water supply is available but no sewerage system, 125 lpcd where piped water supply and sewerage system are both available, 150 lpcd for metro cities.

2005 data provided by PHED Jaipur City states a consumption rate of 147 lpcd. This number, calculated by dividing water production by population connected, includes 37% losses. The adjusted value would be 92 lpcd.

Statistics of coverage and figures of quantity of water supplied tend to hide several realities regarding both the operations of the system and the experience of consumers. Alternative statistics suggest upwards of 20,000 boreholes in the city, the majority of them private



and the majority delivering water quality well outside the prescribed limits.

There can be wide variations within the city in quantity and quality of water supplied. The coverage figures do not indicate the actual functioning of the system. Breakdowns may deprive the consumers of water for several days. Coverage figures also do not reveal the regularity or duration of supply, the year-round performance, like water availability in summer and the number of hours of supply in the case of household connections, and for public stand-posts, the distance, time taken to collect water, number of users of each stand-post, etc. Most importantly, the coverage figures say nothing about the equity of distribution. It is likely that poorer areas are provided with less water whereas the influential rich will get a more satisfactory service. The poor households which are not connected end up paying high costs in terms of collection time and

Tariffs and Service Standards

increasingly health-related costs from drinking contaminated water. Wealthier households have better possibilities to cope with this situation. Installing roof tanks and (additional) supply from privately owned boreholes improve their situation.

Service standards

There are no service standard set with respect to duration or quantity of water supply. A set of guidelines exists with specific time limits for operations such as redress of consumer complaints and application procedures for new connection. But even these procedures are not subject to any form of monitoring and there is no way to enforce compliance.

Estimates speak about at the best 60% (in terms of area) of Jaipur being connected to the sewerage system. Not all the sewage is treated before discharged into natural watercourses. 20% of the wastewater generated in 2000 was reportedly not collected at all (SAFEGE 2000).

The residential zones where there is no sewerage have on-site sanitation installations. Many dwellings, including almost half of the slums, have no sanitary facilities and so open-air excretion is common.

Sewerage tariffs are 20% of the water tariff, where a household is connected to the PHED network. Otherwise the rate is Rs. 1365 (US$ 31.16) as a one-off payment or in monthly rates.

Financial performance

The price for urban water supply is constant throughout Rajasthan. The current tariff has not been revised since 1998. Generally tariffs are very low. Over a period of 30 years the tariff for minimum consumption did increase by 300% but from a very low base.

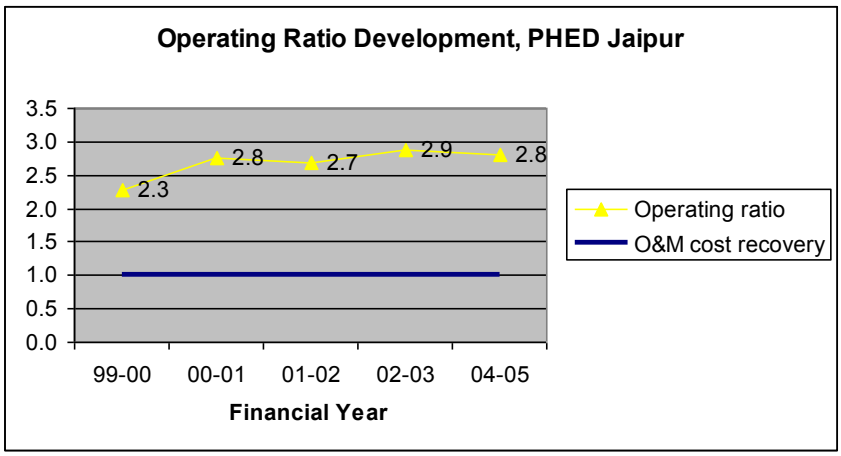
The increasing block tariff is structured into three consumption blocks. 31% of the domestic consumers fall within the lowest block, the one that should be subsidised. Lowering the first block to the level of lifeline consumption (6m³) would help to target subsidies more effectively. Industrial tariffs are substantially higher than domestic rates, but with only a marginal share of the revenue collected from industrial consumers, cross subsidisation becomes irrelevant. Charging the industry more than the actual costs tends to drive them to self-provision. The system performance has to improve significantly before to "re-" attract industrial customers and households which are now privately served.

Only 3% of consumers pay flat rate tariffs. Since 1990 all new connections have been metered, such that 92 % of customers now have metered supply, but around 50% of the meters do not work.

The connection charge of Rs. 200 ($ 4.57) does not seem to be a big hurdle. For selected economically weaker sections of the population in Jaipur, e.g. people living below the poverty line (BPL), this charge could be partially paid by the government in form of a direct subsidy. The process of identifying BPL households is very slow; the women in focus groups conducted for this study reported: " They have been here, we filled in some forms and we have never seen them again".

The very low tariffs do not send the right signal, i.e. that water is scarce and must be treated as a valuable commodity. As there is no existing licensing practice to regulate abstraction, whoever can afford to can abstract any amount of water for free

New household latrine in low-income housing area,, Jaipur



Service to the Poor and USO

Without any control data produced by the Rajasthan Urban Integrated Development Programme (RUIDP) in 2000 shows that illegal unplanned poor settlements - so called Katchi Basties - have settled on a large scale along the foot of the hills towards the North and the East, few are spread in other parts of town. Any additional information other than location of the slums was not available. Visiting these areas, the author found out that there is no "standard" slum area and that different categories concerning legal status, water, sanitation and infrastructure services can be defined. Selecting only one area was found not to be sufficient to represent the whole spectrum of water services. To cover the variety, four different slums, introduced in the table below, were chosen to represent poor areas in Jaipur.

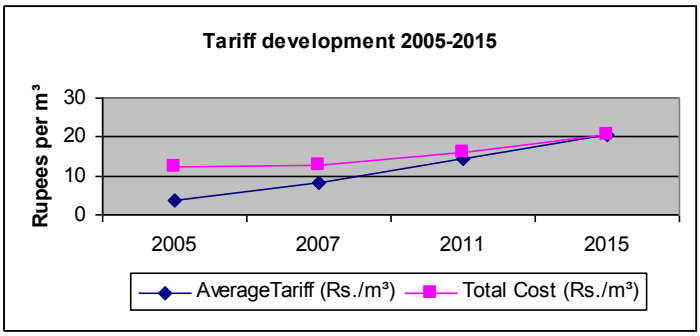
Customer Involvement

Within the existing framework, customers of PHED Jaipur are not at all involved in any process of price-setting. There is no mechanism for any planned consultation with consumers and no formal hearing procedure yet in place. Customers cannot express their needs and priorities to the decision making parties other than through political votes. Non-response to complaints is common procedure.

Name of *Katchi Bastie*	Legal status	Water supply system	Sanitation	Roads
Balmiki Nagar	regularized	public	latrines, open drainage	good
Kunda Bastie	not regularized	public	no latrines, no drainage	none
Nirmar Nagar	not regularized	mainly private plus public	latrines, no drainage	none
Lunka Puri Bastie	not regularized	mainly public plus private	latrines, no drainage	none

Clearly the situation in the regularized slum is best. A good, reputedly 24-hour standpost water supply (taken from a borehole to overhead tank main), proper roads and a functioning drainage system improve living conditions. Piped water supply is generally unreliable and insufficient; an additional source always is needed. Public standpost supply is stated as minimum requirement. People are used to get water for free and would prefer to keep it like that. For improved water services the stated willingness to pay ranges around the affordable 3% of the household incomes. The percentage of income spent on water services is generally below 1%. This figure shows also that low income groups pay twice as much in relative terms as high income groups, a clear sign that subsidies are not targeted well.

Clear signs of increasing water scarcity and decreasing quality will make the situation, so far only caused by bad management, even worse. Connection procedures seem to be mostly unclear. The technical reasons stated by PHED for not connecting the areas are not plausible. The approach for developing the supply network could perhaps be better described as chaos management or 'fire fighting'.



Tariff development required under Bisalpur scheme

In contrast, the electricity services are satisfactory in all survey areas. Connection rates are high, billing procedures clear and efficient. The Kunda Bastie area was recently connected to the grid, which is a clear sign for improvements in the sector. The reduction of illegal connections is a sign of good management, the same as price increases which have to be paid for better services. Faced with the choice between water and electricity at the same costs (Rs. 200 ($ 4.57)), people in Kunda Basti would chose electricity, believing they would still be able to organise water somehow without paying. The reported prices from private water suppliers were much higher than the existing PHED tariff.

Electricity Regulation, Rajasthan

The power sector in Rajasthan has also been facing problems. The power system was characterised by frequent service interruptions, high system losses, unexpected voltage and frequency swings, restrictions on demand, poor cost recovery and heavy commercial losses. Although power generation and sales grew over the years, demand always exceeded supply.

With the Policy Reform Statement in May 1999 the Government of Rajasthan initiated a reform process. The reform programme included the following policy measures:

- Tariff reforms and rationalisation in November 1999
- Restructuring of Rajasthan State Electricity Board (RSEB) in July 2000 into five companies - one Generation, one Transmission and three Distribution Companies (Discoms) - Jaipur, Jodhpur and Ajmer
- Setting up of Rajasthan Electricity Regulatory Commission (RERC) in January 2000

The broader objective of this unbundling was to improve operational efficiencies, maintain judicious balance among interests of various stakeholders, ensuring commercial viability of the sector and improving the service delivery in terms of quality and quantity.

In 2003, the central government issued the Electricity Act 2003, which makes it mandatory for every state to have a regulatory body for electricity. The Act contains also provisions for safeguarding the interests of consumers. It demands "Uninterrupted and reliable supply of electricity for 24 hours a day and good quality electricity at reasonable rates", and forced the RERC to take several measures for redress of consumer grievances. RERC set up several forums: complaint centres, district level forums, corporate level forums and finally an Ombudsman to settle disputes which could not be resolved in the earlier stages.

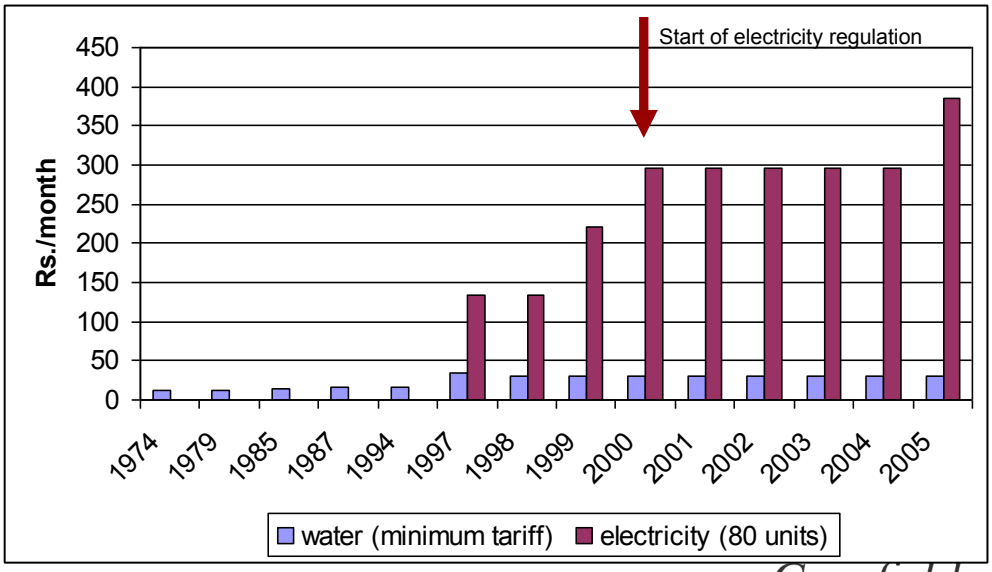
The required separation of ownership, management and regulation has taken place. The government is still influencing the Discoms, but all government orders have to comply with RERC regulations. At the first glance the framework indicates that restructuring has taken place, but the internal structure of the Discoms has not changed at all. It is still a purely administrative organisation and the "replacement of procedures and paper work with a cost-benefit analysis" has not happened (Ruet 2005).

RERC was established under the Electricity Regulatory Commission Act 1998 as an autonomous regulatory authority. RERC regulates power purchase and procurement process of the transmission and distribution utilities and determines tariffs for electricity transmission and supply. RERC also promotes transparency, efficiency and economy in the operation and management of the power utilities, encourages competition, sets standards relating to quality, continuity and reliability of service and helps the power sector in Rajasthan to attract private capital for development while ensuring a fair deal to the customers. It has the power to issue licenses to transmission and distribution companies.

RERC consists of three members, each having a fixed tenure. They are appointed by the State Government on recommendation of an independent Selection Committee.

In 2001, RERC instituted the Commission Advisory Committee. Its 21 members are representing the interests of commerce, industry, transport, agriculture, labour, consumers, non-governmental organizations and academic and research bodies in the energy sector. The Consumer Unity & Trust Society (CUTS) was nominated to this Committee. It represents the interests of domestic and agricultural consumers.

At policy level CUTS advocates consumers' concerns and at grass root level it tries to establish a network for consultation. The networking process serves two purposes, (1) to improve interaction between all stakeholders and (2) to collect information about the issues to be addressed in the Advisory Committee. In six



selected districts CUTS is running consumer awareness and capacity building programmes and is setting up customer committees, but so far only in rural areas. With increasing urban population numbers there will be a need for a greater focus on urban customers in order to advocate their needs and to report about Discoms' compliance with performance standards. The regulatory system has to include all stretches of society to prevent inequity. With CUTS acting as customer representative, agricultural customers are better represented then urban domestic consumers.

With setting up the first customer committees a beginning has been made. A larger number of groups meeting on a regular basis could improve the interaction between stakeholders.

For the ordinary consumer the regulatory process is still not transparent enough. A charter of consumers' rights in respect of supply of safe, reliable and efficient electric energy to the consumers has been published by the Discoms, but not many people were aware of their rights. Following a CUTS initiative the charter of rights was displayed in public.

Financial and operational performance: Jaipur Discom

RERC issued Distribution Licensee's Standards of Performance – Regulations in 2003 (RERC 2003). The utility submits its performance report to RERC, but it is not made available to consumers. In case of non-performance RERC does not take any action, as the Commission is of the view that it is too early in the reform process. This means the Discoms have no incentive and pressure to perform. The enforceability is weak. Furthermore the data basis is still not reliable and RERC draws conclusions only from Jaipur Discoms reports. No other source of information is considered.

Jaipur Discom has been publishing an Annual Report & Accounts since 2001. The author experienced great difficulties to obtain the reports as Jaipur Discom personnel was convinced that these reports are only given to government officials and the commission. The operating ratio of Jaipur Discom has been stable since 2001, but it is still far from the sustainable level of 0.6.

In the period from 2000-2004 the distribution losses of Jaipur Discom remained at the very high level of 40%. This level of losses is totally unsustainable and RERC forebodes financial collapse of the companies (RERC Annual Report 2003-2004) if no substantial improvements can be achieved.

The expected improvements of the reform process cannot yet be seen after 4 years: The process is very slow. The increase in sales of domestic power is the only indicator that improved, but it is not clear what proportion relates to new connections.

Conclusion

The picture drawn from Jaipur's water utility portrays extreme inefficiencies, lack of customer involvement and representation, lack of effective pro poor water policy and consequently the strong need for reforms. In the midst of this there has been some good pro-poor work of above ground pipelines in some slums along with household sanitation from an NGO. The Government of India and the foreign lending institutions are exerting pressure on the State of Rajasthan to bring about change. The framework for reforming the water sector is set, but there is nobody to carry out the necessary steps. It seems that the restraining forces still defeat the driving forces for change. The highly influential political parties and the administration are not willing to give up control over the decision on regulation and competition, they benefit from the arrangements as they are right now.

Independent economic regulation without political interference on tariff decisions remains a distant goal. At least one can hope that consumers will learn how to use their client's power and voice and start pushing for improvement from the bottom as the pressure from above is not sufficient. The experience from the electricity sector shows that introduction of the regulatory process strengthened customer's voice due to enhanced consultation and engagement.

Today in India the state exerts too much control in too many areas. Being owner, policy maker and manager of the water sector at the same time, the state is involved in too many tasks and is not able to concentrate on the essentials. An enabling state which allows others to do what they can do best would be for the benefit of the whole country. To bring about real change Shourie (2004) proposes institutional revolution rather than reform. Society has yet to agree with this prescription.

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