

# 24x7 water for all

Nagpur's integrated water management approach has helped it lead in providing continuous supply

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NAGPUR, the "Orange City" of Maharashtra and its winter capital, is delivering 24x7 water to 10 per cent of its population. The pilot project for continuous water supply in Bajiprabhu Nagar in Dharampeth zone was conceived in 2007 and commissioned in 2009. Nagpur has joined Hubli-Dharwad, Belgaum and Gulbarga in Karnataka to provide 24x7 water to its residents.

In a long-overdue exercise to set standards for service delivery for core urban services, the ministry of urban development in the government of India has recommended 24x7 water as the norm for all cities and towns of India, in a report brought out in 2008. This reflects the recognition that continuous water supply is vital for both health and sanitation, and that leapfrogging in this respect is a desirable and feasible option.

For Nagpur, it all started with the Sukhantkar Committee, set up by the government of Maharashtra in 2000 to review the efficiency of water supply in the towns and cities of Maharashtra. The committee recommended a water audit for all cities of Maharashtra and the state government offered to fund 75 per cent of the cost of studies measuring the gap between the cities' water input and their billing for water ostensibly consumed by consumers.

In 2003, the Nagpur Municipal Corporation (NMC) tried to augment the supply of bulk water to the city by building water treatment facilities, water mains, and elevated service reservoirs. This increased the volume of water input to the city by 32 per cent, but

sales of water showed no increase. It turned out that leakages/losses in the distribution network offset any gains from augmentation.

Nagpur was the first city to conduct the water audit, which revealed water losses to the extent of 52 per cent. The transportation loss from the bulk source was 30 per cent. The distribution network of approximately 2,100 km of pipes in Nagpur's 10 zones for water distribution also had a massive water loss problem, resulting in non-revenue water and commercial losses for the corporation.

A number of initiatives were taken up by the NMC to improve the efficiency of operations in water treatment plants via the water audit and the upgrading of pumping stations through the energy audit and to plug the leakages in the distribution network in the city, which has resulted in increasing Nagpur's water system efficiency from 32 per cent in 2005 to 41 per cent in 2010.

The NMC has put in place a series of projects to upgrade the augmentation system. Canals that carried raw water from the first source at Pench 48 km outside of the city are being replaced by pipes and the second source at Kanhan is being augmented (both under the JNNURM), bringing down the cost of raw water by 75 per cent. Production capacity is expected to increase to 765 million litres a day, which should meet the additional demand for water up to 2021. Not only does this augment Nagpur's water supply by 235 mld with no additional burden on natural resources, but the NMC/government was able to save about Rs 300 crore that would have been spent on developing a new water source.

A major initiative of the corporation was the pilot 24x7 water supply project, which has attracted much attention. A performance-based management contract of the project in the demo zone was awarded to Veolia Water at a cost of Rs 27 crore (including rehabilitation). No capital investment was made by the private party for the pilot project. Of the distribution network, 70 per cent of the assets were retained and 30 per cent replaced. All legal connections were metered, while slum connections were not metered.

Close to 10,000 connections now

have access to 24x7 water supply. Another 5,000 connections will be activated by December 2010. Water pressure has increased from three to five times, as a result of which households have stopped using booster pumps, which saves energy. A customer care centre has been set up for generating bills, receiving payments and attending to complaints 24x7. Non-revenue water in the demo zone has come down from 50 per cent to 32 per cent.

To recover costs, tariffs had to be raised. But customers were used to paying less because of faulty meters and/or theft. Moreover, tariffs had not been raised for nine years. Also, at the time of the switchover, bills were delayed and customers received their bills for six months at one go. Communicating the need for a tariff increase was a challenge and there seems to have been no strategy in place to do

this. For example, the minimum water tariff was to increase from Rs 3 to Rs 8, and a case was not properly made to the customer. Timing was also bad because of the elections in May and October 2009. Protests were organised by NGOs against the tariff increase.

Not surprisingly, the general body of the NMC decided to reduce the water tariff. The fact remains that water tariff in Nagpur is one of the lowest in the region. For example, the NMC's minimum tariff of Rs 5 per unit is much lower than the Rs 11 per unit charged by Maharashtra Jeevan Pradhikaran (MJP), the apex water supply department of the state government to areas in and around Nagpur. As NMC Commissioner Sanjeev Jaiswal put it: "The downward revision of the tariff increase was a necessity because of the opposition raised by civil society but in the years to come, the real challenge

would be to increase this tariff again to make the operation economically viable."

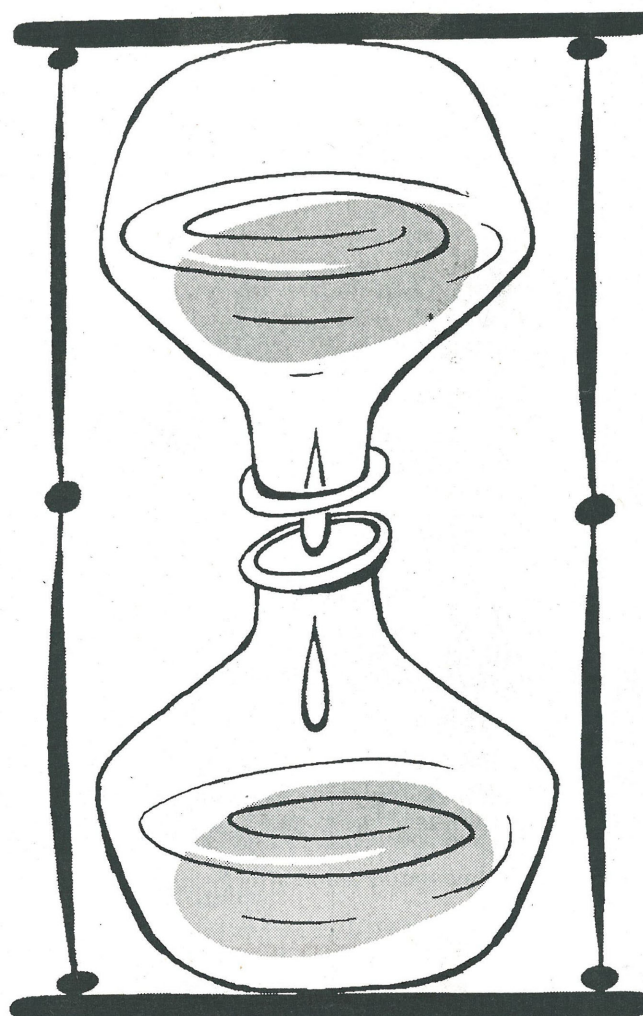
Despite the initial setbacks on raising the water tariff, NMC has launched an ambitious programme of universalising the 24x7 norm across the city. A special purpose company, Nagpur Environmental Services Ltd (NESL), was set up in 2009, wholly owned by the NMC, with a view to separate the water account from the municipal accounts. The company was empowered to focus on all aspects of the development and management of the city's water operations. To ensure financial sustainability, the NMC has now revised the tariff structure for O&M for partial capital cost recovery. The tariff has an inbuilt provision to pass on the increase in input cost for raw water and energy directly to the consumer. NESL has used a public-private partnership to address the challenges of integrated management of the water economy of Nagpur. The NMC received the second prize in PPP Initiatives in the 2009 "national urban water awards" from the ministry of urban development on August 13, 2009. In February 2009, the city-wide 24x7 water project was approved under the JNNURM.

In November, 2010, the NMC awarded the contract to Veolia Water (India) Pvt Ltd and Vishwaraj Environment Pvt Ltd at a price Rs 7.90 per thousand litre sold and received from the customer. The private operator will bring 30 per cent of the sanctioned capital cost and any cost escalations that may arise. As Dinesh Rathi, the consultant to NMC on the project, explained: "This project will provide much-needed professional approach to urban water management."

The progress made by Nagpur in the ambitious water initiative will be followed closely by the entire nation, as success on this will have a positive demonstration effect for many other cities wanting to do the same.

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