



Tackling water shortage

As access to safe drinking water is becoming more complex by the day, Rishabh Sethi, executive director, SPML Infra Ltd, suggests what needs to be done

BY SYED AMEEN KADER

You started focusing on the water sector when many didn't realise its potential. How did it all begin and why did you choose this sector?

I think it's all in our genesis because we belong to the state of Rajasthan where water is scarce. My grandfather, late Punam Chand Sethi, realised that we should make all out efforts towards providing clean drinking water to people. That's how it all started in 1981 and we began developing water infrastructure when the sector was at a nascent stage. With all our efforts that we have put together over the years, the company has managed to create significant value in this field and I am happy that our progress has touched the lives of millions of people across the country. Today, they have access to clean drinking water, improved sewerage facilities and better municipal waste management.

In the past three decades, we have implemented over 600 projects in water supply and distribution management, wastewater treatment and reuse, sewerline rehabilitation, besides executing renewable power development and power transmission and distribution in India.

How do you see the situation of water infrastructure in India and is there scope for improvement?

India being a large and vast country with geographical diversity has been well endowed with large freshwater reserves. But a number of factors including increased population, urbanisation, industrialisation and overexploitation of surface and groundwater over the past few decades have resulted in water scarcity. It is predicted that by 2025, per capita annual average fresh water availability will be reduced to only 1340 cubic metres from what it was in 2001 (1820 cubic metres) or in 1951 (5177 cubic metres).

In the coming years, the demand situation will overcome supply and life for the average city dweller in India would become a lot tougher. Water supply for the average citizen would drop drastically with a large section of the population having no access to potable water at all.

The existing water infrastructure is old with conventional technologies and completely insufficient to cater to the demand at present. Unless water manage-

ment practices and water infrastructure are improved, we are going to face a severe water crisis in the years to come. But there is scope for development and it has already been started with the central grants in terms of JNNURM funds to the states and municipalities. The company is working towards the development of sustainable water infrastructure with operation and maintenance for a five to 30 years' period.

India has over 17% of the world's population but only 4% of the world's renewable water resources with 2.6% of world's land area. How should India address the water scarcity?

It's true that India has only 4% of the world's water resource and will face water scarcity if adequate and sustainable water management initiatives are not implemented. India being an agriculture rich country uses almost 90% of the country's water, whereas the rest is being used by municipalities and industries.

The current urbanisation pattern and per capita water consumption rate clearly indicates that the growing demand from the energy and industrial sectors will significantly outgrow agricultural and residential demand in



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STEPS TO RESOLVE INDIA'S WATER SCARCITY PROBLEM

- Improve water usage efficiency in agriculture, encourage adoption of techniques such as drip irrigation, rain-water harvesting and watershed management
- Reduce subsidies on power and implement customised pricing models to counter groundwater exploitation through excessive withdrawal
- Encourage investment in recycling and treatment of all wastewater, be it sewage or effluents from industries through regulations and provide subsidies for wastewater treatment plants
- Implement policies to make rain-water harvesting mandatory in cities with all new construction projects
- Serious efforts should be taken to reduce leakage, pilferage and non-revenue water from the current average of 60% level to 15-20% in the next 3-5 years' time
- All households in cities should be connected with piped water supply and proper metering and billing system must be in place
- Promote efficient water use practices through community-based education programmes aggressively
- Implementation of the National River Linking Project (that connects 37 big rivers through 31 links with 9000 km of canals and generates nearly 2 crore litres of water by interlinking) is also an important step for the government to take because it will reduce regional disparities in water availability.

(As suggested by Rishabh Sethi)



Bisalpur-Jaipur water supply pipeline.

future and will be one of the major factors contributing to the increased demand for water. Access to safe water is becoming more complex day by day. Having said that, I think we can still manage to cater to water for drinking, industries and agricultural usage provided we take immediate and necessary steps.

India recently recognised the need to manage existing water reserves in order to avoid future water strain. We need to develop sustainable water infrastructure with a long-term perspective.

What's the growth potential of the sector? Where does the market lie— in urban or rural areas?

A recent study suggests that the Indian water sector can create investment potential to the tune of Rs8 lakh crore (\$130 billion) by 2030. Business opportunities revolve around four key themes viz., water demand management, water supply management, water infrastructure up-gradation, and water utilities management. In coming years, water infrastructure requirement in rural India will be as high as it is in urban parts and we see a strong growth in rural areas as well. We are happy

that our firm has the first mover advantage and we have a vision to make it a leader in the water sector globally.

What policy reforms are needed? Is PPP the best option?

India would benefit from establishing an independent central regulatory agency to design, control and coordinate national programmes for water project execution and conservation. The government policy changes would also ensure that water management techniques and initiatives are executed at a national level across sectors. Multiple government agencies have responsibility for water management, which hinders effective policy development and implementation due to lack of coordination between them. Inadequate legislation on the exploitation of groundwater for the use of water for irrigation and domestic purposes has led to the undervaluation of water as a resource.

In India, PPPs are sometimes mixed up with privatisation. These two forms of engagement are different in their concepts. The most frequently used mode of PPP in India is the one in which assets belong to the government while the operations

lie within the private sector. We believe the next phase of growth in the water sector will come in management of city water distribution systems and long-term operation and maintenance contracts. PPP is one of the solutions to address water issues, but the best possible option in the current financial situation will be the management contract where the infrastructure is developed on an EPC basis and long-term O&M contract is given to the private sector.

Are technologies used in India at par with global standards?

To prevent future water scarcity, India needs to implement programmes based on established water management techniques. In recent years there has been progress, thanks to chemical engineering in membrane technology (Reverse Osmosis). This has allowed the removal of all impurities from water at a reasonable cost to meet the increased demands of drinking water. The cost of reverse osmosis for desalination has also decreased by 50 to 100% as a result of breakthroughs in technology, energy use, engineering innovation and economies



A water treatment plant at Pokhran in Rajasthan.

of scale. The revolution in information technology (internet, GIS and remote sensing) brought much-needed transparency and accountability to a sector that has been traditionally mired by its problem of water being a natural monopoly. The Automatic Meter Reading (AMR) technology for automatically collecting consumption, diagnostic and status data from water meters and transferring that to a central database for analysing, troubleshooting and billing has also made a big difference.

Science and technological innovation offers reliable and accessible options to areas under water stress, but like any advancement in technology and knowledge it has to be grounded in the equitable and efficient allocation of water. We have the latest technology now available in India and our company is using it in our projects across India depending upon the requirements.

You have partnered with foreign firms. So have you brought in any new technology to India?

Our alliances with offshore technology domain leaders have given us the access to technical and technological know-how. It helps us in executing large turnkey projects and giving the best available in the world to our clients. We do specific

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technology tie-ups as per project requirements and are open to any good alliance with foreign partners for world class services.

We, for example, brought in cured-in-place-pipeline (CIPP), a no-dig trenchless technology providing joint-less, seamless, pipe-within-a-pipe that protects against spills, breaks for the first time in India for sewer rehabilitation and we have successfully completed a number of projects in Delhi and other cities.

What's your current order book, how much is for water and which are the major ongoing projects?

Our order book position stands at Rs7,000

crore at present and we expect to add more projects in the remaining months of this fiscal. Out of these total orders, almost 80% are for the development of water infrastructure and management.

We are currently executing a number of large water projects that include water supply improvement schemes in Delhi and integrated water supply projects in Aurangabad and Bhiwandi. Our water supply project in Pokhran is going to provide drinking water to 10 lakh residents of 580 villages and 4 towns in Rajasthan.

The Bangalore water supply project is to provide a sustainable source of drinking water to over 20 lakh to cater to the growing demands of the Bangalore Metropolitan Area. We are also working on a first-of-its-kind project for reduction of non-revenue water (NRW) for Bangalore city among many others.

What is your take on the current market scenario?

The Indian infrastructure sector has come up in a big way in the last one decade. But there was a slowdown in the last fiscal - infrastructure growth was only 3.2% during 2012-13 as against 5% in the previous year 2011-12. Most of the existing infrastructure is aging with conventional technology that requires more power to operate. There is an urgent need to revamp and re-build with latest technology for effective results and efficient operation and maintenance.

The opportunity for the infrastructure sector is massive as the government is focusing on robust growth in infrastructure development. But infra companies at this time of economic uncertainty need to be watchful and not get tempted to short term gain by careful risk evaluation and management practices.

India has the potential to perform better, if the central government succeeds in getting back on the saddle of infrastructure development as per the ambitious 12th Five Year Plan. The situation will be entirely different if the 12th Plan is implemented in letter and spirit. A unique weapon at the disposal of the government is its ownership of many cash-rich public sector companies, which can be persuaded to invest. If implemented, it can go a long way in softening the blow of global slowdown on the Indian infrastructure sector. ■