# ‘The future lies in recycle and reuse of municipal wastewater’

Renu Rajaram , Saturday, June 12, 2010, 15:12 Hrs [IST]

**—** Ajay Popat, Chief Executive Officer, Ion Exchange Waterleau Ltd

**Ion Exchange Waterleau** offers environmental solutions for industrial, infrastructure and municipal applications. **Ajay Popat** discusses the growth of the water and wastewater treatment market with **Renu Rajaram**.

**Discuss the growth of the water and wastewater treatment market in India.**
The current water consumption in India is 1,900 billion litres per day. The per capita domestic consumption is 89 lpd. By year 2050 water consumption at a CAGR of 0.50 per cent is estimated to increase to 2,463 billion lpd. The per capita domestic consumption is estimated to be 167 litres per day.

The estimated market in India for water and wastewater treatment is Rs 5,400 crore and it is anticipated to grow at a CAGR of 13 per cent between 2010 and 2013. Segments in industrial sector which will contribute to this growth rate are power generation, steel manufacturing, food and beverages, chemicals, and pharmaceuticals. In the municipal sector, the growth will come from investments in municipal wastewater treatment. Point-of-use purifiers in the urban and rural markets will also contribute to the CAGR.

**What are some of the key trends in this sector?**
The key trends in the water and wastewater treatment market in the past few years in India have been: i) Growth in water demand due to rapid industrialisation and urbanisation ii) Rising consumption of water for irrigation iii) Overexploitation of groundwater and increase in wastewater discharge iv) Acute shortage of water due to draught and sporadic rainfall v) Increased awareness on water issues, legislations and technology trends that promote greater efficiency and purpose in water and wastewater treatment techniques, and vi) Increasing awareness and acceptance of the role of public-private partnerships in managing water and wastewater treatment systems.

**Do you foresee big business opportunities in this sector?**
Yes. The market for water and wastewater treatment equipment in India is growing at a CAGR of 13 per cent. This estimate does not include the potential that exists in providing safe drinking water and sanitation practices in rural India. Infusion of private and public funds in municipal sectors and investments that are envisaged in all industrial segments indicates big business opportunity in the water and wastewater management markets in India.

**How is your company geared to take advantage of these opportunities?**
Our company will continue to invest its resources in market and product development activities. We have introduced state-of-theart technologies to improve the efficiency of established processes like demineralisation, clarification, filtration, disinfection, membrane separation and wastewater treatment. Supporting our technology initiatives, which continues to help us retain the No.1 position in the Indian water space, is our ability to provide comprehensive after-sales services to our customers in industry, home water market and communities. We are thus ideally positioned to leverage business from demands of these markets.

Our vision is to be the most valued environment business partner of all our customers in line with the No.1 position we have established in the Indian water treatment segment.

**Is government doing enough for this industry?**
The outlook for sustainable development and environment protection would be recycle and reuse of municipal wastewater apart from augmenting water supplies through alternate sources like seawater desalination and compulsory rainwater harvesting. The government must encourage various agencies involved in this process

through a clear policy which encourage implementation and application of latest technologies. It should continue with its policy thrust like JNNURM for reform initiatives that finances and incentivises waste management and services market. As in the case of solid waste management, government should involve private agencies in liquid waste (sewage) management.

Government through its regulating mechanism should also set the context and rules by which all other participants in the waste sector behave. It should continue to be a major capital provider for water solutions through initiatives like JNNURM (benefiting urban areas) and Rajiv Gandhi Drinking Water Mission (benefiting rural areas) and make economic policy decision that have a direct impact on minimising the demand-supply gap.

In short, government must continue to evolve in its role as a facilitator and regulator for water and wastewater management practices and encourage more publicprivate partnerships.


PHOTOS: ION EXCHANGE LTD.

The intake facility of the RO-based desalination plant installed for Chennai Petroleum Corporation Ltd.

**What are the challenges in the water and wastewater market?**
There are several challenges plaguing the nascent water and wastewater market, such as: i) Lack of funds ii) Lack of awareness (benefits of treating/managing waste amongst users, technology options etc.) iii) Lack of effective enforcement and no stringent penalties on illegal dumping of waste iv) Lack of trained manpower in managing water and wastewater treatment systems v) Lack of priority for investment in water and wastewater treatment systems in the municipal sector and the process of awarding bids to the lowest cost bidder, many times ignoring technology advantages and lifecycle cost as parameters for awarding contracts, and vi) The market is fragmented with more than 500 participants of which around 20 are large and the rest are small companies.

**How does your company overcome these challenges?**
Against the above market scenario our company advocates the concept of "value" creation through sustainable total environment solution. Through this approach, we provide solutions which apart from meeting the stringent guidelines of water treatment and effluent discharge, also ensures that valuable products are recovered from waste streams, waste to be treated is minimised, and water recovery maximise for reuse. This approach not only ensures that the user meets the disposal norms against stricter enforcement, but also receives a payback on investment.

For new projects, incorporation of recycle and byproduct recovery treatment scheme considerably reduces the capital investment on water treatment. Supplementing water and wastewater treatment systems that are based on technologies that optimise the treatment process and lifecycle cost, we offer specialised chemical treatment packages for cooling tower, boiler water treatment, and water and wastewater treatment processes to further improve the efficiency of their use and reduce cost substantially. Our trained manpower operates and maintains these facilities efficiently.

Who are your major clients and which are some of your installations in recent times? Bearing testimony to our leadership and presence of four decades are more than 45,000 installations worldwide, of which over 500 are at thermal and nuclear power stations, fertiliser factories, refineries, petrochemical and other industries. We have executed over $50 million worth of projects on global tender basis in India as well as many projects abroad. Our plants, ion exchange resins and water treatment chemicals are exported to Southeast Asia, Japan, Europe, Africa, Egypt, the Middle East, USA and UK as well as to neighbouring countries of Bangladesh, Nepal, Mauritius and Sri Lanka. We also provide comprehensive O&M services to more than 12,000 industrial customers.

Major installations in recent times include Reliance Industries' Jamnagar export refinery project for water and wastewater treatment; the largest industrial seawater reverse osmosis plant of 26.4 mld for Chennai Petroleum Corporation Ltd; and an order from NTPC Tamilnadu Energy Company Ltd for the largest SWRO plant for a power project in India.

We are also engaged in providing water and wastewater treatment systems for several power projects of NTPC, Reliance ADA Group, Tata Projects, BHEL, O.P. Jindal Group, Holcim (Ambuja Cement), Moser Baer and General Motors India Pvt. Ltd, to name a few. Internationally too we have received large contracts in the Middle East, Sri Lanka, East Africa and USA, including a 5000 m3/d RO plant for the prestigious Tiger Woods Project in Dubai. Our Ion Exchange resins continue to enjoy a good demand in developed countries in Europe, USA and Southeast Asia.

**What are your investment plans for the coming years?**
Our company will continue to invest in new products and process developments, develop newer markets and geographies, continue dialogue with all major stakeholders including Central government, state governments, public health engineering departments and local gram panchayats and NGOs. We will continue investment in our government recognised R&D department to develop new products and improve existing products and processes to minimise energy and chemicals used in treatment process. The focus will also be in developing markets in renewable energy and energy efficient projects such as methane utilisation and biomass projects. Such sustainable business development initiatives will also have the objective to offer affordable solutions to our customers and markets that we serve in India and abroad.

**Tell us about the joint venture with Waterleau Group.**
The joint venture, Ion Exchange Waterleau Ltd, leverages strengths of both organisations to provide state-of-the-art turnkey environmental solutions and services to the growing Indian market. It uses the Ion Exchange Waterleau offers environmental solutions for industrial, infrastructure and municipal applications. Ajay Popat discusses the growth of the water and wastewater treatment market with Renu Rajaram. 64 URBAN AFFAIRS Projectmonitor, Mumbai, May 24-June 6, 2010 The intake facility of the RO-based desalination plant installed for Chennai Petroleum Corporation Ltd. PHOTOS: ION EXCHANGE LTD The estimated market in India for water and wastewater treatment is Rs 5,400 crore and it is anticipated to grow at a CAGR of 13 per cent between 2010 and 2013. references and experience of more than 800 plants installed worldwide by Waterleau Group in municipal waste treatment and industries like petrochemicals, breweries and distilleries, plastics, industrial chemicals, dairy and also food and beverage companies. The JV in India provides single-point responsibility of total environmental solutions for industrial and municipal needs for treating industrial effluent, sewage, solid waste treatment and disposal, hazardous waste management, air pollution control and generation of renewable energy from waste.

The benefits have accrued to both parent companies. For Ion Exchange (India) Ltd, the immediate benefit is to position itself as a total environment solutions provider, complementing its total water management capabilities. For Waterleau, it opened the door for a very large market for its proven products and technologies for liquid waste treatment, air pollution equipment and waste-to-energy systems. The JV has benefited from its parent company's capabilities to win a prestigious award of 'Best Wastewater Management Company' from Water Digest UNESCO only in its second year of inception

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