

Hannover – 25-April-2012
The Way Ahead for Urban Water Sector Reforms in India –
Nagpur PPP

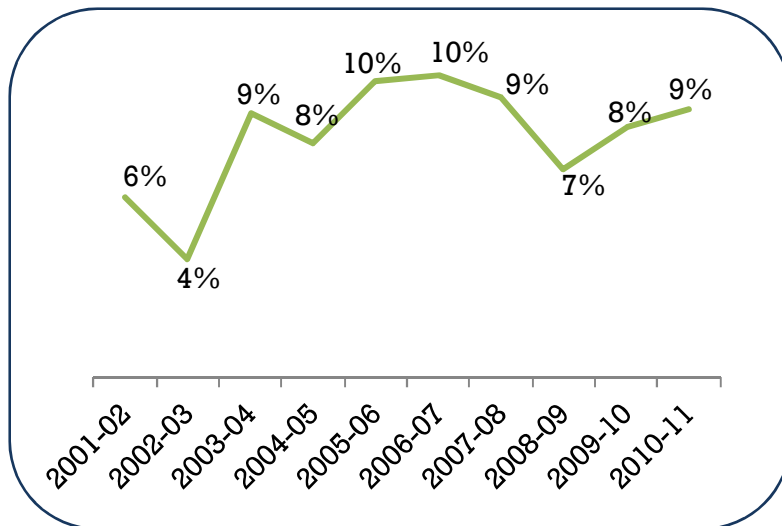
Arun Lakhani
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+ India

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- A large country
 - 7th largest by area (~3.3 million sq. km)
 - 2nd most populated (1.21 billion as of 2010-11)
 - Largest democracy

Real GDP growth rate in India



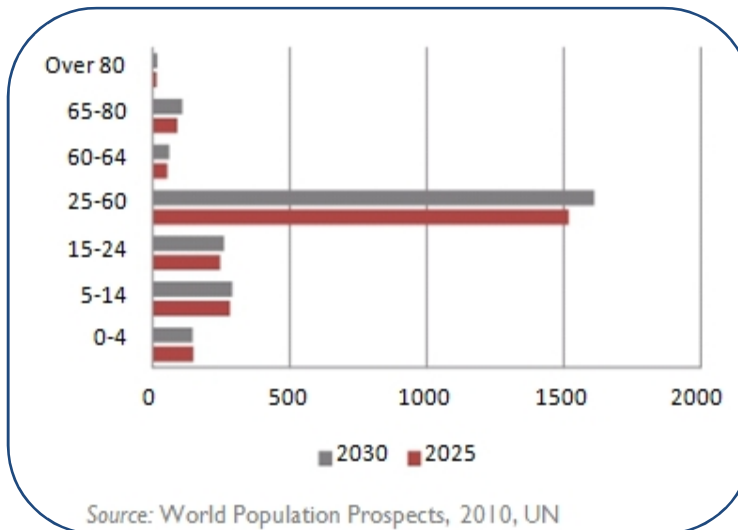
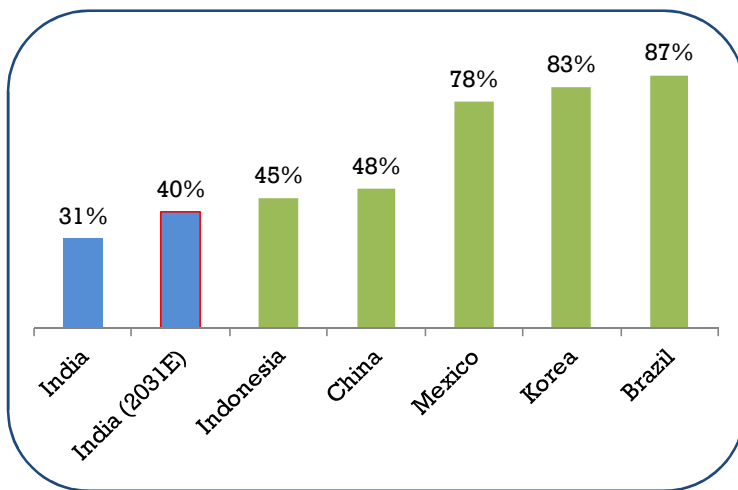
- And is growing steadily at a fast pace
 - 10 year average GDP growth rate of ~7.7% despite financial crisis

(1) HPEC report 2011
(2) Economic Survey 2012

+ Urban India – A large market that is growing quickly

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Indian Urbanization – Global perspective



- Leading to steady rise in urbanization
 - 31% of total population i.e. 354 mn (2010)
 - 62% of the country's GDP (as of 2010) vs 52% in 1999–00
 - Urban population is estimated to grow at 2.6% p.a. to 598 million by 2031
 - Adding ~8.4 million people every year to urban centers
- Demographics
 - India is among the world's youngest nations with a median age of 25 years as compared to 43 in Japan and 36 in the US
 - In 2025, more than 55 per cent of the population would be of working age
 - With a large working population, India can continue to be competitive globally

(1) HPEC report 2011
(2) Economic Survey 2012

+ Urban Water Infrastructure – Current scenario

- Total water requirement by 2050 is expected to be ~1,422 BCM
- Total utilizable water resources will remain stagnant at 1,086 BCM
- Resulting in water deficit of nearly 25% of demand
- In current time, the artificial deficit is due to Non Revenue Water (NRW)
- Infrastructure upgrade required
 - Average NRW estimated at 50-55%
 - Continuous water supply as a concept is not prevalent
 - Continuous water supply is required for reducing NRW and also to address health issues



+ Urban Water Infrastructure – Investment need

- The High Powered Expert Committee (HPEC), set up by the Ministry of Urban Development, Government of India had conducted a detailed study on the investment requirements for Urban Infrastructure Services.
- **USD 64 billion** of capex estimated to improve the situation of **Water Supply Sector** in all urban towns
- **USD 49 billion** of capex estimated to improve the situation of **Sewerage Sector** in all urban towns
- Considering a mid term plan of improving infrastructure in top 800 populated towns, VIL's assessment of combined investment need can be summarized as follows;

Cities with population	> 5 mn	1 – 5 mn	0.1– 1 mn	0.05 –0.1 mn	Total
# of Cities	6	29	360	404	799
Total Population (mn) (2010)	82	67	102	32	283
Water Supply PCIC* (USD)	70	88	118	99	
Sewerage PCIC* (USD)	67	77	68	106	
Total Capex requirement (USD bn)	12	11	19	6	48
PPP Operator share of capex requirement	30%	30%	10%	10%	
Private Investment requirement (USD bn)	3.6	3.3	1.9	0.6	9.4

(1) HPEC report 2011 | (*) Per Capita Investment Cost

+ Urban Water Infrastructure – Need for PPP

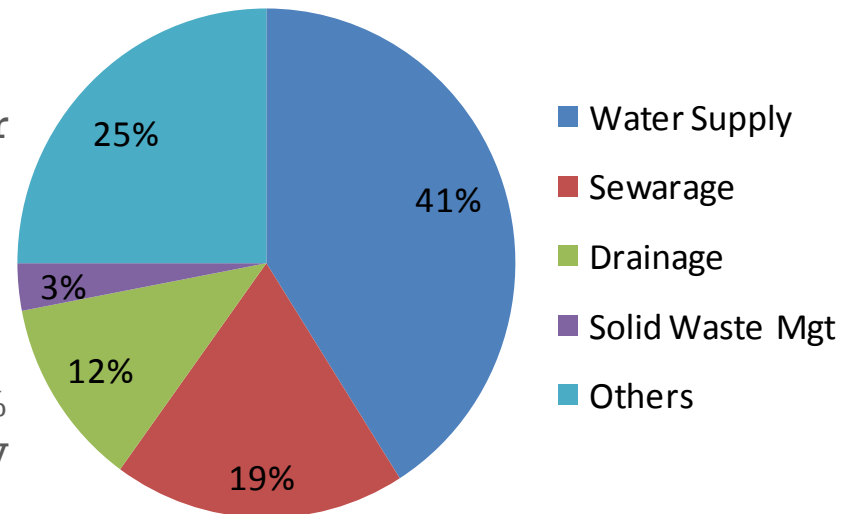
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- Urban Local Bodies (ULBs) needs financial and technical support to rehabilitate and operate the system on long term
- Network needs constant maintenance – private operators revenue linked to it hence more vigilant and diligent
- Customer service is very much lagging in public domain
- PPP in India is already matured in sectors like Road, Power and Port
- Model Concession Agreements in vogue in Road and Power sectors
- Neutral Regulators in sectors like telecom, power are established
- PPP in water sector is new and evolving
- ULBs are exploring various contract models in water sector like Concession contracts, service contracts, management contracts , annuity & lease contracts, etc.

+ Urban Water Infrastructure – Government initiative

- **JnNURM / UIDSSMT** are key initiatives to fund urban renewal
 - USD 10 billion of federal aid for a period of 7 years under JNNURM have already been invested
 - Likely to increase to 3x (\$ 30 Bn) for the next plan-period
- USD 2.4 billion spent under JnNURM for Water Supply (41% of total till 2010)
- Key features
 - **Project specific funding**
 - **Clear economic reform agenda** – 100% collection of O&M expenses for water supply and solid waste management
 - ULB + Operator share is 30% in JnNURM locations & 10% in others

JnNURM allocation (As on 31 Dec`10)



- JnNURM – Jawaharlal Nehru National Urban Renewal Mission
- UIDSSMT – Urban Infrastructure Development Scheme for Small & Medium Towns

+ Urban Water Infrastructure – Government initiative

- Ministry of Urban Development (MoUD), Government of India has launched the Service Level parameters for ULBs for Water sector
 - Continuity of Water Supply
 - Coverage of Water Supply Network
 - Per capita supply of water
 - Extent of NRW
 - Efficiency in redressal of Customer Complaints



+ Nagpur 24/7 PPP – Opening up a new paradigm

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NAGPUR



- 10th largest Indian city with ~2.7 million population across 217 sq.kms
- 530 MLD of water is produced and distributed over 2,100 km of pipeline to reach 300,000 water connections on intermittent supply basis with 50-55% of NRW
- India's first "Full City" water distribution PPP contract awarded to Orange City Water Limited – 50:50 JV of Vishvaraj Infrastructure Limited & Veolia Water India Pvt. Ltd.

+ Nagpur 24/7 PPP – Opening up a new paradigm

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Key Features

- 25 year program – 5 years of capital rehabilitation, 25 years of O&M
- Scope of Work
 - Refurbishment of the water supply infrastructure
 - Operation, maintenance and renewal of the water infrastructure
 - Distribution of drinking water to end-users
 - Billing and collection of the water charges on behalf of NMC
- Service Level Agreement
 - 24/7 water supply to 100% population including hutment-dwellers in 5 years
 - NRW reduction to 20% in 8 years



+ Nagpur 24/7 PPP – Special focus on under -privileged section of society

Benefits

- 24/7 water supply for each family
- Health improvement
- Water consumption control
- Time saving for women



- Better living conditions
- Increase of hygiene level
- Less disputes

+ Nagpur 24/7 PPP - Key issues

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- Revenue and Tariff
 - Operator Revenues delinked from consumer to be decided by the elected body
- Employees and unions
 - Job security of Government Employees maintained
- Economic alignment
 - Operator's revenues linked directly to Service level performance
- Creating awareness
 - Sensitive social issues addressed through NGO's and Media Awareness Programs
- Delivering beyond the role
 - Included 'economically challenged segment of society' in Service Level Agreement (SLA) for connecting households
 - Emphasis to equitable distribution of water prior to reaching Continuous water Supply



+ Nagpur 24/7 PPP - Lessons learnt

- Sensitizing and communicating with the People is extremely important
 - 'My city my water' initiative on water conservation across 250 schools touching 55,000 households
- Concept of ownership of citizens on natural resource "water" to be re-emphasized
- Cultural challenge of private, multi national companies handling water
 - Strong communication required with opinion makers
- Benchmarks of Customer Service to be improved



+ **Heralding Water Sector Reforms through PPP in India**

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- Indian economy is growing rapidly resulting in rapid urbanization
 - 354 million urban population, adding 8.4 million people every year
- Adapting to Continuous Water Supply required
 - To achieve the Service Level Benchmarks
- USD 64 billion of capex estimated to improve the situation of Water Supply Sector in all urban towns
- Government grants available (70-90% of capex), Government reforms supporting investments
- PPP is well recognized as a Solution by the Government and is also established amongst the people at large
- The Concept of Continuous water Supply gained Momentum in India after the Nagpur project and several towns looking forward to reduce NRW

+ INDIA - Water sector

- A Land of opportunities
- 1.23 billion people
- NRW levels as high as 60%
- Scarcity of Water felt more and more acutely
- Opportunity to hit triple bottom line
 - Service to society by providing healthy drinking water
 - Government gaining Good Will by promoting and participating
 - Private Enterprise gaining returns for the shareholders

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Thank You !



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