

## ***What should be Water's Price?***

An article

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There is a famous diamond-water paradox, which is apparent contradiction about price of water and diamond. Water is essential for survival and it has lower price where as piece of diamond, which has only ornamental value has higher price. Adam Smith in 1700s had explained the paradox of value through economic terms - scarcity and marginal utility.

Adam Smith died in 1790. At that point of time, water was probably not scarce. Fourteen years after Adam Smith's demise population of the world reached first billion in 1804. It took 125 years to add another billion to world population after 1804 and there after it took 25 years to reach three billion mark in 1960. Since then world population is increasing by a billion every 12-15 years. It is estimated that the world population by turn of 2100 will reach above 11 billion.

Modern form of humans evolved 200,000 years ago and the civilization as we know of today are estimated to have started 6,000 years ago. However it would have taken 300 years by 2100 for human population to have grown by 10

times! Earth has been in existence for more than 5 billion years but human population has now reached proportions, which is threatening all natural resources – including water.

### **Is water going to be super scarce soon? What should be the price of water?**

Price of any good or commodity is function of what consumer can afford. I conducted a simple study of same household electricity utility bill and water utility bill in 30 cities and towns in India.

Fifteen of the total sample of 30 cities/towns got water bills directly from the water utility. 3 of the 30 cities/towns were apartment complex/society and the water was received by the complex / society itself and individual households did not get any direct billing from the water utility.

Only 7 cities / towns got data on how much volume of water was consumed by them.

Three cities/towns had water tariff based on the volume consumed. Six cities/towns had water priced on the basis of property value. It is not clear how water tariff has been devised in other cities/towns.

The range of ratio of electricity bill / water bill for the same household was from 1.56 to 116.12.

Places like Karnal, Bhilwara and Jaipur have this ratio > 100. Lucknow, Kanpur, Ludhiana and Hyderabad have this ratio in the range 23-44. For Mumbai, Delhi, Kharghar, Faridabad this ratio is between 9-11. Allahabad and Haldwani had this ration between 5-6.

The lowest ratio of 1.56 was for a housing society in Bangalore, which is totally dependent on tanker water and has no municipal water supply.

In Singapore and many other countries in the world the same household electricity and water bill ratio is between 2.0-3.0.

Example of Bangalore housing society, which is totally dependent on tanker water for its water needs, shows to what level customers are willing to pay for water, if no municipal water is available. The particular housing society in Bangalore in sample set had ratio of 1.56, which is lower than 1.90 average ratio that author has in Singapore!

Consumers in India surely have the ability to pay for water more than what water utility or politicians think consumers can pay for. In places like Jaipur, the household electricity bills were in range of more than Rs 10,000 and monthly water bill was less than Rs 100.

The electricity bill has a large component of electricity tax. This is in range of more than 13% of the total bill. For most of the sample set, only the electricity tax component of the electricity bill itself is more than total water bill. This also brings about another dimension of discussion that one kind of utility (electricity) can collect more money through tax, and another utility (water) has total collection which is less than the tax collected by government through electricity utilities.

Chennai sample pays Rs 820 for its water bill in six months. This sample is from a building, which has total of 8 apartments. This building procures water from tanker in times of shortage. One single tanker supply costs Rs 700; close to the amount single apartment pays for full six months of municipal water!

In terms of water pricing, consumers surely have better ability to pay than what they are being charged.

There are few interesting takeaways from this study.

Jodhpur water utility in its bills clearly shows total cost of water delivery to household, how much subsidy is provided by government for supply to water delivery to that particular household and how much household is paying on its own. This is a classic nudge that water utility can make to be transparent with consumer on costing and pricing of water. This lets consumer prepare for future tariff hikes.

Maharashtra electricity utility bills of state owned government electricity utility include a photograph of the meter itself in the bill. This serves two purposes – one that the meter reading can be verified by the customer and the electricity utility can confirm that its own staff has actually gone to site and read the meter.

Both the practices stated above of Jodhpur and Maharashtra is worth emulating by other utilities.

Finally debate about water pricing is not complete with out discussing the importance of letting the consumer know about how much volume is consumed by it. There are few water utilities that tell customers how much water they are consuming. Even in cities like Bangalore and Mumbai, the water bill is part of the housing society maintenance bill and hence the individual households are not aware of their standalone water bill or the volume consumed by them.

In long run, the supply of water is constrained. One credible way of managing water demand – supply mismatch is to reduce the water demand itself. Thus it is very important that household are communicated what volume of water they are consuming and how much they can save.

The debate about water price has many facets and can't be dealt in single article.

However this study does highlight the fact that there is capacity with households to pay more for water than what they are currently charged.