Socially fair domestic water pricing: who is going to pay for the non-revenue water?

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ABSTRACT

To plan and develop a socially fair water pricing policy is a difficult task to do since many factors need to be taken into consideration. Usually, a significant part of a water tariff structure is the fixed charge that should be associated to the opportunity cost the consumers have to pay. In many cases though, it is set just to balance the water utility’s revenues and expenses. This weird billing practice results in the underestimation of the Non-Revenue Water (NRW) and in the minimization of water use efficiency. The application of the IWA Standard International Water Balance 2nd modification and its element, the Minimum Charge Difference (MCD) can reveal how big this “underestimation” is. MCD represents the water volume that although not consumed, generates revenues to the water utility. Another element towards a socially fair pricing policy is the allocation of the NRW-related cost. In every water network, two main water users are identified: the actual water consumers and the network itself due to the real water losses occurring. The paper presents a novel methodology to estimate the MCD and a new approach regarding a socially fair allocation of the NRW-related cost.

Keywords: Fixed charge; Non-revenue water; Water balance; Full water cost; Minimum charge difference; Water pricing