



WATER EFFICIENCY

# A strong business case for water efficiency and recovery



HELEN HULETT, TALBOT & TALBOT

It is estimated that industry discharges as much as 80% of its water uptake as waste, a costly exercise when one considers that this must be offset by the further intake of water into the system and external treatment and disposal costs.

Capital evaluations often don't calculate the 'true' cost of water, which should, at a minimum, include:

- The supply charge (the rate placed on a kilolitre of water by the service provider)
- The cost of secondary treatment
- The cost of treatment before discharge to ensure in-specification effluent, and
- The charge placed on the external treatment and disposal of wastewater, generally calculated by the municipality based on volume and quality.

For many industries, the per kilolitre rate placed on water supply – commonly in the region of R25 for large users in South African industrial areas – can be doubled to obtain the operation's true cost of water. Often ignored is the cost of potential production shutdowns resulting from external water supply interruptions.

Not considering water efficiency and/or recovery in future planning is unsustainable, while calculating the 'true' cost of water significantly strengthens the business case for efficiency and water recovery initiatives as sustainable and cost-effective options. For example, an operation that discharges 80% of its supply as wastewater has the

opportunity to halve external supply requirements, thereby significantly reducing its supply and discharge bills by 50% or more. This is an increasingly lucrative opportunity in South Africa, which is expected to experience a rapid escalation in the price of both water supply and wastewater discharge to fund the infrastructural upgrades required to meet current and future demand.

Historically, water recovery has been unpopular with industry owing to perceptions around quality and the possible reputational impact of using recovered water in products. These concerns can be negated by channelling recovered water to non-product-related activities like clean-in-place, steam, cooling and other utilities. In addition, this allows for the quality of recovered water to be specified, increasing the potential volume recoverable and decreasing costs further.

The negative perceptions that have limited appetite for water recovery are often unfounded, as the quality of recovered water can equal, and in many instances, exceed that of water supplied by the service provider. Furthermore, the reputational impact of being a poor water steward is increasingly more relevant than that of using recovered water in products. ■