Sweet water, bitter aftertaste

Rising oil prices are likely to raise the cost of turning seawater into potable water, and desalination industry sources warn that's not the only extra pressure on price, **ZARINA KHAN** reports.

The price of desalination – the Gulf region's major source of potable water – is expected to increase in 2010 as the price of fossil fuels inch up again, industry insiders reveal.

"We expect an increase in the total cost of water due to an increase in crude oil, as most of the desalination inputs are based on oil," said Middle East Desalination Research Centre research and development project manager Dr Noreddine Ghaffour. Oil prices had fallen in the wake of the global recession but are already on the rise. Oil was trading at $81 per barrel at the start of 2010, nearly double the rate it was sold at in the same period last year.

Desalination – a process by which seawater is converted into water for human use – is the major source of the Gulf's water supplies – accounting for more than 90 per cent in some countries. The world's largest desalination plants exist in the Gulf – with the UAE and Saudi Arabia accounting for the top 10. The desalination procedure is highly energy intensive, requiring substantial inputs of natural gas or oil, depending on the make of the desalination plant, making it a near luxury only afforded by gas- and oil-rich nations.

"Earlier, the price had gone down due to improvement of technologies. In the last year or two, the price was stable because it was compensated by the new developments in technology, which improved efficiency. But now the rate of development of technology is slowing down. Last year was spectacular – energy recovery went down from 50 to 96 per cent. In this year maybe you can push it to 97 per cent, but no further," Dr Ghaffour explained.

Additionally, many forms of desalination require further

processing with petroleum-based chemicals. "In desalination, when you talk about cost, you are talking about the chemicals that are part of the desalination process. Also, there is the cost of transporting those chemicals and other inputs, which is dependent on the price of oil," he added. And while the cost of standard desalination inputs increases, so too is the quantity and quality of the chemicals required.

"Environment impact management and other restrictions are increasing. We can no longer throw brine into the sea without any issue. We have to treat the output more thoroughly. Chemicals are more costly," the scientist explained. Allied industry insiders supported his assertions.

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"The cost of most chemicals is dependent on the cost of crude. It is the basis of the feedstock of the chemicals. There are others as well, like the cost of energy generally and the cost of labour. They have been trending upwards, though it had levelled off given the economic downturn. But … as regulatory requirements become more stringent, what industrial users and thermal desalination users are having to do is emit less water and clean the water more thoroughly, and those are both activities that require speciality chemistry," said Paul Turgeon, president of Bahrain-based BWA Water Additives.

While the desalination sector itself is expected to continue to enjoy its relative insulation from the recession due to a continuing need for water for civic and economic viability, industry sources question how the increased cost will be handled by state-run utility authority that provide it. The cost of the desalination process in Gulf countries is subsidised by the government. Industry insiders said currently, the end user in the Gulf only pays about half if not less than the true value of desalinated water – a service that will be costing recession-rocked Gulf governments dearly in the coming year. ■ *zarina@motivate.ae*