Towards sustainable desalination

David Lloyd Owen
Envisager Ltd., Trewindsor Farm, Cardigan, Ceredigion SA43 2LN, UK
Tel. +44 1239 615505; email: david@envisager.co.uk

Received 11 October 2010; Accepted 1 June 2011

ABSTRACT

As the role of desalination in providing water is broadened, it has come under increasing scrutiny due to its perceived impact on the marine environment and its energy intensity. Desalination's increasing popularity is due to lower cost technologies such as reverse osmosis along with the need to supply water to populations are moving towards the coast. Sustainable desalination is feasible when desalination projects are combined with demand management to ensure that the water is effectively used. There is appreciable scope to lower its energy demand through new technologies and approaches and by adopting desalination techniques wastewater can be recovered for potable and non potable use. Desalination can also play a positive role in relieving pressure on low flow rivers.

Keywords: Energy; Demand management; Environmental impact; Demographics