

Alliance to Save Energy Award

Description of Achievement

The world's oceans present a virtually limitless and drought-proof supply of water. A major challenge with seawater desalination, however, is the energy required in the process. There are a variety of methods for desalinating water, including a thermal process which uses high temperatures to separate potable water from brine via evaporation. Most new facilities utilize another method called reverse osmosis which squeezes drinking water from salt water using a semi-permeable membrane and high pressure. Energy Recovery Inc (ERI), a company headquartered in the San Francisco Bay Area, has developed an innovative, ingenious device that dramatically improves the energy efficiency of the latter method.

ERI's PX Pressure Exchanger® (PX®) can reduce the amount of energy required in membrane desalination by up to 60%, resulting in more economical production of drinking water and a reduced carbon footprint. Over 6,000 PX devices have been shipped to more than 80 OEMs worldwide to support the production of drinking water for about 17 million people. These devices will save an estimated 550 MW of energy, or \$390 million a year in operating costs, and an estimated 1.6 million tons per year of carbon dioxide production.

H.P Michelet, Chairman of the ERI board since September 2004, and a member of the board of directors since 1995, has been a driving force behind the company and its innovations. He is, therefore, an ideal candidate for the "Innovative" Star of Energy Efficiency Award.