

Products: DOW FILMTEC™ ECO

Technology: Reverse Osmosis



Water & Process Solutions

BREAKTHROUGH TO WORLD CHALLENGE

DOW FILMTEC™ ECO Reverse Osmosis Elements deliver 40 percent better purification with 30 percent less energy.

By 2015, based in part on the United Nations' [Millennium Development Goals](#), Dow will achieve [at least three global breakthroughs](#) that will significantly improve the world's ability to solve the challenges of affordable and adequate food supply, decent housing, energy and climate change, sustainable water supplies, or improved personal health and safety.^{1,2}

In March 2014, Dow named DOW FILMTEC™ ECO reverse osmosis (RO) elements as its second breakthrough technology.³ Fighting global water scarcity by helping to deliver 40 percent better purification with 30 percent less energy, ECO elements have the potential to positively benefit millions of lives by revolutionizing water treatment.

In April 2014, Dow was presented with the [Bronze Edison Award](#) for DOW FILMTEC ECO elements in the Energy/Sustainability and Commercial Resource Management category.⁴ The judging committee recognized FILMTEC ECO technology for its ability to significantly reduce the energy required to remove impurities from water.

"As this new Dow technology is fully adopted, we anticipate it will help deliver trillions of metric tons of clean water, billions of kilowatt-hours (kWh) of energy savings, and reduce carbon dioxide (CO₂) emissions by more than a million metric tons in its first 10 years of use alone," said Neil Hawkins, Dow corporate vice president of sustainability. "This innovation will help deliver a more sustainable water supply to the world, addressing global water scarcity in a very tangible way."

According to the [2030 Water Resources Group](#), global water demand is expected to grow exponentially by 2030, greatly outpacing supply.⁵ While consumers might experience limitations to household water consumption as a result of drought conditions, they have limited visibility to significant opportunities for water efficiency in the production of the goods and services they use every day. For example, it takes 2,867 gallons of water to make just one pair of jeans, and 39,090 gallons of water to manufacture a new car.



About DOW FILMTEC™ ECO Elements

By using new membrane chemistry and low dP feed spacers, DOW FILMTEC™ ECO elements are able to help deliver significantly lower energy costs and reduced chemical consumption in downstream polishing costs. With a new industry-leading performance rejection of 99.7% at 150 psi, DOW FILMTEC ECO elements provide robust performance over a longer element life. At highest quality, the elements deliver 40% lower salt passage at 30% less energy when compared with standard RO elements. Plants that switch from conventional RO elements to DOW FILMTEC ECO elements enable lower energy usage and reduced regeneration costs.

Offered in ECO-400i, ECO-440i and ECO-500i configurations, DOW FILMTEC ECO elements provide the continued quality, reliability and outstanding performance advantages that customers have come to expect from Dow Water & Process Solutions.

LEARN MORE ABOUT DOW FILMTEC™ ECO. >>>

Sources:

1. www.un.org/millenniumgoals/
2. www.dow.com/sustainability/goals/world.htm
3. <http://www.dow.com/news/press-releases/article?id=6459>
4. www.dow.com/news/press-releases/article?id=6499
5. www.mckinsey.com/client_service/sustainability/latest_thinking/charting_our_water_future