

Sustainability Solutions for Pfizer, Ireland

Pharmaceuticals | Case Study

The Client

Founded in 1849, Pfizer has a leading portfolio of products and medicines that support wellness and prevention, as well as treatment and cures for diseases across a broad range of therapeutic areas. With an industry-leading array of international brands, Pfizer is at the forefront of modern pharmaceutical advances globally.

Located at Shanbally, Ringaskiddy, Co. Cork, Pfizer's Biotechnology Plant became operational in 2009 and the facility is a phase 2B / 3 clinical trial scale facility to manufacture, purify, formulate and bulk fill mammalian cell culture derived proteins. The complex also serves to establish a strategic biotech manufacturing centre of excellence and is planned to support the rapid development of new biotechnology products.



"We are delighted with the project. These sustainability solutions are delivering results for us far beyond our initial expectations. Seeing the payback period halved from 14 to 7 months simply reinforced our confidence in Veolia Water Technologies Recovery Capabilities."

Dave O'Shea, Pfizer Biotechnology, Shanbally, Co. Cork

The Client's Needs

The facility includes 5,500 litres of bioreactor capacity, over 12,000 m² of production floor space and is designed with significant utilisation of disposable technology such as; bags, filters, tubing and mixing technology, as well as modularization of unit operations. The inherent flexibility that is provided by this design supports the multi-product and variable nature of the potential product portfolio.

With a keen focus on 'Green' solutions and a dedicated programme to address the Carbon Footprint of its facilities worldwide, Pfizer required an innovative solution that would address the increasing cost of their supply and wastewater at the Biotechnology Plant.

The Solution

Pfizer already had a cutting-edge ORION® 6000 onsite, and the Veolia team used the RecoBLUE online calculator to show Pfizer's engineers how a Recovery RO could take advantage of the plant's 'waste' water and turn it into a valuable resource. A committed team of Pfizer engineers, worked with System Design Specialists from Veolia Water Technologies to devise a solution to meet the specific needs of Pfizer's Biotechnology Plant. Through the addition of a sustainability-focused Recovery RO system, this plant is now recovering 75% of wastewater generated (up to 2,700m³ of reclaimed water per year) and this water, now a valuable resource, is recycled back to the plant inlet to begin the purification cycle once again as raw water.

The Results

As predicted by the RecoBLUE calculator, the amount of water sent to drain has been reduced by 75% and consequently Pfizer's requirement for source water is proportionally reduced, delivering huge financial savings annually. Further sizable energy and cost savings were achieved through low energy membranes. This innovative project was designed, implemented and commissioned in less than 8 weeks, with a payback period of just 7 months and a reduced carbon footprint.

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