

# Fertilizer Manufacturer Saves US\$252,000 Per Year with GE Treatment Solution

## Challenge

A nitrous ammonia fertilizer manufacturer asked GE Water & Process Technologies to evaluate and recommend ways to improve their fertilizer manufacturing reliability while lowering their operating costs.

The manufacturer used about 5.6 million gallons of city water per month (at 131gpm) at a cost of US\$3.75 per 1000 gallons (US\$21,000 per month). The water expense along with the regeneration costs of their current ion exchange system burdened operating and maintenance costs.

The manufacturer had a brackish well water source available, which could help alleviate the reliance on city water but, because of the high salinity concentration of the well water, it was not a cost-effective solution. It would require more frequent regeneration of the ion exchange system leading to more expense for acid and caustic consumption, as well as, increased maintenance costs.

## Solution

GE's solution was to install a PRO 150 Reverse Osmosis (RO) system (Figure 1). The RO system reduces the salinity concentrations to levels where the manufacturer is now able to use the brackish well water source while decreasing the number of regenerations required from their current ion exchange system. By choosing to lease the GE RO system, the fertilizer manufacturer mitigated their capital equipment expense and began saving immediately on their city water expense.



Figure 1: PRO 150 RO System

## Results

The approximate US\$252,000 per year of city water cost savings, more than justifies leasing the GE Water & Process Technologies product.

The manufacturer now has a reliable water treatment system, lower operating costs and high-quality water for the fertilizer manufacturing process.

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