



Boiler Upgrades Save Money & Energy: Allergan - Westport

Allergan is a global, integrated pharmaceutical company that discovers, develops, manufactures and markets prescription medicines. Headquartered in Irvine, California, the company has more than 9,000 employees worldwide and operates ten major manufacturing and R&D facilities worldwide with five of those located in the United States. Allergan's Westport Ireland site is a 450,000 square foot pharmaceutical manufacturing facility which was established in 1977.

An active partner in the U.S. EPA's ENERGY STAR program, Allergan has earned ENERGY STAR certification for superior energy efficiency for its Waco, Texas manufacturing site and three of its U.S. headquarters buildings. The company also leverages ENERGY STAR tool & resources to help them achieve their goal of a 15% reduction of greenhouse gases by 2015. Allergan more than reached its prior five year goal of a 5% reduction in greenhouse gases by reducing these emissions by 15% in 2010.

Allergan's Westport facility employs three steam boilers capable of producing 5,455Kg of steam per hour for use in manufacturing processes and space heating. These boilers were originally designed to use fuel oil and consumed the equivalent of 29,500,000 Kwh (net calorific value) annually. With the expansion of the natural gas infrastructure in Ireland and rising cost of fuel oil, Allergan decided to convert the boilers to run on natural gas, with fuel oil used only a backup. In addition, Allergan added a boiler flue gas economizer on the primary boiler and retrofitted 135 steam traps with more energy efficient GEM traps which also offer a lower failure rate.

As result of converting to natural gas and improving the efficiency of the boiler and steam system, Allergan was able to achieve significant cost and environmental benefits.

Savings:

- ✓ Lower fuel costs by 40% or \$1 million annually.
- ✓ Reduced annual CO2 emissions by 30% or 2035 metric tons.
- ✓ Reduced NOx emissions.

Additional Benefits:

- ✓ The CO2 reduction at the site supports the corporate goal of a 15% reduction in greenhouse emissions and distinguishes Westport among Allergan sites worldwide.
- ✓ The estimated payback of this project is 0.5 years and meets Allergan's requirements for strategic climate and energy projects.
- ✓ Converting to natural gas has also allowed planning for a cogeneration facility to proceed.
- ✓ Continuously improving energy efficiency keeps the facility competitive.