

Case study

# Sealed Air Corporation

Iowa Park, Texas



## Specialty packaging and films manufacturer reduces energy costs, greenhouse gas emissions

Sealed Air is a leading global innovator and manufacturer of a wide range of protective packaging and performance-based materials, including Bubble Wrap® brand cushioning and Cryovac® food packaging products. Operating in 51 countries, Sealed Air is focused on environmental stewardship and conserving resources through active pursuit of environmental initiatives and sustainable packaging alternatives.

Based on corporate initiatives to reduce energy costs and greenhouse gas emissions enterprise-wide, Sealed Air asked Johnson Controls to evaluate several production sites to determine potential energy savings, operational cost reductions and greenhouse gas reductions. The Iowa Park facility was the first site selected under the program. Johnson Controls conceptualized, developed and performed a series of equipment improvements under the performance contracting method, whereby elements of the business case are guaranteed.

## Challenges

- Decrease energy consumption to lower utility expenses and minimize the company's impact on the environment.
- Reduce greenhouse gas emissions by updating older equipment with environmentally friendly technologies.
- Reduce the amount of ozone-depleting refrigerants on site.
- Extend asset life through an asset renewal program.
- Improve the ability to monitor and control energy consumption throughout the Iowa Park facility.

## Johnson Controls solutions

- Optimize the chiller plant systems by installing a rooftop chilled water distribution network and variable speed drives on circulating pumps, and integrating plants into a single cooling system. For compressed air systems, upgrade controls and expand storage capacity.
- Retrofit rooftop Direct Expansion chiller systems, replacing R-22 refrigeration components containing chlorofluorocarbons (CFCs) with chilled water coils.
- Install a state-of-the-art energy data management system to offer monitoring and trending of equipment, store historical data in one location, and provide a customizable platform to multiple users.

## Results

- Guaranteed energy and operational savings throughout the four-year performance contract term, including an annual decrease of 8.5 million kW hours of electricity and 5,900 tons of carbon dioxide emissions.
- Reduced the use of ozone-depleting CFCs by nearly 3,000 pounds, attributable to the phase-out of R-22 components. This CFC replacement also saved Sealed Air more than \$1.1 million in avoided capital and operational expenses.
- Real-time reporting of energy consumption contributed a 5 percent incremental reduction of utility costs to the total savings.

