

Multi-Site Energy Efficiency Retrofit

Our Client



Grocery retailer Ahold Delhaize, parent company of East Coast grocery store chains Stop & Shop, Giant Food, and The Giant Company among others, is an industry leader in its commitment to sustainable retailing. As part of its multi-faceted approach to reaching its ambitious sustainability goals, Ahold sought to reduce the energy used by its stores' largest energy-consuming systems: refrigeration and heating, ventilating, and air-conditioning (HVAC).

Our Solution

BaselineES designed, proposed a package of multiple energy efficiency measures (EEMs) focused squarely on reducing Ahold Delhaize's refrigeration and HVAC system energy usage. The package included recommissioning (ReCx), the addition of variable speed drives to the refrigeration condenser fans and HVAC supply air fans, demand-controlled ventilation, and improved refrigeration and HVAC system control strategies and setpoints. The program, called the HVACR&C EEM Retrofit Program, included two full years of remote monitoring by BaselineES's Remote Services Center (RSC) to ensure the EEMs at completed stores continued to operate as designed and produced the intended energy usage reductions.

BaselineES also helped Ahold Delhaize reduce their required investment by over 30% by taking on the complicated task of collecting financial incentives offered by the chain's electric utilities.

After a successful initial pilot, BaselineES then managed the engineering and completed the commissioning of HVACR&C EEM Retrofit Program rollouts in more than 480 Ahold Delhaize stores across the Northeast and Mid-Atlantic, from Massachusetts to Virginia. BaselineES also helped Ahold Delhaize reduce their required investment by over 30% by taking

on the complicated task of collecting financial incentives offered by the chain's electric utilities. BaselineES prepared individual site-specific pre/post EEM equipment status data tables, energy models, and savings calculations for each project location, and completed all utility incentive application, inspection, and post-installation monitoring and verification requirements on Ahold Delhaize's behalf.

For two years following completion of the retrofit at each store, BaselineES's Remote Services Center provided remote monitoring of the installed and affected systems, equipment and control settings. This ongoing monitoring, coupled with a monthly utility bill analysis conducted by BaselineES's Energy Efficiency Project Management Team, exposed and enable the correction of under-performing EEMs, and ensured that the predicted energy savings were achieved and maintained.



| Condenser A Settings | |
|----------------------|------------------|
| Min condensing temp | : 70.0°F |
| Max condensing temp | : 100.0°F |
| Condenser Delta T | : 12.0°F |
| | |
| Reaction Time | Inverter Speed |
| Linear Factor : 2.0 | Minimum : 30.0% |
| Sensitivity : 10.0 | Maximum : 100.0% |

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Our Results



Through our energy efficiency upgrade suite of measures, BaselineES was able to help Ahold Delhaize achieve an average reduction of over 10% in annual energy consumption across the included stores, resulting in over 115 million kWh in annual energy savings and a reduction of over 38,000 tonnes of CO₂e per year. Additionally, BaselineES was able to secure over \$10.6 million in utility incentives to offset project costs, resulting in an average project payback period of just 1.3 years.



Annual Energy Savings:
115 million kWh



Emissions Reductions:
38,000 tonnes CO₂e



Utility Incentives Acquired:
\$10.6 million



Average Project Payback:
1.3 years



Suite of HVAC and Refrigeration Energy Efficiency Measures