

CASE STUDY

Design, Engineering and Installation of Renewable and Energy Efficiency Technologies

HVAC Restoration

SITUATION

Bowne (NYSE: BNE) provides financial, marketing and business communications services around the world. In an effort to improve the energy efficiency of its HVAC operating systems, Bowne engaged Groom Energy Solutions to provide HVAC restoration services.

STRATEGY

Groom Energy technicians performed analysis on Bowne's HVAC systems, identifying sources of energy inefficiencies. The team addressed mechanical, thermal and air flow adjustments as well as reconditioning of the systems components. Through this process the overall system efficiency was boosted from 22% to 92%, which reduced energy consumption by \$21,884 per year.



Technical Results	Before Restoration	After Restoration	Improvement
Tons of A/C	20	20	
BTU's	53,105	226,887	327%
CFM Air Flow	1,959	6,444	229%
Evaporator Coil Air Temp	73.2F	65.6F	12%
Overall Unit Efficiency	22%	95%	

Financial Results	Total
Annual Operating Hours	432
Annual Operating Cost Before Restoration	\$37,960
Annual Operating Cost After Restoration	\$16,076
Annual Operating Cost Savings	\$21,884
Technology Investment	\$19,160
Return on Investment	114%

