

# CASE STUDY

## Capital Plaza Hotel and Convention Center

### Kentucky Convention Center Meets Energy Star Certification Using Aeroseal

Sealing ducts with aeroseal allowed administrators to reduce exhaust fan speed while increasing air exchange rate - savings result in three year payback

The 10-story Capital Plaza Hotel and Convention Center in Frankfort, Kentucky has become the first Energy Star certified hotel in Kentucky with the help of Aeroseal duct sealing. Owners estimate that duct sealing and other energy conservation measures (ECMs) have reduced building operating costs by \$110,000 a year. Sealing leaks also fixed bathroom exhaust issues and eliminated chronic mold and mildew problems. Plus, temperature imbalances in the facilities were improved. Specifically, cold spots have been replaced with even temperatures throughout the facilities.

The sealing process took five days to complete. Payback was estimated less than two years, and ongoing energy savings was estimated for duct sealing alone to be approximately \$24,000/year.

Additional savings is expected through reduced maintenance costs and equipment repair. The building owners are now enthusiastic supporters of Aeroseal duct sealing for significantly reducing overall operational costs and improving indoor air quality (IAQ) in buildings.



I was getting quotes for an overhaul of the HVAC system that ran \$1 million to \$2 million dollars – it would have taken decades to pay back. We opted instead to seal the ductwork with Aeroseal. That dramatically improved the efficiency of the current system, allowed us to reduce energy use related to heating and the use of exhaust fans and it solved a lot of issues related to poor ventilation. We expect pay back on the duct sealing to take less than two years. Then it's simply ongoing savings right off the top of the hotel's monthly operating expenses.

**Jason Delambre**  
Energy Consultant  
Interdependent Energies, LLC.

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### PROJECT OVERVIEW

|                                                              |                                                                                                                                              |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BUILDING</b><br>Capital Plaza Hotel and Convention Center | Fix mold and mildew issues in the facilities                                                                                                 |
| <b>LOCATION</b><br>Frankfort, Kentucky                       | <b>BEFORE AEROSEAL</b><br>6,270 CFM total leakage                                                                                            |
| <b>AEROSEAL CONTRACTORS</b><br>Service Tech Corporation      | <b>AFTER AEROSEAL</b><br>771 CFM total leakage                                                                                               |
| <b>ENERGY CONSULTANT</b><br>Interdependent Energies, LLC     | <b>RESULTS</b><br>Became first Energy Star certified building in state of Kentucky; Improved building indoor air quality (IAQ) for occupants |
| <b>GOAL</b><br>Achieve Energy Star certification;            |                                                                                                                                              |



During the demo we got to see how the Aeroseal technology actually worked. The computer-generated graph follows the sealing process in real time, and we watched as the leaks were sealed and the CFM of lost air went down to practically nothing. There was no other way, short of tearing down and rebuilding the hotel, that we could have gotten anything near these results.

**Chad Braden**  
Director of Facilities  
Capital Plaza