# Example Retrocommissioning Measure: Disabled Economizer Control

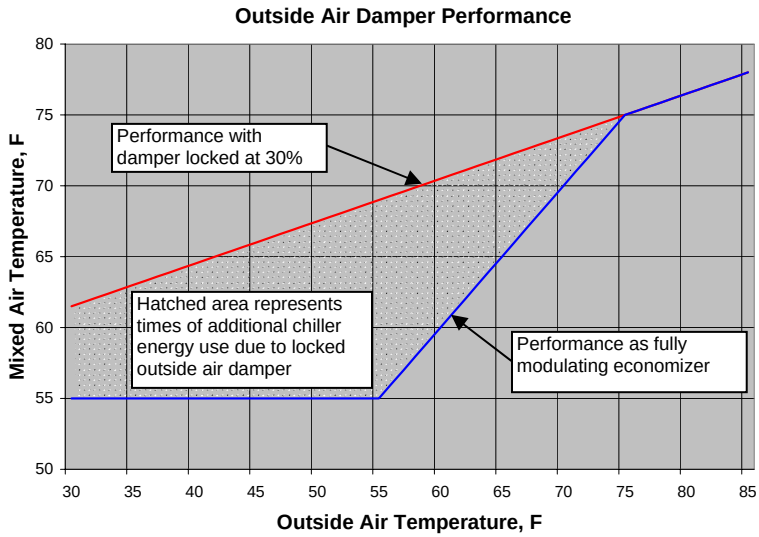
## Facility

This 21-story building, built in 1997, contains 589,000 gross square feet of mostly office-type occupancy. Its HVAC system includes six large air handlers, 400 variable air volume terminal units, five boilers, three chillers, and three cooling towers.

## Investigation Finding

The outside air damper related to a 120,000 cfm air handling system was locked at 30% open to remedy return fan operational issues that occurred when the system went into economizer, or "free cooling", mode. With the economizer disabled, the system was requesting chilled water at outside air temperatures as low as 45ºF. At this temperature, the system could be using 100% outside air alone to cool the facility.

If the economizer system were in operation, the air handler could use a higher percentage of outside air to provide cooling, rather than relying on mechanical (chilled water) cooling. This would reduce the energy used by the HVAC system.




## Implemented Measure

The operational issues related to the return fan were addressed and the airside economizer system was returned to fully modulating automatic control.

## Results

| | | |
|---|---|---|
| Estimated annual electric savings | **$5,465** | **74,857 kWh** |
| Implementation cost | $2,800 | |
| Simple payback | 0.5 years | |