KES

INDUSTRY LEADERS IN TURNKEY DEMAND CONTROL KITCHEN VENTILATION (DCKV)

WHAT WE DO

Demand Control Kitchen Ventilation (DCKV) controls the exhaust and supply fans automatically in order to provide the correct amount of exhaust at the correct times saving you energy and money.

A proper and well designed DCKV system can save money for the operator every single day. Your fan doesn't work as hard and therefore will most likely last much longer.

We offer the most efficient answer to the demand control needs. KES has been in the business for over 17 years and offers a full service solution from design to final startup in one complete offering.

ECOAZUR's cutting-edge solution constantly monitors your kitchen for even the slightest changes in temperature and detects smoke and vapor in an instant.

ECOAZUR SYSTEM AT

Wentworth Institute of Technology

Beatty Hall

550 Huntington Ave, Boston, MA 02115

Wentworth Institute of Technology was looking for a solution to save energy at Beatty Dining Hall but had the challenge of multiple hoods connected to single exhaust fans. The kitchen layout included newer hoods that had been integrated with an old existing main cookline for a total of nine large exhaust hoods. With typical DCKV systems, the fans would need to be commanded to full speed any time cooking activity was detected to ensure that no smoke/temperature rolled out of any of the hoods. How could energy savings be achieved with this multiple hood-single fan layout?

WIT.EDU

Strategic Partner:

I·E·S·G
Integrity Energy Solutions Group

www.iesgcorp.com
1777 Marine Pkwy, Brooklyn NY 11234
info@iesgcorp.com
(800) 757-2406

Our Solution

ECOAZUR was the perfect solution for this situation by being able to retrofit modulating dampers on all hoods in combination with the ECOAZUR optic and temperature sensors to maximize the energy savings in the kitchen. Some exhaust hoods required further customized dampers to ensure that no existing ductwork or hoods in the space needed any alterations. ECOAZUR was fully integrated with Beatty Dining Hall's BAS so system information can be gathered by facility staff in real time. Wentworth is now achieving energy savings that surpass the initial estimates and will be enjoying these savings for years to come. Note the exhaust fans now never reach 100% speed!

Results *Runtime Hours per Day: 15 | Total Controlled CFM: 23,900*

Estimated Preliminary Analysis:

Average New Fan Speed: 55%
Electrical Savings: 115,698 kWh / year
Electrical Savings: $23,355.00 / year
Heating Savings: $14,052.00 / year
Cooling Savings: $346.00 / year
1.5 year payback

Post Installation Analysis:

Average New Fan Speed: 43%
Electrical Savings: 177,702 kWh / year
Electrical Savings: $26,655.00 / year
Heating Savings: $17,800.00 / year
Cooling Savings: $439.00 / year
1.3 year payback.

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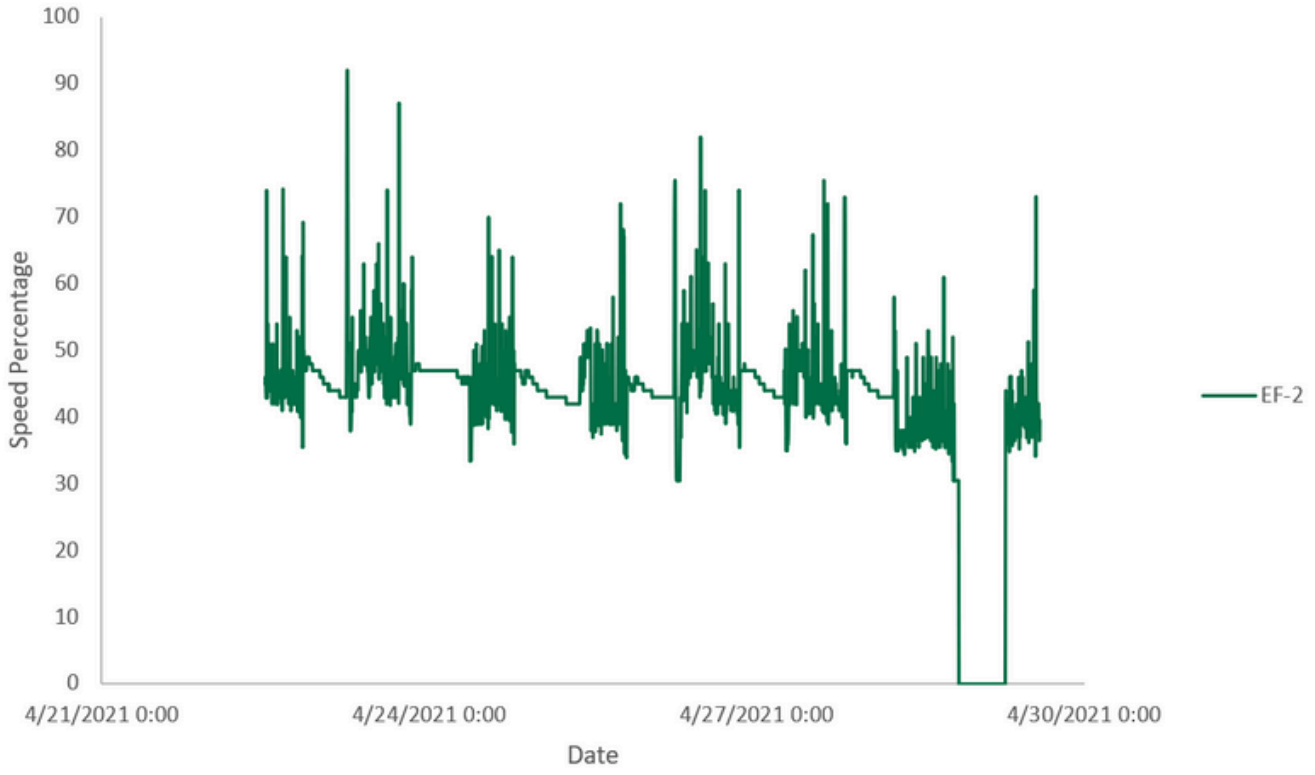
The Graphs: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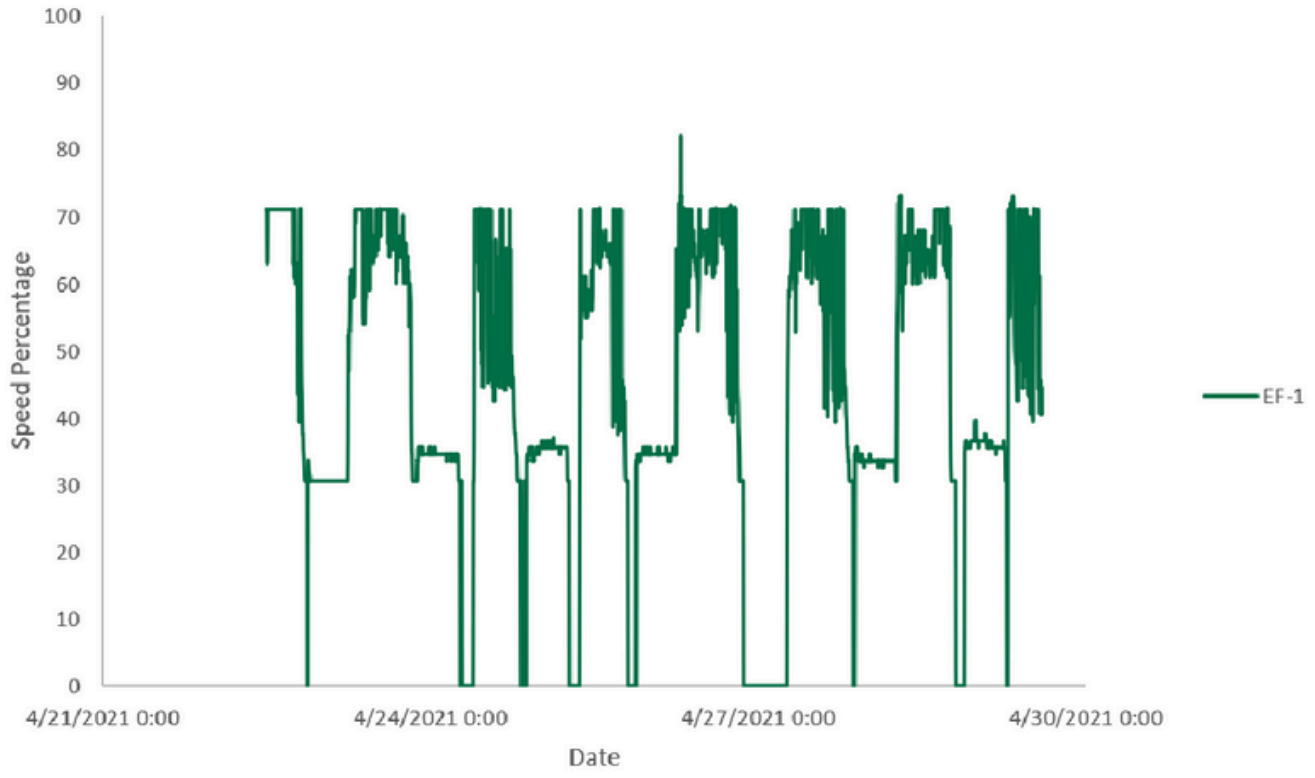
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