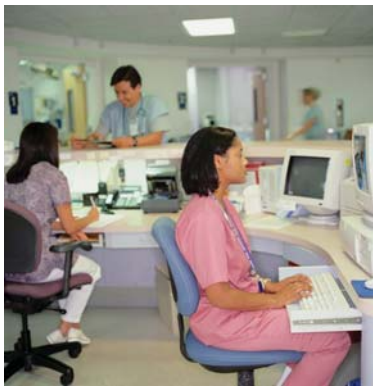
OptiNet case study

Texas Children's Hospital

Energy Savings and Safety

Texas Children's Hospital is an internationally recognized full-care pediatric hospital located in the Texas Medical Center in Houston. One of the largest pediatric hospitals in the United States, Texas Children's Hospital is dedicated to providing the finest possible pediatric patient care, education and research.

The newly renovated Feigin Center is a state-of-the-art research facility for more than 120 researchers from Texas Children's and Baylor College of Medicine. The $40-million renovation of this former patient-care facility now offers 12 floors of state-of-the-art research and office space to physicians leading innovative pediatric research initiatives.



LABORATORY DEMAND CONTROLLED VENTILATION

On floors 4 and 7, OptiNet was deployed to control the dilution ventilation (air change rates - ACH) across 28 lab modules. Significant energy savings are being achieved by dynamically controlling the airflows in the labs via OptiNet's Laboratory Demand Controlled Ventilation application. The system safely varies ventilation rates within the laboratory spaces based on the cleanliness of the air, rather than leaving the air change rates at typical fixed design rates.

As a result, the required outdoor air flow rates have been reduced significantly.

4th Floor – CFM Reduced by 7898 CFM

7th Floor – CFM Reduced by 5827 CFM

ESTIMATED ANNUAL ENERGY SAVINGS: $103,000

By reducing the outdoor air flow rates, the operating speeds of the main supply and exhaust fans were reduced by approximately 30%. The fan speed reduction, coupled with the subsequent reduction in heating and cooling requirements for the outdoor air, will achieve energy savings of approximately $103,000 per year (@$7.50/cfm).

BENEFITS OF LABORATORY/VIVARIUM DCV

- Significant energy savings
- Potential first costs savings
- Validates safe operation of a lab/vivarium
- Documents proper IEQ

OptiNet™
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