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The HVAC Tax Experts

HVAC Tax Incentives Combine with Affordable Care Act to Drive Hospital HVAC Replacement Projects

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HVAC tax incentives provide excellent opportunities for hospital operating room HVAC replacement projects.

Hospital operating room HVAC replacements are more expensive than typical HVAC replacements because of the comprehensive advanced planning that needs to occur. Operating rooms conduct a vital hospital function and essentially need to be available on a continuous uninterrupted basis. The advance planning elements include engineering design, site preparation, optimal timing, equipment staging, installation team scheduling with quick changeover and post project cleaning to a pristine site condition.

It is estimated that U.S. hospitals spend more than $6.5 billion annually on energy costs, which is equal to about 15 percent of hospital profits.[i] The hospital sector has lagged in achieving building energy efficiency as compared to other property sectors and may be able to use new tax rules to its advantage.[ii]

These new tax rules, that became effective in the beginning of this year, are particularly favorable for the more expensive carefully conceived hospital operating room HVAC replacement. In addition to a presumed decrease in operating expenses due to new HVAC equipment, higher quality HVAC may also help increase the bottom line at medical facilities if it helps to reduce readmissions related to hospital borne infections and their associated penalties included in the Affordable Care Act. Tax deductions combined with lower operating costs of new equipment and the potential for penalty avoidance all combine to create a compelling argument to consider HVAC replacement in 2014 or as soon as possible.

Hospital HVAC Systems

Since hospitals are human-occupied, 24/7 facilities, HVAC is the largest building energy cost item. However, the role of HVAC in hospital care cannot be understated. Hospital HVAC systems are responsible for heating, cooling and ventilation, but also infection control, removal of harmful toxins, and providing environments conducive for medical procedures and patient recovery. Energy efficient ventilation allows hospitals to maintain low pressures for highly contaminated rooms to reduce the spread of infection and maintain high pressure in operating rooms to increase airflow. Hospital HVAC systems can also detect fires and eliminate smoke from exits and enclosures.[iii]

Operating rooms, specifically, often contain highly sophisticated and heat generating equipment which increasingly include robotic surgery systems and computers that require precise

environmental conditions to function properly. HVAC systems in operating rooms are required to fulfill multiple functions in order to keep both the humans and machines healthy at all times.

By carefully planning and sequencing HVAC system replacements in multiphase projects such as operating rooms, the combination of lower operating costs and tax deductions will both positively affect the bottom line.

HVAC Systems' Role in Preventing Hospital Infections

According to the U.S. Centers for Disease Control and Prevention (CDC), about one in every twenty hospitalized patients contracts a hospital-acquired infection (HAI) and the associated cost to the health care systems is about $10 billion a year. This is down dramatically from previous estimates of $20 to $40 billion annually and shows that some progress is being made but there is still room for huge cost savings. [iv]

The hospital design, construction and facilities-management communities play a crucial role in preventing HAIs and creating a physical environment that supports quality care and positive patient outcomes. The Center for Health Design analyzed more than 120 independent studies before concluding that clinical outcomes improved when patients received quality-centered care in a healthcare facility where the temperature, humidity and indoor air quality were effectively managed. [v]

The more hospital engineers and surgeons understand the safety issues involving surgical HVAC, the better they can focus their efforts to reduce infection rates of surgery patients and also to lessen the financial burden of business interruption. [vi]

It should no longer be an issue for hospital engineers to simply keep the surgeon from complaining that it is too hot in surgery. There are very specific reasons for maintaining proper air flow, direction, humidity and temperature in surgery. These factors not only benefit the patient, but reduce the risk of litigation brought against the hospital by patients who develop infections. [vii]

Surgery is a vital service provided to the community and important to a hospital's financial well-being. Without a well maintained surgical air handler and surgical HVAC system, the entire surgical suite can be shut down, effectively closing down other hospital departments as well. [viii]

Case Study Data

Following are some examples of our firm's hospital building HVAC projects that have resulted in significant tax savings.

Northeast Psychiatric Facility • $ 720,000 Chiller Tax Deduction	**Eastern VA Hospital** • $ 480,000 Chiller Tax Deduction
Northwest Hospital • $ 175,000 Chiller Tax Deduction	**Midwest Medical Center** • $ 180,000 Chiller Tax Deduction

Conclusion

Hospital building managers who replace existing HVAC and meet the betterment, adaptation, and restoration tests, may qualify for large tax incentives under the law effective January 1, 2014. When making these decisions, building managers should engage knowledgeable building tax experts with HVAC engineering backgrounds to prepare supporting HVAC tax incentive study documentation. [ix]

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[i] Charles Goulding, Jacob Goldman and Malcolm Thomas, Building Operating Management, *For-profit and Government Hospitals Can Earn Tax Deductions for New Construction and Renovations*, March 2010. Available online at http://www.facilitiesnet.com/lighting/article/Forprofit-and-Government-Hospitals-Can-Earn-Tax-Deductions-for-New-Construction-and-Renovations--11563?source=part

[ii] Charles R. Goulding, Jacob Goldman and Jennifer Pariante, Major Hospital Network Planning For Large Energy Cost Savings as of January 1, 2014, ETSI Publishing, April 2013. Available online at http://www.energytaxsavers.com.

[iii] Charlie G. Goulding, Andressa Bonafe, and Rachelle Arum Corporate Business Taxation Monthly, *LED Lighting and'HVAC HVAC Tax Aspects HVAC Tax Aspects of Energy-Efficient Hospitals,* September 2013.

[iv] Anne Harding, Reuters Health, *Hospital Infections Cost U.S. $10 Billion a Year*, September 12, 2013. Available online at http://www.reuters.com/article/2013/09/12/us-hospital-infections-idUSBRE98B0QQ20130912

[v] Laura Rygielski Preston, *Breath of FRESH AIR*, Medical Construction & Design, January/February 2011. Available online at http://www.trane.com/corporate/resources/documents/20110526/FdMCD0111_52-54-IF-IAQ.PDF

[vi] William G. Gurry, Proper Air Flow in Surgery: Protects Patients and The Bottom Line (HVAC), The Locomotive; a publication of The Hartford Steam Boiler Inspection and Insurance Company. Available online at http://www.hsb.com/TheLocomotive/ProperAirFlowInSurgeryProtectsPatientsAndTheBottomLineHVAC.aspx

[vii] ibid

[viii] ibid

[ix] Jacob Goldman, Andrea Albanese and Charles G. Goulding, *Office Buildings Use New January 1, 2014 HVAC Tax Incentives to Improve Energy Star Ratings*, ETSI Publishing, January 2014. Available online at http://www.energytaxsavers.com