

Ask the Experts

Cutting a building's heating costs: A step by step process that you can tackle with confidence

Robert Sedaghatpour



Stratco
Property
Group

Restructuring a multifamily building's heating system, to most owners will appear a daunting task. However, with the following easy step by step process an owner can tackle it with confidence.

Study Your Building's History

Before commencing any plan, track your historical energy usage at the building. To arrive at the benchmark your designers have to beat, obtain a summary of the fuel units consumed per month for the last one to four years.

Educate Your Team

Obtain the HPD code requirements regarding hot water and heat during the heating season. Educate your manager and building staff about the law. (There are inexpensive courses offered at various institutions around

New York City, including NYU, that provide excellent training for these kinds of issues.)

Investigate and Log Your Findings

Purchase an electronic thermometer that can take the temperature of a room with the press of a button. To learn how the current heating pipes distribute heat, log the temperature in different parts of the building at different hours through the day and even on weekends, until you are able to determine which are the coldest and hottest areas of the building. You'll soon notice that different sections of the building have widely ranging temperatures.

Apply Today's Technology

To tell you the temperature in various apartments, and direct your boiler to provide heat when the temperature goes below a certain threshold that you set, research and purchase a heat computer that fits your building's size and budget. You will be able to control this remotely from your office, even many miles away. Older systems provided heat purely based on the outside temperature. Thus an apartment can be at 85 degrees and

still have the boiler on merely because of the brisk external temperatures. A heat computer's sensors allow you to cash in the savings that come from other heating sources in the apartments such as cooking, body heat, and electronic devices.

Correct Your Heating Traps

With setting your temperature threshold at a reasonable amount higher than the minimum legal apartment temperature requirements, you will see that your coldest areas of the building may be significantly below the code requirements, while most of your building may be at targeted temperatures. This means that you have one or more heating traps. With the information that your investigation and heat computer provide, diagnose the areas of your building where there may be too much or too little heat traveling. Having a master plumber inspect and adjust your heating traps, will enable you to provide heat on an as-needed, rather than an as-poorly-engineered basis.

Consider Alternative

Fuel Options

In New York City, we generally have the option of using either gas or oil to operate our heating plants. Gas is currently trading at a historically

low price and, inside the building, is a much cleaner product than oil. In situations where a utility has already piped a street with gas, capitalize on this, and transfer your building to gas. Call your utility representative and find out if you have an adequate supply on your street. If you do or can get it done at a reasonable price, converting your building to gas can realize substantial savings.

Engage Your Tenants

It is common for tenants to complain when their apartment temperatures drop, even though the heating is still being higher than the city mandated temperature minimums. Many managers simply raise the temperature back up to avoid such complaints. However, such actions cost a building thousands of dollars per year. In middle to lower class tenanted buildings, when such complaints are received, the building staff should immediately inspect and take an apartment temperature reading. Your staff should show the reading to the tenant and educate the tenant about the law. This is key, as you are now engaging your building community in your goal of creating an efficient building. However, if you are running and marketing your

building as a luxury accommodation, engineer your heating system accordingly.

Create a System

Create a system to monitor these changes. Your management team now must regularly review complaints, and adjust apartment temperatures until you have a margin of safety keeping you within the legal requirements. This is critical as the fines associated with violating these requirements can cripple your finances. While you are creating your system, compare your fuel consumption with your historical records. This should show substantial savings.

Final Thoughts

When you have taken all the above steps and integrated all of them, you have now transformed your relationship with your fuel cost from a position of weakness and fear to an opportunity of transformation and confidence. This financial statement expense item may now become an opportunity to beat all previous years' numbers, regardless of all the obstacles we have in the industry.

Robert Sedaghatpour is a principal at Stratco Property Group, New York, N.Y.

The big storm, one year after by Ravelo

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The post-and-beam type demountable barriers consist of permanently installed base plates that are level with the building's sidewalks and aluminum posts and hollow planks that are assembled prior to the predicted storm event, and dismantled afterwards. These can be stored on or off-site, and erected easily and quickly. These barriers have been deployed in such notable places as the Grand Ole Opry in Nashville; Prince George's County Administration Building in Upper Marlboro, MD; The African American Museum, National Mall, Washington, D.C.; The Bolivar Dam, Bolivar, OH and most notably to contain the Danube River at Prague. Thornton Tomasetti currently has three active projects in NYC employing these barriers. Of course, these devices have to go hand in hand with other physical changes to the building so that all existing life-safety systems are not circumvented by the barriers, particularly egress.

The design industry has had a shot in the arm with post-Sandy repairs and implementation of new flood proofing measures. The demand for these services has reached a high level in the past months, as more funding becomes available from both governmental and private programs. The newly designed building must now re-think where to place the not so sexy program functions such as vehicular ramps, mechanical rooms and telecommunications entry points.

It is no longer a given that these will go below grade or buried within the confines of the building. A robust water management approach must now be considered when designing new buildings or retrofitting older ones. There are numerous reference codes available to guide the designer, most notably ASCE 7 & 24, FEMA Technical Bulletin 3-93, NYC Executive Order 233, RCNY 3606 and Appendix G of the 2008 NYC Building Code. All these have to be incorporated with a heavy dose of common sense, so that they complement each other and accommodate Fire Department apparatus connections and truck access, as well as that any barriers or base plate anchorages placed outside the property line need long-term permitting through both DOT, Dept. of Buildings and DOT Revocable Consent and Franchises. All of these affect the layout of the on-grade floor plan as well as the building skin at this level.

In summary, it's has been a busy year of dealing with post Sandy issues and getting those implemented. Where there is room for improvement is in modifying current codes to encompass the aforementioned measures so that the review and approval process is clearly defined and easy to follow.

Julio Ravelo, RA, NCARB, is a vice president at Thornton Tomasetti, New York, N.Y.

Safe Haven: A general const./women-owned business by Baker

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The need for safety and security has reached heightened levels worldwide. Safe Haven is a complete, rapid deployment turn-key manufacturer. There is no project too large or too small. New levels of protection are required for every area today including schools, mission critical protective buildings, banks, hospitals and doors to protect mechanical rooms as well as safe rooms in homes. The Port Of New York recently installed U.S. Department of State certified Safe Haven doors in two tunnels to protect pump areas. Installed before Hurricane Sandy, these doors provided the protection required. Due to my longevity in the protection industry, Safe Haven has become one of the most respected and reliable places to turn for projects dealing with hardening of both new structures and refurbishing structures already in place. Everyone thinks they can work with metals but this is not true. We know how to prevent sweating, deflection of metals and that frequent popping sound.

I have always been a firm believer in giving back to her community. I have served on the board of directors and I am a member of WBENC and WPO, both women's business not-for-profit organizations who certify women business owners, provide education and networking sessions to connect women business with corporations and government agencies. I am a



member of WIPP, providing women business owners a voice in congress. As signature sponsor for March of Dimes and the American Cancer Society, I give back to my local community. I am also the chair of the Louisiana District Export Counsel, DEC, board of directors member for SOWELA Technical Institute in Lake Charles, Louisiana and on the advisory board of Veterans Aid Foundation. Most recently, I have been working with Thanks USA, a not-for-profit that funds scholarships for the spouses and the children of the fallen.

Alta Baker is the president & CEO of Safe Haven Enterprises, LLC, Jennings, Louisiana and New York, N.Y.

