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## Looking to Cut Costs? 3 Manageable Strategies to Lower Your Facility Budget

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You really can lower your costs without compromising your business.

If you're like most businesses in America, you probably set a budget for your facility's operation each year based on the previous year and occasionally plan for large capital projects, without really measuring how it affects your profitability. Of course, budgeting for a facility's operating costs is absolutely necessary - but the method in which you make that budget has serious consequences to your bottom line. In fact, you may be spending a *tremendous* amount of money that could be otherwise spent on your core business or revenue-producing projects. So what follows are explanations and three manageable strategies that you can employ to create some extra dollars in your organization.

### 1. MEASURE AND ANALYZE YOUR BUILDING'S ENERGY USE.

Research done by the United States Department of Energy shows that buildings in the United States utilize 65.2% of the nation's total electricity consumption, and over 36% of the nation's total primary energy use.[1] In addition, 30% of total U.S. greenhouse gas emissions come from our facilities - the largest share of the country's emissions[2] - not cars! With the "Go Green" movement in today's society and the high cost of energy, you have plenty of reason to suspect that you may be wasting money on your facility.

It's no secret that energy costs have risen dramatically, and will continue to rise in the future. The expense will never go completely away, but you can do some things to help offset it. Money you spend on your utility bills each month should be separated into two categories: money spent on the energy that your facility *requires*, and money spent on the energy that your facility *wastes*. On average, the largest energy *consumers* in a non-manufacturing facility and, by default, the largest energy *wasters* are usually the mechanical systems that provide heating, ventilation, air conditioning (HVAC), and lighting to the interior of your building (up to 70% of electricity costs and 100% of natural gas costs).[4]

As HVAC equipment ages, it becomes more inefficient and costs your organization extra money. For example, a gas boiler installed in 1993 at a rating of 80% efficiency (for every \$1.00 of gas you put into it you receive \$0.80 worth in heating) could have lost 5% efficiency or more today - even if properly serviced! Plus, HVAC equipment that is over even three years old could have efficiency ratings well below the high-efficient technology that is available today.

One simple way to measure and analyze your facility's efficiency is available online at

[www.energystar.gov](http://www.energystar.gov). This is a great tool produced by the Environmental Protection Agency (EPA) that allows you to input your facility attributes and the information from your utility bills. Your facility will receive a rating on a scale of 0-100 to determine where it stands against other facilities like it in energy efficiency. It will provide you with a good indication of whether or not you need should proactively invest in your facility to get the most efficiency out of your systems, and the most out of your dollars.

A second method of determining where inefficiencies may exist is by utilizing the knowledge of an authorized *Energy Star* contractor. Many of these organizations have experts that will meet with you at your facility to determine if any potential savings exist, and some will assist you in a simple energy study free of charge. You may want to check the company's references and credentials, though - especially for LEED accredited professionals as well as membership in organizations like the United States Green Building Council (USGBC). They should be able to identify savings opportunities and their costs, implement the solution, and measure what the financial impact will be on your organization's budget.

## 2. MEASURE YOUR CAPITAL AVOIDANCE/LIFE-CYCLE COSTS

The American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) publishes a list that states the average life expectancy of mechanical equipment used to condition the environment within your building. On it, you can find information that states typical life expectancy for the majority of HVAC equipment to be between 15 and 20 years, if maintained properly. Unfortunately, that means over the life of an average building, this equipment will have to be replaced at least once, and you should determine what your annualized cost is to pay for that replacement.

First, you need to find the total replacement cost of your HVAC system. If available, find the amount that you paid for the HVAC systems in your facility to be installed. An educated guess of \$7.00-\$10.00[5] per square foot could be used, depending upon your systems' complexity. Next, determine how much of your system could be salvaged, such as piping, ductwork, and diffusers (this amount is typically 15%-25%). Then ask your HVAC expert or contractor to report on the physical state of your equipment and to make an educated guess as to how much longer it will last you (keeping the ASHRAE life expectancies and your operating methods in mind). With this information (adjusting for inflation and salvage value), take your total replacement cost and divide it by the remaining years of useful life. This will give you an annualized cost, or deferred liability, that you need to save for when your equipment needs replacement. A sample looks like this:

Installed cost: \$500,000.00 / Life expectancy: 15 years / Age: 5 years /

Salvage value: 20% / Inflation rate: 3%

$\$500,000.00 * 115\% * .80 / 10 = \mathbf{\$46,000.00 \text{ per year}}$

When you determine your annual deferred liability, decide where this money will come from. Consider that saving this money now will avoid unexpected capital spending in the future. In addition, proactive planning of major energy consuming equipment allows you to purchase more efficient equipment. You could also explore different options such as service coverage that includes repairs and replacement, or look into alternative financing that defers capital expenses to your operating budget. The point is this: you must plan for the inevitable to avoid costly interruptions in your business.

## 3. REVISE YOUR MAINTENANCE METHODS

Research done by the U.S. Federal Facilities Council shows that over the life of a building, the total amount of money put into it consists of 5% for cost of construction, and 95% for cost of ownership.[6] Translation: the upkeep of your facility is extremely important in saving you money over time - particularly on your HVAC systems. Quality of maintenance affects several important factors, including but not limited to: energy usage, extended equipment life, improved reliability, increased productivity, and less system downtime.

Two schools of thought exist when it comes to HVAC maintenance methods: (1) spend little or no money up front, and utilize the money saved on repairs and replacements, or (2) spend more money annually on your maintenance program to avoid costly repairs, downtime, and wasted energy. In most cases, strategy number 2 is not the lowest first cost solution, but proves to be the most proactive and cost-effective solution over time.

Much like buying a new car, HVAC equipment decreases in value over time, while the operating costs associated with it increase. A proactive maintenance method will help to offset these changes. In addition, proper preventive maintenance can cut your system's energy consumption 10-30% per year![7]

If you utilize in-house staff, you must make sure that you properly train and equip your employees for their jobs. They should have a good working knowledge of your HVAC systems and how to service them, as well as a relationship with a qualified service contractor if they encounter problems not able to be handled in-house. An annual plan should be developed to make sure that no equipment goes overlooked, and it should be revised at regular intervals to reflect any changes in the facility. In addition, identify any areas they may be spending a lot of time or money in, and make sure a plan exists to resolve the problem - because the cost of repair will only go up over time.

If you depend on outside contractors to take care of your equipment, you will want to ensure that you receive the right amount of service and measure its financial impact to your organization. The right amount of service refers to physically analyzing your systems and operating hours/procedures, determining exactly what needs to be done, *and* planning for the future. Make sure you receive documentation of work that has been completed after every visit, and have your contractor create a financial analysis to justify the service and repair work that you are paying for. Outside contractors positively or negatively affect your operating budget, and how you choose to buy from them can have a big impact on your bottom line.

This is not intended to be an all-inclusive strategy to lower your facility costs. However, the three items mentioned, (1) measure and analyze your energy use, (2) measure your life-cycle costs, and (3) revise your maintenance methods provide a good foundation for you to begin a proactive, long-term strategy to get more out of your facility and increase your profitability. Good luck!

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*Sources:*

1, 2, 3, 4 - Energy Information Administration, U.S. Department of Energy

5 - R.S. Means Costworks 2003

6 - U.S. Federal Facilities Council Technical Report #142

7 - Louisiana Cooperative Extension Service 1991

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