No Brainer: Three Easy Steps To Risk-Free OpEx Reductions and Municipal Asset Valuation Increases

BY JAMES S. OLIN, CRE

These days, city officials, finance officers and municipal asset managers everywhere are struggling to come to grips with two unavoidable realities: ever tightening budgetary constraints and aging government buildings badly in need of renovation and upgrade. It's a dilemma that municipalities all over the country wrestle with every day. Government buildings are in desperate need of improvements necessary to simply preserve valuations, let alone increase them, and yet there is often not enough money in the operating budget to do what must be done. Nevertheless, the need to maintain and somehow increase asset valuation is unrelenting, and as municipal governments continually seek to become financially stronger with better credit rating levels, valuation of assets will have a greater and greater impact on the rating indexes for the local government.

So what's the solution? After years, sometimes decades, of grappling with this seemingly intractable predicament, some municipal asset managers have awakened to the fact that it may be over their heads. Literally.

CREATING VALUE WITHOUT RISK

Because municipal assets are used to collateralize municipal debt obligations, it is important to establish asset values using generally accepted valuation methods for relevant properties. One of the most widespread is the direct capitalization method, which is based on the income that could be generated from rents or other income in relation to the property being valued. That projected income is converted into a capital sum (current value) by the use of a capitalization rate derived from analysis of actual sales in the market. Presently, the national average stabilized cap rate for suburban Class A assets is about 6.5 percent. Thus, an annual income of $1 million from such an asset would result in a valuation of more than $15.4 million.

Asset managers know that one sure way to increase a building's valuation is to decrease its Operating Expenses (OpEx). Most of them also know that implementing strategically selected Energy Efficiency Measures (EEMs) is one of the quickest, most cost

About the Author

James S. Olin, CRE, *has been a leader in the vacation rental and resort real estate and development industries since the 1980s.*

Jim is currently CEO of C2G Advisors LLC, a strategic consulting firm specializing in all facets of the hospitality industry, with special emphasis on vacation rental and resort activities. Jim was also part of a select negotiations team for one of the largest class action settlements in the history of the United States, and he continues to provide litigation consulting in the areas of hospitality and business economic loss.

Previously, Jim was Managing Partner of The Sterling Companies LLC, and is the former President and CEO of ResortQuest International (NYSE: RZT), the world's largest vacation rental property management and resort real estate firm. Under his leadership at ResortQuest, Jim guided the network of more than 20,000 vacation rental properties in 52 premier resort destinations and developed alliances and partnerships that gave ResortQuest a truly global reach. Jim also oversaw a real estate brokerage network of more than 350 agents, who traditionally managed in excess of $1 billion in real estate listings.

Jim is a licensed real estate broker in Florida, Alabama, Mississippi and Tennessee, and has been appointed to numerous state-level committees and task forces by previous Florida Governors and Secretaries of Commerce. Jim is a member of both the prestigious Counselors of Real Estate (CRE), and Council of Real Estate Broker Managers (CRB) – he is one of only 8 people currently invited to membership in both organizations simultaneously.

Jim also has certifications from the National Association of Realtors as a Resort and Second Home Property Specialist (RSPS) and a Senior Real Estate Specialist (SRES). He is also a Certified Negotiations Expert (CNE), and a Fellow with the Royal Institution of Chartered Surveyors.

effective ways to achieve substantial OpEx reductions that will, in turn, dramatically improve valuations. For example, at a cap rate of 6.5 percent, reducing a building's annual energy costs by $100,000 will result in a $1.5 million increase in valuation. Happily, such an energy cost reduction is easily achievable for most large office buildings.

Naturally, every asset manager would like to achieve similar or even better results for his properties. But what may not be clear is which EEMs should be implemented, when and in what order. With various measures to choose from, and thousands of vendors vying for the business, choosing the best path to energy efficiency can quickly devolve into an exercise in confusion. Although a random approach will almost certainly result in cost reductions, it is not likely to yield the best outcome. How then, to plan the best way forward?

Fortunately, making the best decision about EEM selection and implementation can be as easy as one, two, three. By following three simple steps, *it can also be risk free.*

STEP ONE: MEASURE FOR SUCCESS

In order to get to where you want to go you have to know where you are. In the quest for energy efficiency that means obtaining detailed metrics about current energy consumption. Legendary management consultant and business visionary Peter F. Drucker is often quoted as saying, "If you don't measure it, you can't improve it" — or words to that effect. Some of today's managers might beg to differ with that purported Druckerism, but when it comes to energy efficiency it is spot on. Thus, measuring pre-retrofit energy usage — benchmarking — is the indispensable first step for any asset manager who is truly serious about minimizing energy usage and OpEx. As we shall later see, benchmarking is crucial to eliminating performance risk for the EEMs selected as a result of analyzing the collected data.

Benchmarking involves much, much more than simply collecting the information that appears on the energy bills, and the guiding principle is that there is no such thing as too much data. Truly meaningful metering provides asset managers with the data about energy usage that is necessary not only to make informed decisions about which EEMs should be implemented, but also on how best to operate the building's various mechanical and electrical systems. While utility company meters provide important information about total usage for the billing period — some smart meters are even able to report usage in real time — the data they provide is simply insufficient for the purpose of creating a truly comprehensive energy efficiency strategy. Instead, each one of the target asset's load and consumption points must be measured using sophisticated metering systems, and the resulting data leveraged to provide insightful analytics. It's the only way to take the guesswork out of identifying the EEMs that should be implemented, and in what order, and the only way to monitor and accurately evaluate post-installation results.

As with every task, the right tool is key to metering success. If the objective is to maximize both energy efficiency and asset value, the right tool is an advanced, vertically integrated energy management platform, such as those available from Egotia and Enertiv. Each of these state-of-the-art systems combines a network of meters and submeters with powerful analytical software and a user-friendly dashboard, in order to provide complete transparency about energy usage at every level — from the building all the way down to individual pieces of equipment. Limited only by the number of meters and submeters connected to the system, these systems provide real-time building- and equipment-level data that can be employed to identify opportunities to reduce energy use, decrease operating expenses, improve overall building performance and extend equipment life cycles.

Tony Smith, a principal at Egotia, said that metering allows owners and asset managers to build a fact-driven EEM decision tree that can not only identify which measures should be employed, but also which ones will deliver an acceptable return on investment (ROI). "Metering does more than just show you where you can save energy," he said. "It gives you the facts you need in order to determine whether it is more cost effective to replace a piece of equipment that has substantial life cycle remaining; update it with energy-saving controls or other modifications; or just leave it alone and replace it when it finally wears out." (T. Smith, personal communication, October 9, 2016.)

No Brainer: Three Easy Steps To Risk-Free OpEx Reductions and Municipal Asset Valuation Increases

When initiating a metering program, it is important to bear in mind that an energy management platform is an expense that, in and of itself, does not reduce energy consumption and costs. However, the system is necessary in order to enable asset managers to benchmark building energy usage at a granular level; identify operational efficiency and EEM retrofit opportunities; and accurately quantify the ROI of energy efficiency projects. Knowledge is power — or in the case of electric power, less of it.

Happily, a real-time energy management platform also provides other valuable and on-going benefits, including the following benefits identified in a report prepared for the U.S. Department of Energy:[1]

- Verification of utility bills
- Comparison of utility rates
- Proper allocation of costs
- Demand response or load shedding when purchasing electricity under time-based rates
- Usage reporting and tracking in support of establishing and monitoring utility budgets and costs, and in developing annual energy reports
- Prolonging equipment life (and reducing capital investment requirements) and improving its reliability by verifying the efficient operation of equipment
- Assessing the impact of utility price fluctuations prior to or as they happen, allowing sites/agencies to address budget shortfalls on a proactive basis
- Supporting efforts to attain ENERGY STAR and/or green building certifications

Of the above listed benefits, perhaps none is more important than the last one: ENERGY STAR certification. Earning an ENERGY STAR label has been shown to increase building value, generate greater income compared to similar buildings without ENERGY STAR certification, and increase occupancy rates. And for asset managers who want to lease space to federal tenants, Executive Order 13514 mandates that Federal Agencies may only lease space in buildings with a current ENERGY STAR label.[2] Installing an advanced energy management platform makes maintaining a current ENERGY STAR label a much easier process.

STEP TWO: PICK THE LOW-HANGING FRUIT

Once the energy management platform has been installed and commissioned, actionable data is quickly available. Usually, it only takes a few days to gather enough data to make informed early decisions, with the objective to identify the low-hanging fruit. These are the energy efficiency improvements that will deliver the most bang for the buck. And the biggest bang for the buck almost always comes upgrading equipment hanging right above every asset manager's head: the lights.

Smith said that installing high-lumen LED lighting, "is a no brainer. It's almost always the very first energy efficiency measure you should implement. It can decrease OpEx for a large building by hundreds of thousands of dollars per year and add millions of dollars to its valuation, depending on the cap rate." (Ibid) He points to information provided by the Tennessee Valley Authority that shows that lighting accounts for 40 percent of electrical energy use in large office buildings.[3] He said that retrofitting the ubiquitous 4-foot T8 and T8 fluorescent lamps that are typically found in these properties with super-efficient, DLC-approved LED linear retrofit kits, can reduce lighting energy consumption 66 percent or more. Such savings can be found out on the street, too, Smith said. "Retrofitting LEDs in place of the high intensity discharge (HID) lamp types commonly used for outdoor lighting, like streetlights and area lights, will cut usage by a minimum of 50 percent." Smith explained that, depending on daily usage, ROIs of 30 percent or more are the rule rather than the exception and simple payback periods (SPP) are often less than two years. (Ibid)

While a decision to install high efficiency lighting is usually both simple and fiscally sound, decisions about other EEMs can be much more difficult, and in those cases metering becomes much more important. The most obvious areas for improvement are the building's cooling, heating and ventilation systems. Returning to the TVA data, these uses account for about 28 percent of the annual energy use for a large office building. But the cost for parts, materials and labor to retrofit these systems can easily be up to ten times or more than a lighting retrofit, making financial justifications for their implementation difficult at best.

For example, Smith said one of Egotia's clients had received a proposal to install EEMs at one of its properties, a 500,000-square foot, 13-building office center in Southeast Tennessee. The EEMs proposed by the vendor included an LED retrofit of all outdoor and indoor lights, and replacement of all existing HVAC equipment with brand new HVAC equipment and digital controls. First, costs of the lighting retrofits were $430,231 and the projected annual decrease in OpEx was $227,506. Financial analysis showed that the proposed lighting retrofit would produce a 52.9 percent ROI, a SPP of just 1.9 years, a net present value (NPV) of $1,021,056 and an increased valuation of $2.84 million (at an 8 percent cap rate). A total no brainer.

On the other hand, financial analysis of the proposed HVAC retrofits painted a far more dismal picture. First, costs of $4.10 million were almost 20 times higher than the projected annual OpEx decrease of $211,538. This resulted in an unacceptably low ROI of just 5.2 percent, a SPP of 19.4 years, and, worst of all, a negative NPV of -$2.75 million. Clearly, these proposed HVAC retrofits and EEMs could not be justified by financial considerations alone and, needless to say, they were not installed as proposed.

However, there are other justifications for installing EEMs and sometimes they outweigh, or at least offset to a substantial degree, the lack of strong financial justifications. In the example above, the opportunity to increase tenant satisfaction, decrease maintenance cost and — most important — the desire to achieve ENERGY STAR certification in order to lease and continue to lease to Federal Agencies, motivated the owner to move ahead with energy efficiency upgrades to existing HVAC equipment. Egotia was able to show the owner that using metering to create a data-driven decision tree would reduce first costs by nearly $1 million and still maintain more than 80 percent of the savings projected by the original proposal. "Without the insightful data and deep analytics provided by the energy management platform," Smith said, "the owner might have wound up spending a million bucks he didn't need to spend." (Ibid)

STEP THREE: ELIMINATE RISK

Multi-million dollar energy efficiency projects are typically financed. However, over the last several years, the credit crunch has made it difficult to secure financing, even for municipalities. Financing for energy efficiency projects has enjoyed marginally more success in the credit markets but has nevertheless been difficult to obtain, despite an increase in demand. To a large degree, banks are reluctant to lend on such projects due to the fact that the loans need to be secured against future OpEx reductions resulting from installation of the energy efficiency measures being financed. If something goes wrong — if the performance of the EEMs has been overestimated or the technologies chosen do not work as expected — then the anticipated savings will almost certainly not be achieved. If that happens, the borrower could default.

There is a way to successfully address this disinclinaton, said **Tillman Holloway**, president of New Term Energy Assurance, LLC, located in Franklin, Tennessee. "Energy efficiency insurance from NTE eliminates technical uncertainties for both the borrower and the lender," said Holloway. "In layman's terms, that means the borrower is guaranteed to receive the energy efficiency — and the savings — he paid for.

"It also means that the lender is able to concentrate solely on credit risk, free from any concerns about whether the EEMs he is being asked to fund will produce the savings and efficiencies that his customer, the borrower, is expecting."

NTE is one of only two firms in the United States that can underwrite an energy efficiency insurance policy, Holloway said [Ed. Note: The other is Hyland]. Backed by an A.M. Best Company with an A++ Superior rating and available for periods of up to five years, the policies cover any annual shortfall in energy savings compared to the amount of savings insured. "If your policy insures savings of $100,000 a year and the EEMs that were installed deliver only $80,000," explains Holloway, "then the policy provides a benefit of $20,000 to make up for the shortfall." (T. Holloway, personal communication, October 17, 2016.)

Energy efficiency insurance delivers meaningful benefits for all parties involved in an energy efficiency project, from the asset owner, to the company delivering and installing the equipment, to the bank or lender funding the project. For asset owners, it eases the uncertainties surrounding an energy savings project and gives them the confidence to move forward with projects that will reduce

energy consumption and OpEx. It protects providers of energy efficiency products and services from the risk of underperformance and instills greater customer confidence in their ability to deliver energy efficiency projects that meet or exceed all expectations for financial performance. For banks and lenders, it removes technical uncertainties from the lending decision, improves the creditworthiness of energy efficiency projects and can protect loan repayments. In short, it removes all performance risk from an energy efficiency project.

The United States presently enjoys relative low energy prices. Nevertheless, energy costs account for approximately 30 percent of a building's total operating costs, thus improving energy efficiency pays big dividends now and operates as a hedge against future increases in energy prices. Municipally owned properties, in particular, can benefit from energy efficiency improvements, because politicians — who must justify their fiscal performance to voters every election cycle — as well as municipal asset managers are both looking for quick solutions to increased asset value. By taking the steps outlined in this article, municipalities can quickly, easily, and *without* risk realize substantial reductions in OpEx, and dramatically increase the value of their properties. ■

ENDNOTES

1. "Metering Best Practices: A Guide to Achieving Utility Resource Efficiency, Release 3.0." energy.gov, March 2015, accessed October 30, 2016, h*ttp://energy.gov/sites/prod/files/2015/04/f21/mbpg2015.pdf.*
2. "Ten Reasons to Pursue ENERGY STAR Certification," July 12, 2008, accessed October 15, 2016, *https://www.energystar.gov/buildings/about-us/how-can-we-help-you/build-energy-program/business-case/10-reasons-pursue-energy-star.*
3. "Managing Energy Costs in Large Office Buildings," April 5, 2015, accessed October 30, 2016, *https://tva.bizenergyadvisor.com/large-offices.*