

Energy Efficiency Makes Cents

By Jill Hahn

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Here in Newton, we take pride in being a "green" city, mainly due to our concerns about global warming and the long-term health of our citizens. But improving the energy efficiency of buildings is also a great way to save money. Corporations are beginning to realize this. Bank of America's new headquarters in New York City, which will be the most environmentally friendly skyscraper ever built when it opens in 2008, has been designed with resource-saving measures from basement to the 54th floor roof. Even so, the building's eco-friendly features add up to less than one percent of the project's total price, and since water and energy usage is decreased by 40%, tenants will reap savings for years to come. (from Wright L. *The world's coolest skyscraper*. *OnEarth* 2005; Winter: 12-13.)

State governments, including our own, have begun to come to the same realization. In February 2006, Massachusetts passed "An Act Relative to Contracts for Energy Management," making it easier for municipalities to contract for work that will improve their buildings while saving them money at the same time. The new procurement rules encourage municipalities to invest in energy conservation measures by entering into performance contracts with an Energy Services Company (ESCO). Using conventional procurement, a city has to hire service providers (auditors, engineers, architects, general and subcontractors) and separately procure equipment. An ESCO is a one-stop shopping alternative. It first performs an energy audit of the public buildings. It then recommends energy conservation measures - such as automatic light switches, new boilers, new windows or roofs, improved plumbing - and estimates how much energy the city would save if such measures were put in place. It finally acts as the general contractor for the city, purchasing and installing the energy conserving measures selected by the city. And here's the hook: the ESCO guarantees a certain amount of energy use reduction. If it fails to meet its guarantee, the ESCO pays the city for the extra energy usage.

Financing is usually done through a tax-exempt lease provided by a bank, rather than through the bonding municipalities usually use to pay for such work. Passing a bond is a political act, with the long approval process that implies, and it adds to a city's debt burden.

Tax-exempt leases do not. Monthly lease payments are made by the city to the bank, with energy cost savings providing the cash needed to pay the leases. Because of the way the performance contract is structured, the only way savings would not equal or exceed the monthly payments would be if utility costs skyrocketed or if energy usage increased unpredictably and dramatically.

In 2005, Belmont became the first town in Massachusetts to contract with an ESCO for a project that involved both school and government buildings. The contract cost the city \$1.7 million, and guaranteed the town at least \$200,000 in cost savings over each of the next 10 years. ESCOs are able to make such guarantees because they couple measures that bring quick savings, such as energy-efficient lighting, with projects that slowly pay for themselves, such as replacing boilers. The guaranteed savings enabled Belmont to fund improvements to six schools and five government buildings out of its operating budget rather than as capital expenses. "I felt that I probably couldn't have

sold this solely on the basis that it was environmentally friendly," Selectman Paul Solomon said. "But I did think that I could sell it on the basis that it would save money."

And that's the beauty of this approach. Energy costs in Newton's aging public buildings are currently rising at a rate of 40% per year. One only needs to compare the energy cost per square foot of newly renovated Newton South High School (\$1.61) to that of, say, Zervas Elementary School (\$4.34) to get a hint of the sort of savings the city could realize if it entered into its own performance contract with an ESCO. And a wonderful side effect of all this fiscal responsibility would be the savings we realized in greenhouse gas emissions and pollution, savings that will benefit all of us long after the tax-exempt lease is paid for and forgotten.

Jill Hahn, jkkhahn@comcast.net, a Newton Highlands resident, is a biologist, a writer, and a mom. All three roles contribute to her interest in environmental issues. She is co-chairing a local effort to educate the city of Newton on the benefits of performance contracting as a means of improving our public buildings.