



*September 19, 2013*

# Financing Sustainability

**As budgets continue to tighten, new financing tools can help healthcare facilities fund sustainability projects.**

By John Bruschi

Building owners, facility managers and design teams planning new buildings or extensive building performance improvements often struggle to fund green building systems, despite favorable returns on investment. We all know that these investments save energy and minimize environmental impacts, but budgets are tight and design teams and building owners often are challenged to meet upfront capital costs. As a result, financially viable green technologies and systems can get value-engineered out of a project long before a shovel hits the ground.

As the green building market matures, however, a suite of sophisticated – and highly effective – financing tools have emerged that can significantly reduce capital costs of energy-efficient, renewable energy and other sustainability projects. Some of these financing tools can be structured to help pay for future projects. Across the country, more and more organizations and companies have utilized these tools, although they are not as well-known as they could be.

## Grab the Low Hanging Fruit: Incentives and Tax Credits

Where does an organization begin when thinking about alternative financing mechanisms? Incentives and tax credits are an obvious place to start, although efforts to uncover them and fill out applications should begin at the earliest phase of a project in order to maximize the funding potential of these tools. Many states and electric and gas utilities, as well as the federal government, offer incentives and tax credits that reduce the first cost of energy efficiency building investments and generally are available for both new and existing buildings. While incentives are not always a cure-all for tight budgets (a project still needs adequate financing) incentives and credits are an important strategy to research for significantly improving your project's return on investment.

Energy efficiency and renewable energy incentives often are available from or through local or regional utilities, as utilities often are required to invest in energy efficiency as a means of deferring the

construction of new power plants. Utility incentives often are paid a lump sum cash payment upon completion of a project. Other utility programs provide energy audits and expert consultation on how best to reduce the energy use from various parts of a building or facility.

Several utility incentive programs require the applicant to involve the utility during early stages of the design process so that the utility can demonstrate some measure of influence on a project's energy efficiency. A common condition for retrofit energy efficiency incentives requires the customer to wait to begin work until after the utility (or a third party) has reviewed the proposed project, base-lined the existing building and granted an approval letter for the proposed incentives. This process can take anywhere from a few weeks to several months. Thus, submitting an incentive application as early as possible and understanding your local utility's incentive program requirements helps to avoid missing out on utility incentive opportunities.

By contrast, energy efficiency and renewable energy tax credits and deductions are available at the state or federal level and often are taken on a corporation's tax return. A state's tax credit programs often are directed to attain certain goals relating to the reduction of energy use. For example, California state tax credits are available for organizations that produce renewable energy from a variety of sources, including solar, biomass, wind, geothermal and waste-to-energy systems.

Maintaining or establishing a close connection to your local utility during planning stages can pay off. Your utility account representative can be an important ally in finding the best financial aid options your utility provides. Utility companies may be able to offer facilities other ways to assist in funding projects. For example, they might be willing to build a power plant for a large facility that would be paid for in the form of energy purchased from the plant. In any case, reaching out to your local utility's incentive specialist or account representative is a smart move.

Peak load shedding strategies provide ways of significantly reducing utility bills. For rate structures that have high peak demand charges, there are a variety of strategies to reduce these charges while saving on energy usage. These strategies range from simple controls upgrades to set back room temperatures and dimming lighting to investment-grade projects such as thermal energy storage. In climates with cool, dry nighttime conditions, cooling water can be produced efficiently and stored for use during the higher daytime rate periods. Understanding the rate structures, including changes in rates, can provide ways to justify potential savings programs in new ways. Again, the bottom line is that an organization interested in pursuing energy or water reduction strategies should approach its utility company early in the project stages about alternate ways to finance projects.

### Shared Savings Agreements and Power Purchase Agreements

Many organizations have implemented energy projects (those that reduce energy use or generate renewable energy) through unique arrangements called shared savings contracts and power purchase agreements. Essentially, these require a third party (usually called an energy service company, or ESCO) that finances, designs and installs energy projects, with the costs of the project paid from the energy savings that results.

Depending on the nature of the agreement, a shared savings agreement can be structured as either an “on balance” or “off balance” transaction. In power purchase agreements (PPAs), a third party owns, finances, designs and operates a power-producing asset, usually a renewable energy source such as solar panels, and the building owner purchases the energy at an agreed-upon price.

Both of these arrangements reduce or eliminate any capital investment by a building owner and have favorable tax advantages, in addition to providing locked-in electricity rates that can be a hedge against increasing energy costs.

As an example, a large healthcare organization contracted Mazzetti to partner it with a financial institution, which provided \$57 million in funding towards the installation of solar panels across various sites as part of a successful PPA. This not-for-profit organization is ineligible for government renewable energy tax credits. So, this PPA enabled the installation of solar panels much more widely across the organization’s facilities than otherwise would have been financially viable.

### On-Bill Financing

On-bill financing generally refers to a financial strategy where a utility funds an energy efficiency improvement and the cost is repaid by the building owner on the monthly utility bill. In many cases,

this allows customers to pay back part or all of the cost of their energy efficiency improvements with the money saved on their monthly utility bills.

### Property-Assessed Clean Energy (PACE)

This financing tool is relatively new and has been used primarily on the West Coast for residential properties. However, fourteen states have passed enabling legislation for PACE financing, and there is discussion at the federal level about its use, which indicates the idea is likely to spread. Essentially, PACE means that building owners can have their energy efficiency and renewable energy projects financed completely by a government agency, in exchange for agreeing to repay the investment over time through property tax assessments. For more information, visit PACENow.

### Revolving Loan Fund

In this arrangement, a company or organization acts as its own energy services company, investing in a sustainability project that is anticipated to save money. Once the investment is paying off, a portion of the savings is set aside to fund future projects. In this way, a single investment of capital generates both immediate energy savings and a steady stream of investment capital for future projects.

Alternative financing mechanisms allow your project to get ahead of the cost and regulatory curves that are likely to be faced in the near or long term. As demonstrated, your primary consideration for finding alternative project financing is to start early. Your engineering design firm should have experience in alternative project financing to be able to uncover the right incentives and financing to maximize sustainable features in the project design, conduct a thorough financial analysis and connect your project effectively with the financing entity. As alternative financing sources are discovered and investigated, this can spur new design approaches for the original project. Thus, the design and financing of a sustainable project can introduce a productive feedback cycle that actually enhances a design. This process more accurately describes the originally intended definition of “value engineering” in contrast to the notorious process with which it has become associated today.

### About the Author

John Bruschi, PE is an associate/senior sustainability engineer at Mazzetti. He develops custom energy and water analysis tools to help plan and validate building performance improvement retrofit projects as well as to assist design teams to make informed decisions for new construction projects. He also performs building energy benchmarking and audits and is an experienced communicator of energy efficient building design and operation practices.