

Energy Projects Increase a Building's Value by 5X

By Eric A. Woodroof, Ph.D., CEM, CRM, PCF
Buildings Magazine January 2017

As a new US government administration comes into control, many people have asked me if I am optimistic about energy efficiency projects... the answer is YES. No matter how you analyze it, energy efficiency is a great investment... dare I say "Huge". Energy efficiency projects have high returns on investment and extremely low risk. The only thing they don't have is a "compelling event" forcing them to get done. In contrast, a repairing a roof leak has a sense of urgency because of potential damage from inaction.

Most energy projects are "discretionary" or "optional". However, this month's article will focus on one under-sold aspect of energy savings upgrades... they actually improve a building's sale value, and this benefit is attractive to many building owners, even when they aren't trying to sell their building. *For example, increased asset values make any business look better to banks for borrowing options, etc..*

Would you believe that if I implement a project that saves \$200,000 per year in energy, my building's value will improve by \$1,000,000? I say YES, and I will show you the mathematical and logical approach to do your own calculation. I can tell you that many real estate management companies that I have worked with are using this particular selling point as their main selling point, to get massive projects approved and implemented.

The Calculation is Easy:

There are only two steps to calculate the improved building value:

1. Understand the "hurdle rate" or Simple Payback required by the building owner,
2. Multiply the Simple Payback by the Annual Savings from the project.

Step by Step Details:

STEP 1: Let's start by discussing what is a "hurdle rate" or an "actionable ROI" would be for your company. In other words, if a project is presented, what minimum return on investment must it have to get approved? For some of my industrial customers (who have a short-term view), they want a 50% ROI, which would translate into approximately a 2 year payback. Some of my government clients (who have a longer term view) are



comfortable with a 10 year payback (~10% ROI). Many commercial properties require a 3-5 year payback, which would represent 33% ROI to 20% ROI, respectively. So for “quick” analysis- just remember that the Rate of Return is approximately the inverse of the Simple Payback. For an example, assume your potential projects must meet a 5 year Simple Payback (or less). That is approximately a 20% Return (which by the way is still probably better than many other available investments).

Side Notes: If you feel that your company’s “hurdle rate” is unfair for energy projects (considering the lower risk), there are many ways to challenge your company’s required minimum and I have discussed these approaches in previous [articles, videos and webinars](#). For example- you could challenge a 2 year payback (50% ROI) requirement by comparing it to the company’s own profit margin... which likely isn’t as high. Then you would say that implementing your project will improve the profit margin of the company (because your project’s return is higher than the company’s operational return).

STEP 2: To show the calculations that determine “increased building value”, lets use an example. Pretend you have 2 identical buildings “A” and “B” side by side and each building spends about \$1,000,000 on energy and maintenance.



Example: Two Identical Buildings



\$1 M/year

Operating Costs



\$1 M/year



Suppose you do energy improvements to one of them, which reduces the operating cost of Building B by \$200,000 per year. Therefore, Building B only costs \$800,000 per year to



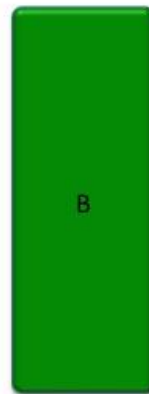
operate.

We Retrofit "B" Reduce Op. Costs by \$200k/year



\$1 M/year

Operating Costs



\$800k/year



Recall from Step 1, the company requires a 20% ROI for potential projects to be approved. This is similar to a 5 year simple payback. This means that the building owner will approve projects when he/she gets their money back within 5 years. Using a similar philosophy, a new buyer would see the building purchase as a "project" and if their minimum payback period was 5 years, then they would be willing to pay:

= \$200,000/year * 5 years
=\$1,000,000 in increased building sale value (because they would recover that additional investment in 5 years)

So let me ask you... When presenting your project, which sales pitch sounds more appealing:

- Do this project and save \$200,000/year, or
- Do this project and increase your building's value by \$1,000,000.

Well... you can present both benefits because both are true and not mutually exclusive. I can tell you from personal experience that some building owners consider the increased building value to "offset" the cost of a project. For example, if a project costs \$40,000 and adds to the



building value by \$40,000 then some buyers mentally consider the project as “neutral”, even though they wouldn’t recoup the additional sale value unless they sold the building.

Side Note: If your company or client requires a 3 year payback, you can use the formula above to compute the increased building value. However, what really matters is the financial criteria of a potential buyer of the real estate. When you consider that a real estate buyer usually has a longer term view (even 7 to 10 years), many feel that a multiplier of 5 years is a conservative estimate.

As 2017 is now underway, I hope you leverage this additional selling point to get your projects approved. When you do, please let me hear about your success. You can email me at Eric@EricWoodroof.com. Also- if you need more “help” to understand the concepts of this article, as well as other selling points for energy projects, watch these free videos: <http://www.profitablegreensolutions.com/sep-course-samples>

Good luck in 2017... I hope to hear about your success and other ideas!

