Overcoming the Barriers to Approval for Energy and Green Projects

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ABSTRACT

Although the popularity of energy management and "green" projects is improving, *many* good projects are postponed or cancelled due to common barriers. This article discusses these barriers/problems, as well as effective, proven strategies to overcome them. These timeless, as well as cutting-edge, strategies involve marketing, educational resources, and financing approaches to make your projects *irresistible*. The goal of this article is to help organizations get more "good" energy management/green projects approved and implemented and help slow global warming.

INTRODUCTION

As far as the planet is concerned, engineers are *wasting their time* if the projects they so carefully develop are not implemented and deliver no value. This article refers to "good" projects as those with a 3-year payback or less. Why don't "good" projects get implemented? There are a variety of reasons and a few common barriers:

- Marketing (under-marketing a project's value).
- Education and collaboration (not expanding the value of a project).
- Money (not having a positive cash flow solution).

If a project can't beat these criteria, it probably won't be implemented anyway… so focus on the ones that will!

Problem #1: Marketing

People often ask me why marketing is first on the list. Answer: because *nothing happens without a sale*. For example, your first job (or your first date) began with you "selling yourself" on a resume or during an interview. In fact, the development of every product/service begins with someone selling a solution to some type of problem. Now, I am not saying that selling/convincing is "bad" or unethical. Convincing someone when it improves their lives is good and can be done with passion. When something (like an energy management project) is great, we should sell the benefits *with all the passion in the world. You would do the same when talking to your kids about "getting a good education," or "learning good manners."* Passion can also emerge from fear, such as from the chaos and violence that occur during an electrical blackout. ***Most of the time, humans are more passionate and action-oriented when they are at risk of losing something versus gaining something.***

So we must communicate in a way the audience (the buyer or project approver) can understand the problem/pain they are in now. After they agree that they are "in pain," they will want to hear about potential solutions.

Attention:

It starts with getting the buyer's attention on the problem, the pain it is causing, and a sense of urgency to solve the problem. Only then will a solution seem logical. In addition, after they understand the problem/pain, they will be able to become passionate about the solution.

If you fail to get the attention of the approver, you are actually doing them a disservice; they won't know they are in trouble and are wasting money. It is like allowing someone to bleed to death when they don't even know they are cut. So don't be shy. You have a duty to perform.

Warning! Some approvers' personalities won't like to hear about problems/pain. Some approvers may put their heads in the sand (like ostriches) when problems are discussed. Don't blame them—it is their personality (which has strengths in other areas). Discover ways to communicate that they will respond to. FYI, it can take seven impressions (explanations/presentations) before some people will agree on the problem and take action on a solution. Don't give up and don't be surprised or depressed when they don't take action after the first impression.

Below are examples of effective headlines[1] that can help get the attention of an approver. Feel free to use these in executive summaries:

- "How will the shareholders feel about us throwing money away every month?"
- "What will you do with the monthly savings?"
- "We are paying for energy efficiency projects, *whether or not* we do the projects!"
- "If you enjoy throwing money away every month, don't read this…"
- "4.6 billion years of reliability… solar energy."
- This project could improve our stock price by over 20 percent![2]
- "Good planets are hard to find."

There are many other great proven examples available.[3] However, you can experiment by looking around for "marketing copy" in magazine advertisements, commercials, etc. *There is a reason they call it "copy"—some of the principles are thousands of years old, and they still work!* Just change the words to relate to your problem/solution. Try a few versions and test, test, test to see which ones are most effective. Go for it!

Benefits:

After you have their attention, be sure that you include compelling benefits that "take away the pain" the audience is feeling. As engineers, we should tap into the passionate reasons behind a good "green" project. A project may save a client energy, money, emissions, waste, etc. However, translated into larger benefits, the project:

- improves productivity,
- is a relatively low-risk, high profit investment,[4]
- differentiates the client from the competition,

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[1]*Ultimate Marketing for Engineers Course*, www.ProfitableGreenSolutions.com.

[2]Wingender, J. and Woodroof, E., (1997) "When Firms Publicize Energy Management Projects: Their Stock Prices Go Up"- How much- 21.33% on Average! *Strategic Planning for Energy and the Environment*, Summer Issue 1997.

[3]The "Vault Files," www.ProfitableGreenSolutions.com.

[4]For example: an energy-efficient project that saves $100,000 in operating costs is equivalent to generating $1,000,000 in new sales (assuming the company has a 10 percent profit margin). It can be more difficult to add $1,000,000 in sales, and would require more infrastructure, etc.

- helps them grow sales/revenue,
- improves their "green" image,
- introduces them to new markets,
- slows global warming,
- reduces acid rain,
- reduces mercury pollution, which allows us to eat healthy,
- improves our national energy independence,
- reduces security/disaster risks, etc.

Dollar values for these benefits can often be calculated and should be included in your proposal. To calculate the "green benefit equivalencies," such as "number of trees planted" (from reduced power plant emissions), see the "Money" section of this article.

The above list can be expanded, refined and optimized for any project. To build a list like the one above, one technique is: "WSGAT": "What is So Good About That?" Ask that question for every project feature, and you will develop a long list of passionate benefits. By the way, this approach has been used in TV sales and has helped sell billions of dollars of material.[5] *If they can sell this much junk on TV, we should have no problem selling green projects that are factually saving the planet!* Add the emotional benefits of going "green," and you will have a project that touches the hearts of leaders in your organization.

Call to Action:

The "call to action" becomes easy and logical when all of the benefits have been quantified and are aligned with the client's strategic objectives. Tell the approver what you want them to do and why. Be sure to include the "cost of delay" in your executive summary. Visual aids can be helpful. *For example, during one presentation, buckets of dollars were shoveled out a window to demonstrate the losses that were occurring every minute. The executives were literally in pain watching those dollars fly away. They couldn't stand it, and they took action.*

But wait… there is more! "Configuring" your presentation can make the difference between immediate approval and further delay. There are many ways to "configure" or "package" your product/project so that it is *irresistible*. One way to do this is to make a project's performance guaranteed or "risk-free." Another way is to separate (or add)

[5]Marketing to Millions Manual, Bob Circosta Communications, LLC.

one part of the project and introduce it as a "free bonus." Everyone likes a "FREE" bonus— it helps them understand that they are getting a good deal. *For example, on a recent "green," facility-related project, carbon offsets for a company's fleet were included as a free bonus. The bonus delighted the client and differentiated the project (and it was extra value), yet the additional costs were less than $1,000.*

Engineers can be two, three, or ten times more productive by developing sales and marketing skills. However, there is another reason for developing these skills: Your Career! The skills you learn will be valuable to your organization (as well as other organizations). These skills are transferable to other industries too. So keep this in mind when you are investing in yourself… there will almost always be a fantastic payoff.

Finally, there are two prerequisites that a buyer must see in you before any sale is made: trust and value. As far as trust goes, it must be earned and once it is earned, it must be cherished. To accelerate the buyer's trust in you, be an advocate for the client and put their needs ahead of your own. Assume the role of their most trusted advisor, and then deliver. Value comes from applying knowledge, tools, resources, partners, etc., in the best way for the client, which is why education and collaboration are such important components of success. This is discussed further in the next section. Be sure to read the sub-sections, reciprocal business agreements, joint ventures, and incentives/rebates… great ideas!

Problem #2: Education & Collaboration

Knowing how to deliver value is an area that requires continuous updating. Today, with the proliferation of energy/green technologies, it is impossible for one person to know all the ways to add value to a project. Green specialties are expanding every day. Examples are energy efficiency, water efficiency, green janitorial, LEED[6], recycling, and transportation.

Learn all you can, then collaborate with other professionals (who are also actively learning) and the value available to your clients increases exponentially. It is important to be open to new ideas and fresh perspectives in this process. *"Mind-sharing" or brain-storming techniques can facilitate the process and maximize the number of useful ideas.*[7]

Fortunately, education is a low-cost investment. Collaboration and

[6]LEED = Leadership in Energy & Environmental Design

[7]Results from the Profitable Green Strategies Course, www.ProfitableGreenSolutions.com

joint-ventures/partnering can be done inexpensively, and the returns can be huge!

Free Sources of Green/Energy Efficiency Education:
https://www.aeecenter.org/seminars/
http://www.eere.energy.gov/
http://www.ashrae.org/education/
www.usgbc.org
www.ase.org
www.energystar.org
http://greeninginterior.doi.gov

In addition, there are many innovative ways to bring more value to a project. Some include:

- Reciprocal business agreements
- Joint ventures
- Free tax and utility incentives/rebates

Reciprocal Business Agreements

For example: After presenting a $1,000,000 service contract for a global car rental company, the deal was sweetened with an agreement on our part to choose that car company while traveling, which generated over $1,000,000 in extra car rentals for them. To the client, they were getting an extra $1,000,000 in revenue by working with us versus the competitors. *With what suppliers, partners, colleagues, professionals, etc. could you develop reciprocal business agreements? How could you help two clients (or a supplier) benefit from each other? How could you help them become more "green?"*

Another example: We helped client #1 supply green solutions to client #2. Both clients were extremely happy to generate more sales/save money. When it was time to approve our next round of projects, there was little resistance, because we had helped them earn/save far more than the costs of the proposed projects. This illustrates the value of being the "trusted advisor."

Joint Ventures

For example: A "green" travel agency gives 50 percent of its commissions back to its clients in exchange for their travel business.[8]

[8]www.GreenTravelPartners.com

The client can use this extra, free money to fund "green" initiatives or scholarships, or other social programs. The travel agency guarantees the lowest prices and easily doubles its business because it delivers more value to its clients via joint ventures.

Free Tax and Utility Incentives/Rebates

For example: In California, 50 percent of a solar project was funded by federal and state rebates. Utility incentives lowered the installation costs even further. There are numerous tax-free and utility incentives available, and some are discussed in the next section.

In addition to the options above, many utilities and third parties are offering "green power purchase agreements," which are essentially "wind and solar performance contracts." For example, if you want to put solar panels on your roof, a third party (often a utility or solar contractor) finances the project installation, and then sells you the renewable energy produced from your roof (at a known price) for 15-25 years. So you get "green" power at no upfront cost, and a known future energy cost (lowering your risk to energy price volatility). The financier wins because the project will pay back their investment within 10 years and the rest is profit.

There are unlimited creative win-win contracts available. However, before finalizing or even developing your solution, be sure you understand the client's strategic and financial goals and align the value to support the client's larger objectives.

Problem #3: Money

If you do a good job tapping into the passion behind the project and satisfying the emotional, financial and other approval criteria, you should have enough benefits to get the project approved, especially if the project is above the client's MARR.[9] However, if your organization is capitally constrained, you can finance a project and have positive cash flow. *CFOs like positive cash flow projects!* On the contrary, cash flow constraints (not having the upfront capital to install a project) represent over 35 percent of the reasons why projects are not implemented[10].

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[9]MARR= Minimum Attractive Rate of Return. For more info on this topic see: Woodroof, E., Thumann, A.(2005) *Handbook for Financing Energy Projects*, Fairmont Press, Atlanta.

[10]U.S. Department of Energy, (1996) "Analysis of Energy-Efficiency Investment Decisions by Small and Medium-Sized Manufacturers," U.S. DOE, Office of Policy and Office of Energy Efficiency and Renewable Energy, pp. 37-38.

Financing does not have to be complicated. In fact, financing energy efficiency/green projects can be very similar to your mortgage or car payment—fixed payments for a length of time. However, with a "good" project, you can finance the project such that the annual savings are greater than the finance payments, which means the project becomes "cash flow positive" and does not impact the capital budget! This can allow the approver to move forward without sacrificing any other budget line item.

Table 1 shows the cash flow for a non-financed project.[11] Assume the project costs $100,000 and saves $28,000 per year for 15 years. This project could get approved *IF the client has $100,000 in cash to fund it.* The project has a net present value of $102,700 and an internal rate of return of 27 percent.

Table 1. Project Cash Flow (paid with Cash)

EOY	Savings	Cost	Cash Flow
0	-	(100,000)	$ (100,000)
1	28,000		$ 28,000
2	28,000		$ 28,000
3	28,000		$ 28,000
4	28,000		$ 28,000
5	28,000		$ 28,000
6	28,000		$ 28,000
7	28,000		$ 28,000
8	28,000		$ 28,000
9	28,000		$ 28,000
10	28,000		$ 28,000
11	28,000		$ 28,000
12	28,000		$ 28,000
13	28,000		$ 28,000
14	28,000		$ 28,000
15	28,000		$ 28,000
NPV i=10%			**$102,700**
IRR			**27%**

Now, let's look at financing the project with a simple loan. Let's say the client finances $100,000 for 15 years at 10 percent per year. That means that instead of investing $100,000 upfront (the bank provides these funds), the client pays $13,147 each year to the bank for 15 years.

[11]Advanced Project Financing Course, www.ProfitableGreenSolutions.com

At the end of 15 years, the bank loan is paid off (just like a mortgage or car payment—just a different time period). *To keep this simple, ignore interest tax deductions, as well as depreciation, which would likely improve the financials even further.*

Table 2. Financed Project Cash Flow

EOY	Savings	Finance Cost	Cash Flow
0	-	-	$ -
1	28,000	13,147	$ 14,853
2	28,000	13,147	$ 14,853
3	28,000	13,147	$ 14,853
4	28,000	13,147	$ 14,853
5	28,000	13,147	$ 14,853
6	28,000	13,147	$ 14,853
7	28,000	13,147	$ 14,853
8	28,000	13,147	$ 14,853
9	28,000	13,147	$ 14,853
10	28,000	13,147	$ 14,853
11	28,000	13,147	$ 14,853
12	28,000	13,147	$ 14,853
13	28,000	13,147	$ 14,853
14	28,000	13,147	$ 14,853
15	28,000	13,147	$ 14,853
NPV i=10%			**$112,970**
IRR			**n/a**

In this case, the project generates $14,853 each year for the client. Because there is no upfront investment required, the IRR value becomes infinity.

Adding the green benefits could further illustrate the project's benefits. Table 3 shows what some of these benefits could include. *Note that it can be easier for the audience to visualize equivalencies ("car miles not driven," or "trees planted") instead of pounds of CO_2.*

However, there are even more benefits, when you consider the following impacts the project could have on shareholders in the annual report, community morale and green image, productivity improvements, legal risk reduction, LEED points, white certificates, RECs[12], and *free* public press.[13]

[12]REC = Renewable Energy Credit

[13]Press release samples from the "Vault" at www.ProfitableGreenSolutions.com

Table 3. Green Benefits

	kWh Saved per Year	260,000	
	# of Years	15	
	kWh Saved during Project	3,900,000	
	Barrels of Oil Not Consumed	7,917	
	Car Miles Not Driven	6,924,450	
	Acid Rain Emission Reduction	29,250	lbs of Sox
	Smog Emission Reductions	14,040	lbs of Nox
	GreenHouse Gas Reduction	6,045,000	lbs of CO2
	Mature Trees Planted	13,260	

FREE Money

In addition, there are utility rebates, tax refunds, credits, and other sources of free money that will improve a project's financial return. Here are some useful websites that allow you to see utility and tax benefits in your state:

www.dsireusa.org/
www.energytaxincentives.org
http://www.efficientbuildings.org
http://www.lightingtaxdeduction.org/

But don't just rely on websites. Use professionals—they should know what techniques, technologies, and rebates are best for your geographic area.

SUMMARY

This article has described the three common barriers (marketing, education, and money), as well as a start on how to overcome them. To get a project approved:

- Articulate the problem/pain,
- Collaborate to add value in the solution,
- Quantify all the benefits,
- Minimize financial risk,
- Develop/configure an executive summary that "sings" to the hearts of the approver.

Hopefully, these techniques will help you get your next project approved. We are counting on you!

ABOUT THE AUTHOR

Eric A. Woodroof, Ph.D., CEM, is widely recognized for helping energy and environmental projects get approved and implemented. His focus is to help clients make more money and simultaneously help the environment. Dr. Woodroof has over 15 years of experience, 20 publications, and has identified profit-improvement strategies at over 200 facilities. He has also been a board member of the Certified Energy Manager Program since 1999. Dr. Woodroof has worked with the U.S. Public Health Service, Ford, GM, Hertz, Visteon, Southwestern Bell, Tulsa International Airport, and many others. He is friends with many of the top minds in energy, environment, finance, and marketing.

Dr. Woodroof is the founder of www.ProfitableGreenSolutions.com, www.GreenTravelPartners.com, and other solutions that help organizations become more profitable and green.