



## **The Team Approach to Sustainable Design**

Because our energy resources are limited and increasing in cost every day, our plans, specifications, and construction practices today are going to impact us tomorrow and influence generations to come. Sustainability, in terms of energy resources, environmental quality, and personal/business economic security, is the ultimate goal of the design team.

Having worked as part of a design team on hundreds of construction projects over the last 30 years, I've witnessed first hand the power of the "team approach" in optimizing a building's design.

I had a similar experience over a several year period at the California Energy Commission, working in collaborative groups of stakeholders to help commercialize alternative energy technologies such as solar water heating, advanced evaporative cooling, passive solar and advanced wall systems. By stakeholders I mean anyone with a "stake" in the success of the technology, such as the representative industry group(s), manufacturers, installers, engineers, architects, end users, etc. It was an amazing experience, learning from the stakeholders' perspectives what the barriers to commercialization were and the actions necessary to overcome them. In this case the intent of the "team approach" was to find the best course of actions to increase the market penetration of these key technologies.

You can probably imagine how ineffective the state's commercialization program would have been had the state just asked an "ivory tower bureaucrat" to come up with a plan. You'd have suppliers, installers, etc all saying "they obviously don't know how things work in our world – had they asked for our feedback we could have fixed all sorts of problems with their lame plan!" Well, these same kinds of problems happen with home designs, whether it's a new home built from scratch or a major remodel or addition.

The purpose of the "Design Team Approach" to buildings is to achieve the best building possible in every way. The expertise, experience and ideas of the various stakeholders – in this case the building owner, designer, builder and energy systems specialist – are all folded together from the beginning. With the team working in parallel, rather than the standard, individual "series" approach to design, the best ideas of the group are folded in at the design phase. Such an approach is typically more "front-end loaded" cost-wise, but the savings that result down the road in the form of construction, operating and maintenance/repair cost savings typically more than make up for the up front costs.

Sustainable Energy Group, as the name implies, is a group of sustainable energy professionals with expertise in building systems evaluation, design, construction, maintenance and service. As a result, we can put the power of our team – or any assortment of our staff – onto the task of making a building be "all that it can be". We can not only focus on elegantly simple and cost-effective energy solutions

but assure, as a result of our service work experience, that the installation will require less maintenance and replacement costs down the road.

I can speak firsthand, from the energy engineering side of things, to the power of this approach. If I'm brought in at the beginning of a project – before the design is too far along – there are hundreds if not thousands of options for reducing energy costs, increasing comfort, etc. But at the end, where the energy engineer has historically been plugged in, all that's left are "band aide" solutions. People's minds are too invested – or too much money has been invested or both - in decisions that have already been made and opportunities to tune the building to the sun and site attributes (like prevailing night breeze) are lost.

If this sounds too "far out" or "greeny" for some folks, consider the fact that the States and Federal Government have been implementing this approach for years! Here's an example from the Army Corp of Engineers -

[http://www.sustainablefacility.com/Articles/Web\\_Exclusive/BNP\\_GUID\\_9-5-2006\\_A\\_10000000000000380813](http://www.sustainablefacility.com/Articles/Web_Exclusive/BNP_GUID_9-5-2006_A_10000000000000380813)

It's simply a natural, evolutionary step in the way we design buildings. As the old saying goes "two heads are better than one!"

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